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END OF THE SECOND VOLUME FOR 1903

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Two Lectures

ON

THE ANÆSTHETISATION OF SO-CALLED "DIFFICULT" AND "BAD" SUBJECTS

Being the Emeritus Lectures on Anæsthetics delivered at the London Hospital on Nov 21st and Dec 5th, 1902,

BY FREDERIC W HEWITT, M.V O, M.A., M.D CANTAB,

ANÆSTHETIST TO HIS MAJESTY THE KING CONSULTING ANÆSTHETIST AND EMERITUS LECTURER ON ANÆSTHETICS AT THE LONDON HOSPITAL PHYSICIAN ANÆSTHETIST TO ST GEORGE'S HOSPITAL.

LECTURE I

Delivered on Nov 21st

GENTLEMEN,—Before I proceed to the consideration of the subject which I have chosen for these two lectures I should like to take the opportunity of expressing to the medical school of this hospital my best thanks for the honour that has been done me in appointing me to this newly created lectureship. I can assure you that it is a great pleasure to me to address you again. But I am even more gratified, if I may say so without being thought to be discourteous, by the actual creation of the appointment, for that creation clearly indicates the determination which is now apparent in most of our medical schools to train students more thoroughly in the administration of anæsthetics. My only regret is that the first Emeritus lectures on anæsthetics at this hospital have been entrusted to one who is so unworthy to deliver them. My successors will, I venture to hope and to predict, make up for my deficiencies

Although very few anæsthetics have been added to the list since ether and chloroform were first employed in practice there has been a steady development during the last 40 years in our systems and methods of anæsthetisation. The systems now in use have as their main object the safety and comfort of the patient, whilst the methods at our disposal are so numerous that whatever the special circumstances of a case may be a smooth and satisfactory anæsthesia may, with the rarest exceptions, be depended upon But whilst this development has been taking place in our systems and methods another development, not perhaps quite so obvious as the former, has been noticeable in what I may term the type of anæsthesia. The analgesic intoxication of former times has become gradually replaced by deeper and deeper anæsthesia. Little by little, in fact, the demands of surgery have increased, and in order to meet these demands a heavy tax has been imposed upon a section of the medical profession

The change in the type of anæsthesia to which I have alluded has had as its necessary consequence a change in the type of anæsthetist In the early days of chloroform and ether the medical man who administered an anæsthetic had as his sole object the prevention of pain. Even at the present day one occasionally meets a survivor of the old school who, having lived in some remote district for nearly half a century and having failed to realise the great change that has occurred in the type of anæsthesia, attempts to carry on a conversation with his patient in the middle of an abdominal section Formerly, any recalcitrant behaviour unconscious struggling movement, rigidity, embarrassed breathing pulse failure or undesirable after-effects were attributed to the patient not to the anæsthetist. The scope for skill in anæsthetising was thought to be so limited that nurses and even domestic servants were often entrusted with the administration When you leave your hospital you will find that if you administer anæsthetics at all in your practice your responsibilities will be considerably greater than were those of your predecessors Modern surgery demands the services of efficient anæsthetists even in simple cases and it is therefore, your duty whilst at your hospital to make yourselves efficient. The movement now on foot of thus providing for the greater safety of the public—a movement at last endorsed by the examining bodies—must be fostered and strengthened, for it deserves—nay, it commands—universal support. The death rate from anæsthetics—in other words, the risk a patient runs when he is rendered unconscious for a surgical operation—may be reduced to almost infinitesimal proportions, whilst the results of many surgical operations may be distinctly improved by placing the administration of anæsthetics in experienced and skilled hands Unhappily, there are still a good many leading members of our profession who either do not realise this fact, or if they realise it do not pause to consider its significance, and so long as this state of things obtains, even amongst a section of the profession, we cannot be surprised at the apathy displayed by the public concerning their own safety The opinions held by the laity regarding anæsthetics are almost ludicrous. They either believe that, provided their hearts are strong enough, they can take any anæsthetic with impunity, no matter who administers it, or they think that, the death rate of anæsthesia being incapable of reduction by skill and experience, they personally are pretty certain to be marked out by fate for a disaster during the operation about to be performed upon them. You will often find, even amongst the ranks of the educated classes, people who will haunt Harley street for a week with the object of settling whether they should or should not take a blue pill occasionally, but who will go to an unqualified and advertising dentist for the cure of toothache and cheerfully allow themselves to be dangerously asphyxiated by nitrous oxide or rendered pulseless by chloroform It would, of course, be going rather too far to say that every accident that now occurs is preventable, but there can be no doubt that in each year's death roll there are many cases in which life has been unnecessarily sacrificed.

What do we mean by good subjects for anæsthetics? I take it that by a good subject is meant a patient who, whatever anæsthetic we may choose, gives us no trouble during its administration, inhaling it freely displaying little or no excitement or inconvenient muscular spasm under its influence, passing quietly into deep anæsthesia without any respiratory derangement, remaining perfectly immobile during operations upon sensitive parts, and recovering with no unusual after-effects. Now a patient who behaves in this exemplary manner is entitled, I think, to be taken as a model and to be regarded, for our present purpose, as the normal type. I have on other occasions pointed out to you the common—and I had almost said the dangerous—fallacy of regarding the strong and perfectly healthy man as the normal and typically good subject for anæsthetics. He is by no means necessarily so I have also alluded to the popular fallacy of regarding strong cardiac action as essential for safe anæsthetisation, the fact really being that patients with comparatively feeble heart action are, *cæteris paribus*, better subjects than those whose hearts are perfectly normal and vigorous. The explanation is simple enough. Putting out of the question the presence of advanced cardiac disease, there is a correlation between the heart and the general muscular system of the patient, and the greater the development of the latter the greater will be the tendency for the patient to give trouble to the anæsthetist by muscular rigidity and consequent respiratory derangement. It hence happens that the comparatively feeble individual, as exemplified by the chronic invalid whose skeletal and cardiac muscles have undergone some degree of atrophy, passes quietly into deep anæsthesia. Speaking in general terms, therefore, it may be said that the patient with the "weak heart" is of the two, a better subject for an anæsthetic than the patient with the strong heart—a totally different doctrine to that which is generally accepted. As our normal or perfect type of patient for anæsthetics we may, therefore, take middle-aged women in moderately good health, of spare build sallow complexion, placid temperament, and moderate habits, possessing a free nasal air way and somewhat defective teeth. These are, in my experience, the best subjects for anæsthetics. No matter what agent may be chosen or what method of administration may be adopted patients of this type will in the vast majority of cases enter into, pass through, and emerge from anæsthesia without giving the slightest trouble.

As we depart from this the normal type of subject we begin to observe corresponding departures from an almost ideal anæsthesia. Younger women, for example, tend to display rather more muscular rigidity as they pass into deep anæsthesia, whilst the greater secretion of mucus and saliva may interrupt the smoothness of administration. Women who hunt or habitually take other forms of outdoor exercise will often give a little trouble to the anæsthetist, especially during abdominal operations. Elderly women, again, although good subjects, may be so susceptible to anæsthetics as to alarm an inexperienced anæsthetist, or, by reason of senile changes having taken place in their respiratory mechanism, they may not breathe as freely as younger subjects. Thus, a full dose of nitrous oxide free from oxygen administered to a thin woman from 70 to 80 years of age, whose chest walls have lost their elasticity, may readily lead to suspended breathing Anæmic, exhausted, and even emaciated patients are often remarkably good subjects for anæsthetics unless the anæmia or exhaustion be of acute origin or the patient has been in former times of powerful build, very obese, or of intemperate habits. Care is needed not to over anæsthetise such subjects.

Men are, as a class, not so satisfactorily affected anæsthetics as women, but young men approaching in type to what has been termed the normal give little or no trouble. When I come to discuss more particularly difficult and bad subjects you will find that most of the remarks that I shall make apply to men Children are generally said to be good subjects for anæsthetics and from some points of view this statement is correct Taking everything into consideration, however, I regard children as somewhat less satisfactory subjects than women of the type to which I have referred. A considerable time may be required to anæsthetise infants, the signs of anæsthesia are not always reliable, and when once the full effects of the drug have been produced great care is needed to avoid over-dosage. Children are certainly less liable than adults to give trouble from muscular excitement, and should suspended breathing take place remedial measures are comparatively easy of application, but the great liability in children to the free secretion of mucus, the frequency with which enlarged tonsils and adenoid growths are present, and the readiness with which vomiting occurs, not only in comparatively deep anæsthesia but after the administration, may, individually or collectively, account for difficulties Of all the patients one meets in dental practice the healthy school boy is most likely to suffer from nausea after nitrous oxide mixed with oxygen, whilst it is often difficult with such a to obtain the best results during an abdominal

What do we mean by difficult and bad subjects? I take it that under this heading may be included all patients who, unless skilfully treated, display marked excitement, rigidity, and a tendency, even though deeply anæsthetised, to inconvenient reflex phenomena, or, apart from the administration of an over-dose, pass into a dangerous state or actually die. I must again in this connexion impress upon you the fact that the patients whom we are now about to consider are not necessarily the subjects of any grave malady They are often, indeed, patients who have never had a day's illness. This is an exceedingly important matter and it is to my mind as interesting as it is important.

Difficult and bad subjects may be conveniently considered under six headings 1. Patients whose general health is good—possibly exceedingly good—but who possess some physical peculiarity rendering them more or less liable to intercurrent embarrassment or arrest of breathing 2 Patients whose respiratory tract is in some way encroached upon or whose respiration is in some way hampered by pathological or other conditions 3. Patients suffering from certain grave visceral or constitutional affections. 4 Highly nervous and excitable patients, those suffering from various nervous affections, and those who have become addicted to the excessive use of alcohol, tobacco, morphine, or other drugs. 5 Patients displaying in a state of combination or association the characteristics of two or more of the foregoing classes. 6 Patients who prove to be difficult or bad subjects without any discoverable cause.

1. The possession of a well-developed muscular system is often responsible for delay and difficulty in anæsthetisation, a fact which although applying particularly to men is not inapplicable to women. Vigorous and muscular men should, whenever possible, be anæsthetised by ether rather than chloroform. If the surgical requirements of the case call for the latter anæsthetic it should be given after anæsthesia has been obtained by the former The large number of fatalities from chloroform which have occurred in patients of this type should teach every medical practitioner a lesson. The explanation of such accident is to be found in one or other of the following considerations In the first place vigorous patients require larger doses of an anæsthetic than other subjects in order that muscular relaxation may be produced, the result being that the anæsthetist progressively pushes his anæsthetic and often pushes it too rapidly In the next place, such patients are more liable to excitement and struggling than others, so that during the stage of excitement intercurrent asphyxia from muscular spasm is liable to occur, and should it occur the chloroform vapour which has been imprisoned in the lungs is absorbed in dangerous quantities And, lastly, these subjects may give trouble from the presence of laryngeal mucus which in deep anæsthesia may actually cause arrest of breathing. Nitrous oxide and ether administered by a wide-bore inhaler produce admirable results in vigorous subjects, ether having a great advantage over chloroform in that it can be safely pushed till relaxation occurs A word of caution is necessary in dealing with the cases in which a change from ether to chloroform is effected. The change must never be made during any muscular excitement or struggling This stage should be allowed to subside, a cough encouraged, and the substitution then effected.

The symptoms displayed by patients during anæsthetisation are largely dependent upon the physical conformation of the upper air passages and particularly upon the number and arrangement of the teeth. Provided the nasal passages be wide and free breathing may take place wholly through the nose, and this state of things may be satisfactory so far as the anæsthesia is concerned. But in a large number of cases the nasal air way is either unavailable or inadequate and nature thereupon endeavours to force a passage through the mouth. In most cases she is more or less successful, but she often finds herself heavily handicapped owing to the teeth meeting one another very accurately, or to the swollen tongue pressing itself against them. The anæsthetist should realise the situation and assist nature in her endeavours by slightly separating the teeth by means of a mouth prop. Patients with large and overhanging upper teeth are specially liable to give trouble to the anæsthetist, for they tend to become very stertorous or to stop breathing altogether This is owing to the difficulty or impossibility in such cases of pushing the lower jaw forwards in order to bring the tongue from the pharynx. It is generally advisable with such patients to place a small mouth prop between the teeth either before the administration or soon after it has commenced. Long, irregular, and interlocking teeth are equally liable to fix the lower jaw and hence to favour occlusion of the air way Speaking generally oral breathing is to be preferred to nasal breathing, and it is especially necessary to secure it in patients with good teeth and powerful jaws. I have notes of several cases in which the neck was so thick and large as to obliterate completely the contour of the lower jaw, and in most of these cases I had some difficulty in keeping a free air way owing to it being next to impossible to push the lower jaw forwards in the customary manner Of late years I have in a large percentage of my cases inserted a small mouth prop between the teeth soon after consciousness has been lost, and I find that my results have been thereby improved The advantage of oral breathing over nasal breathing is, in fact, so great that I am almost inclined to advise you to use a small mouth prop in every case, inserting it rollerwise after consciousness has been lost and before the operation commences. Middle-aged men of powerful build, with red shiny cheeks, thick necks, and good teeth, require careful handling, especially during the induction of anæsthesia They belong to what may be called the "John Bull" type. They are best anæsthetised by administering a mixture of chloroform and ether (two of chloroform to three of ether) throughout, or by using this mixture up to the point at which the stage of rigidity begins, changing temporarily to ether, and continuing with chloroform. If the nitrous oxide-ether sequence be employed a mouth prop must be inserted before starting and a wide-bore inhaler used, any difficulties which may arise after the stage of rigidity has passed off being met by changing to chloroform. The advantage of the C E.-ether or the nitrous oxide-ether sequence over the continuous administration of the mixture or of pure chloroform is that the stage of rigidity and struggling may be nearly or completely eliminated I have anæsthetised a few patients of the "John Bull" type, in the sitting posture, for operations within the throat and I have found my resources somewhat taxed when hæmorrhage has been free. Such patients are also difficult subjects for abdominal section and particularly for such operations as thyrotomy for the removal of a laryngeal growth In one case, that of a powerfully built man who had had half his larynx removed on a previous occasion and who had then given me some trouble owing to the difficulty of keeping up deep anæsthesia by means of a Junker's apparatus, I administered a small quantity of morphine before the chloroform and obtained a very marked improvement in my results Obese subjects, if only obese, are not as a rule difficult to anæsthetise, but if the obesity be associated with such conditions as an inadequate nasal air way, perfect teeth, or a receding lower jaw, if it be grafted on, so to speak, to a previously well-developed muscular system, or if the patient be alcoholic or a great smoker, a good deal of difficulty may be experienced. As a general rule, the mixture of chloroform and ether administered slowly produces better results than ether or chloroform.

The commencement of an operation before perfect anæsthesia has been produced is in most cases unattended by anything more than inconvenient reflex movement. There is no conclusive evidence, to my mind, that the circulation is specially liable to be depressed by operating in moderately deep anæsthesia. But in certain subjects, and particularly in muscular and obese patients, the commencement of an operation during moderate anæsthesia is strongly to be deprecated owing to the reflex suspension in breathing which may result This particularly applies to rectal surgery I have notes of one case in which this reflex suspension of breathing seemed to be the starting point of an asphyxial condition which was with the greatest difficulty overcome. It is highly probable that this state has often been erroneously regarded as primarily cardiac. In heavily built and obese men, with flabby tissues and thick necks, any interference with free breathing may quickly lead to such swelling of parts within and about the upper air passages as to completely occlude them. Further clinical observation may perhaps enable us to state what traumatic stimuli are most likely to interfere with respiration during moderate anæsthesia The point is important, not so much in relation to fairly healthy persons, such as we are now considering but as regards patients who are dangerously ill and who cannot with safety be deeply anæsthetised Fortunately there seems to be far less tendency for such patients to respond either inconveniently or dangerously to the stimulus of an operation begun during partially established anæsthesia

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An Address

ON

THE PROBLEM OF INFECTION AND IMMUNITY IN TUBERCULOSIS AND THE ISSUES INVOLVED.

Delivered before the West Somerset Branch of the British Medical Association at Taunton on Oct 31st, 1902,

BY SIR HUGH R BEEVOR, BART, M.D, F R C P LOND,

PHYSICIAN, CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST PHYSICIAN KING'S COLLEGE HOSPITAL.

GENTLEMEN,—I thank you for the honour of the invitation to meet you and I crave your indulgence for my selection of so commonplace a subject for my address, but as this subject is equally interesting and important to us all I shall, I hope, gain your ready sympathy The revolutions in diagnosis, prognosis, and treatment of tuberculosis have been rapid, especially when attacking the lung, and it is to the lung that I shall devote my attention. However, it is not these aspects of tubercle upon which I would dwell, but rather upon problems which, while of long standing interest to our profession, have recently taken their place in the arena of the town hall and the county council chamber as subjects for public discussion. I refer to the problems of infection and prevention The public will be appealing to us for guidance and it is well that we should take stock of our knowledge and form a reasoned opinion. The cry is "Educate the public," and we are the educators

Let us presume that as their first lesson the public are learning the resolutions passed by the British Congress on Tuberculosis of 1901—viz., (1) that spitting in public should be suppressed, (2) that it is necessary to provide sanatoriums for consumptives, and (3) that they should do away with tuberculous meat and milk —a lesson in which we all heartily concur The first is a matter at least of simple cleanliness, the second is a judgment based upon ample experience worked out first in other lands, and as to the third the meat and milk are simply tested for their purity like any other food But we all recognise that it was not on such common general grounds that a congress was anxious to pass good resolutions it was upon one main ground—the fact that tuberculosis is now recognised as ranking among diseases which are infective diseases The educated public appreciate this and are asking, Is it not very infectious? This is what we have to answer and desire knowledge of, this degree of infectivity it is that we must state, the conditions of risk we must lay down, for it is our duty to consider our patients at least as much as their neighbours, and our patients will suffer, and suffer severely, if credited with an evil eye that is not theirs

Professor G Sims Woodhead has recently written, "Tubercle bacilli may become so modified that they can flourish saprophytically" Dr Kanthack stated that the organism of tuberculosis was capable of thriving outside the animal body, while Dr Sidney Martin stated that it had no independent existence. The variation of medical opinion, nay, in many cases the irreconcilability, upon the point of infectiveness, may be gathered from the words of speakers at the recent autumn conference at Berlin. From abstracts of their communications, representing medical opinions, I select the following quotations as evidence Professor Sangman protested that 'the utility of spreading among the public the fear of contagion by prescribing preventive measures such as partitions between each two persons sitting in offices and workshops as advised by Flügge is doubtful" Dr O Savoire, speaking of workshops, schools, and offices, said of curable and incurable tuberculous persons "they would in all cases, be separated from other people" Dr S von Unterberger wrote that "the contagion of tuberculosis in hospitals is not to be feared," while Director Gebhard stated that ' the homes for disabled consumptives will have to be built so that their neighbourhood is not a danger of contagion and that every danger is as much as possible removed from the persons in good health who frequent it or are employed in it." Dr O Denison said "To my mind the difference in importance is as 10 to 1 between the subject of susceptibility and immunity on the one hand and infection and virulence on the other", and to that point Dr Denison desired to direct the discussions

You will see that I am not tilting at windmills when I mention instances of the disabilities that are already afflicting some patients abroad. "In some parts of France they have had to abandon the idea of sending into the villages single patients of the working class, however strictly selected and although free from bacilli, for the peasants greatly fear tuberculosis, and for their cattle's sake, not for their own health." The Bethel (Sullivan County) board of health has adopted an ordinance imposing a penalty of 10 dollars for the first offence and 50 dollars each week, for entertaining a stranger or guest affected by tuberculosis other than immediate relatives or those dependent on the family Let us mark how the sufferers from this sub-infectious malady differ from those suffering from most infective diseases they are adults, not children, and the term of their illness may be counted by years, not weeks, moreover, as often as not, their powers of work are efficient If we had sanatoriums in plenty and funds to replace the earnings of bread winners it would not even then be necessarily right to follow the lead of the peasants of France or the board of health of Bethel. As we are not yet, however, sufficiently endowed with these aids, let us at least recognise that any exaggerated statement of the infectivity of tubercle will induce similar hardships in this country, together with other hardships consequent upon social taboo, whilst the ultimate result may well be an increase and not a diminution of tuberculosis

The present state of our knowledge may be, broadly, gathered from two regions (1) the region of biology, pathology, and comparative pathology, and (2) the region of experience in the present and the past, the incidence of the disease in man Now the evidence collected in either region cannot be said to conflict nor can it be said to coincide , it is conspicuously incomplete and links of association are evidently missing

In the field of biology one may briefly note tuberculosis of man, of bovine origin, of birds, and of fish Between bovine and human tuberculosis I shall not attempt to draw distinctions, however real may prove those differences which Professor Koch in 1901 impressed upon us and recently reiterated. Small though be the amount of transmissibility from cattle to man which Professor Koch admits even that is sufficient to give inherent probability to those experiences in America related by Professor Ravenel in 1901, and recently at the Berlin meeting by de Schweinitz and E C Schroeder, besides the recent results of Dr G Dean and Dr C Todd at the Jenner Institute, and it is sufficient to make us believe that bovine and human tuberculosis are convertible if not identical.

In birds avian tuberculosis we learn, is with difficulty convertible into the mammalian form in guinea pigs (Nocard)

From fish and slow worm cultures have been shown at the 1901 congress of great interest, as both had their origin in association with tuberculous sputa. In the fish the cultures were obtained from a carp found in a pond contaminated with tuberculous sputa , the slow worm had been previously infected with tuberculous sputa by Dr Moeller Now in either case a bacillus is found growing best at the low temperature of 22° C and not pathogenic to warm blooded animals. One would not think of associating it with tubercle but for the history If it be a transmuted tubercle bacillus its vagaries transgress the lines that usually mark specific difference, so that the discoverers would place it among the acid fast bacilli only and not name it bacillus tuberculosis These acid fast bacilli need not detain us, except one—the timothy grass bacillus. This will grow at the same temperature and produce the same lesions as tubercle, but Moeller its discoverer, finds by virulence and culture character that it is not tubercle nor is it convertible , the less initiated might well hesitate to class it. Other acid fast bacilli are of interest as pitfalls for the unwary who rely upon one or two bacilli as sufficient ground for a diagnosis—they come from butter, grass, manure, and other sources Thus we see that the tubercle bacillus no longer stands alone—it is one of a class widely spread in nature A classification of tubercle bacillus has been made Many students of morphology separate it from the bacteria, the class that provides most of our discovered infective agents, and place it with actinomycosis among the bacteriomyces—a step nearer the moulds. Our knowledge of the bacillus (as we will still term it) of tubercle outside the body has not advanced Coates has confirmed and extended Cornet s researches in dust , he did not find it in 10 dirty houses that had been for some years free from tubercle I have not come across other searches for it in a habitation supposed to be free from contamination

In pathology recent work has been mainly directed to determining the site of inception and to see how far a necropsy sustains the opinion that milk is the source of infection in children Judging from gross lesions the more advanced lesions of the mediastinal glands have been taken to suggest primary pulmonary infection in the vast majority of tuberculous children I think, however, that I see a desire to propound a theory where evidence cannot be forthcoming, a theory that bacilli may pass through a mucous membrane without breach of surface Seeing that the tonsil though not ulcerated yet may be supposed often to pass the bacillus on to the glands of the neck, I am inclined to support these theorists and to suggest that, after all, the early affection of the mediastinal glands may pass through the squamous epithelium of the œsophagus The inert bacillus requires a conveyance, the salivary corpuscles would suffice to carry the bacillus through the wall, stopping at the lymphatic gland , the gland most frequently affected in children lies on the œsophagus in the fork of the bronchi and trachea. I commend this view only for future testing but I am glad to find a particle of supporting evidence Mr S G Shattock last June showed primary tuberculosis of the œsophagus in a python. He remarked that in man it was only known by direct extension and was not primary but there was no lymphatic structure in the human œsophagus as in that of the python but most remarkable of all was his statement that infection had occurred by invasion between the cells of the epithelium which remained intact without any ulcer

The work of Professor Benda has made plain some of the puzzles that exercise our minds in the contrasts of acuteness and chronicity in tuberculosis The acute general tuberculosis and the tuberculous meningitis of general infection in children come, as it were, by anatomical accident Their acute symptoms are not apparently referable to any specially virulent strain of micro-organisms, but to the suddenness of their access to the blood stream. This access is from the frequently advanced disease of the mediastinal gland, which while being thoroughly permeated by advancing bacilli, is the final barrier—their next outlet is into the thoracic duct and blood stream. Like the power of a drug intravenously injected these toxins owe the acuteness of their symptoms to the fact that they travel directly in the circulation. Further, the bacilli make their home now on the walls of the blood vessels and so can continue to administer poison as rapidly as ever unless checked by thrombus formation Then in our conceptions of variety in virulence we must remember the varied path of extension. Another instance is the unfortunate experience, common to many of us, of a patient with phthisis who is rapidly improving but who is suddenly seized with a pleurisy that spreads over all the pleura, hampering respiration and pouring poison of tubercle into the system , this owes its source often to a mediastinal gland from which disease has had outlet to the pleura.

Comparative pathology I may only touch upon Nearly every other animal that dies in the Zoological Gardens gives, I believe, proof of its proclivity to tubercle and *per contra* I am not aware that any animal whose life was spent in a state of nature has ever been found to die from tubercle. Cattle, like children, have a special proclivity to advanced infection of the mediastinal glands—90 per cent. was the proportion of this lesion in a recent inquiry by Professor McSweeney The most interesting and striking evidence of contagion in cattle may be read in Professor Bang's successful prevention of the disease in calves by their segregation. The comparative virulence of bovine tuberculosis may be a factor in its spread, but the more simple explanation is the way in which cattle use their tongues upon their coats, their mangers, and their neighbours. What a dose they must take If we should feel alarm, taking the infection seen in European cattle to apply to ourselves let us take solace in the immunity of cattle in Japan which may as logically be applicable In any case we should avoid pressing analogy between animal and man too closely In cattle the veterinary surgeon applies tuberculin and he sees the cattle slaughtered So thorough and complete a view of the disease exposed to the eye of the pathologist cannot be exceeded. He can thus calculate with accuracy its prevalence, with the astounding result that roughly a million of the kine of Great Britain and Ireland are found affected. Besides milk containing bacilli we now know that the urine is often bacilliferous though there be no renal disease, and an enteritis may allow of vast numbers of bacilli being cast upon the ground. Many countries are trying to get free from the disease by the slaughter and isolation of cattle , some have desisted owing to the magnitude of the task. Victoria has had healthy herds to deal with and has been at work many years, but the extinction of the disease does not seem to be yet in sight.

Turning to the other region of our knowledge—our present and past experience of the disease in man—we find educated (that is to say, medical) opinion holds this view of infection, "Healthy persons run a distinct risk if the contact between themselves and the phthisical sufferers is close and prolonged." Instances of the risk occur to us , a few have been published from time to time. However, in 20 years so little evidence has come forth of the kind to be expected after the discovery of the bacillus that I think it probable that professional experience will, as a rule, agree with the experience of the observers in British sanatoriums who thought that they traced infection in 2½ per cent. of 700 cases No doubt the over estimate of the influence of heredity prevented any such view at all occurring to any but one or two medical men before our attention was aroused by Villemin and Koch.

I attempted to study past experience of a generation of phthisis in England a few years ago ; it was a simple voyage of discovery The returns showed that the amount of phthisis deaths varied with sex, with age, with general mortality, with place and time, food and air , the relation to all of these could apparently be traced but one could not trace infection Rural phthisis had been stated to be due to foci of infection, village infection , but if inquiry were pushed and one probed into parish records it remained untraceable. If we take the extra phthisis death rate of a county asylum as representing for the sake of argument a small epidemic, that will infallibly mark the phthisis rate of that rural union (not parish) as much heavier than any of its neighbours One could not find in ten year periods epidemics which would at all equal the extra rate due to the presence of an asylum. The amount of variation in the factors which I have mentioned was almost enormous For instance, taking sex—between the age of 10 and 15 years 200 girls die to 100 boys, taking time—then 40 years back those 200 girls would have been 500, and taking place either now or then—500 in Somerset would mean about 1000 in Northumberland. The place factor is really the overcrowded house, and the time factor is the food supply While not finding evidence of infection like that of other infectious diseases I allow that the conditions of the search would not detect so small a percentage as 2½ or even 5 but I believe that I am justified in saying that there is not the accidental rise or fall that would indicate chance infection as in other infectious diseases to an extent of 10 per cent —it might well be *nil* Is there any explanation why such evidence should not be forthcoming? It has been suggested by some writers that the latency of tubercle affords a solution of the problem There is a kind of latency (visible to the anatomist when he finds old cicatrices) which is common but very unequally distributed, being much more frequent in the old than it is in the young Now the frequency in incidence of phthisis is greater in the young, further, latency if it took the line of origin of other infective diseases would show the same rise and fall and therefore this theory affords no solution. The only kind of explanation to my mind is an inference which is not infrequently uttered, "We, all of us, repeatedly are exposed to infection"

Returning to our more definite experiences, while evidence of infection is in the main negative, evidence of immunity is of a positive character The prevention of phthisis taught us how to measure our ventilation and by that means afforded to the artisan a large extent of immunity That was 40 years ago, just at present we are realising from the sanatorium and by the expositions of Dr A. Ransome that by using a higher standard of ventilation a higher degree of immunity will be afforded. From 1865 to 1897 the mortality from phthisis in boys from 10 to 15 years of age fell from 100 to 32. During these 32 years no action was taken owing to any idea of infection, indeed, aggregation was increased by density of population and by school attendance to a three-fold extent and risks of infection must have increased accordingly Their diminished death rate was due to avoidance of malnutrition, of the infectious fevers and to a less degree to avoidance of bad air and faulty sanitation. Recently we have been improving our workhouse dietary, and still we have the "out-of-works as our most frequent patients Having on a former occasion[1] detailed much of this evidence I will not delay you by repetition. It is evident that the defensive powers of a healthy man can cope with the attacks of the bacillus, and these powers are infinitely greater in him with regard to tubercle than when they are placed in opposition to the attacks of the bacilli of other infectious diseases. In tubercle, therefore, the first aim should be to reinforce such defence by attention to nutrition, ventilation, and sanitation.

Let us consider next those persons whose contact with sufferers from phthisis is close and prolonged ("close" one considers an attribute of the room too small to ventilate well), are they to be considered unresponsive to the reinforcing of their defensive powers? Some unfortunately are so, but they are much less responsive to any other line of policy In speaking of these I am referring to the "submerged tenth.' Others are very responsive, such as inmates of asylums, and a policy of segregating these for tuberculosis which has been begun should be copied at all those asylums where there may be this close and prolonged contact of the unaffected with sufferers from phthisis, at the same time the standard of air-supply, food, and sanitation should be maintained. In workhouses similar tactics may well be pursued

We see how our attention has to touch on very many points necessary to achieve success in preventive measures. Accordingly our education of the public should be so broadly based that they may learn what are the conditions which make or mar healthiness of life. To effect this I would strongly recommend that the elements of hygiene be forthwith taught in our primary schools

There is a hiatus between the cultural experimental and dead house evidence of the working of the bacillus on the one hand, and our present and past experience of the incidence of the disease among our patients on the other In one case the life-history can be followed throughout and with precision the bacillus can be traced from point to point. In the other there is a fatal precision of death that marks so many attacks, but the bacillus is not traced.

We wish to deal with evidence, not theory, and there is usually no evidence upon the source of the infection according to our experience. It is open to one to argue that it is all of human origin, of bovine origin, or even derived from acid-fast bacilli of unknown powers of transformation.

> There are more things in Heaven and earth, Horatio,
> Than are dreamt of in your philosophy"

We do know this, however, that as the disease bears no relation to density of population outside the home itself, nor any relation to the frequency with which the healthy meet the sick (of which latter medical attendants and patients form a notable instance), therefore the disease is not infectious in the sense employed in speaking of the infective fevers. Then, I say, we shall be wise to utter no more than belongs to our own experience, ' healthy persons run a distinct risk if the contact between themselves and phthisis sufferers is close and prolonged." Those utterances abroad one is glad to find without parallel at home, yet here and there we see signs of our leaders in public health taking theory to work upon rather than experience.

I read a suggestion of a most admirable provision for dispensary, sanatorium, and hospital accommodation for consumptives at Liverpool. I would desire to see this scheme realised, for it is to a sanatorium especially that one looks as the great technical educator in the prevention of phthisis In this suggested scheme Dr Nathan Raw promises "that by isolating the incurable cases the municipality can largely prevent the disease.' From what I have already put before you I believe that such is not the present expectation—i.e., balance of probability And how greatly will a statement like that tend to procure the fulfilment of Dr Raw's own prophecy, ' In a few years it may be a matter of extreme difficulty if not an impossibility, for a consumptive to find ordinary means of employment." For his scheme Dr Raw finds that a halfpenny rate is necessary Many a ratepayer would gladly add to that halfpenny a sufficiency to replace the bread winner s earnings. Such an addition to the scheme I deem essential to its success Let us hope that Liverpool will never seek such avoidance of the sick as first prevents employment and then allows a consequent depletion of the sufferer's pockets, a depression of his spirits, and in the end a crop of tubercle in his impoverished family

And what are we to do in the future? For the cattle, plenty of fresh air, sunshine, and slaughter of visibly affected beasts —it is in this order that the chief inspector of Victoria proclaims his method If we essay complete prevention why not attempt it first in some limited area like the Isle of Man?

Among our patients we cannot fail to recognise how enormous is the proportion of the phthisis of to-day which exists in the lowest wage earner, the most ignorant of the poor Are we going to pillory the educated clerk for no risk or for an infinitesimal one, while these uneducated folk remain, whose potentialities for danger by whatever standard we may measure them, are infinitely greater and cannot be dealt with? If we do allow this we diminish the food or house room of a bread-winner and create the predisposition to tubercle in his family

The term 'infection" is too loose a term to apply to both measles and tuberculosis When its use does damage to the workman s prospects it is perpetrating an injustice upon him, ' sub-infectious" is a more proper term to employ in public health. By difference in the kind and mode of infection, and still more by the greater difference in resistance to the disease, our patients differ from cattle and the argument of isolation does not apply When we see the poor results in the isolation of infective fevers by hospitals for fever those who rank tubercle as most highly infectious must seriously doubt if it is a right policy to apply such a system to tubercle. No, we must proceed in the interests of all by education and attention to the wants of the people in food and in air, and we shall see the successes of the past excelled by the higher successes of the future

I earnestly hope that the medical profession at large will not encourage the public to avoid their tuberculous fellow creatures. Such a course will not, in my opinion, diminish the amount of tubercle. It will, however, infallibly swell the ranks of the unemployed, it will depress the phthisical wage earner's spirits, it will empty his pockets, and ultimately, by want and distress, reduce his family to that condition of low vitality which the tubercle bacillus requires for a successful invasion.

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[1] THE LANCET April 15th 1899 p 1005 Brit Med. Jour August 1901 Catalogue of the Museum of the British Congress on Tuberculosis 1901

In conclusion, gentlemen, I would urge you, as the educators of the public in these matters, distinctly to let it be known that tubercle is not highly infectious. State that it is not a disease that requires isolation and that only under certain quite exceptional conditions does it appear to be infectious at all. Insist that healthy people enjoy extraordinary immunity, that fresh air and open windows are the great armour against its attacks, and that the instruction of the young in the general principles of hygiene will prove more valuable eventually than the isolation of the unwilling artisan or the excommunication of the clerk.

AN IMPROVED METHOD FOR THE MICROSCOPICAL DIAGNOSIS OF INTERMITTENT FEVER.

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IN the Harben lecture, delivered at King's College, London, on Nov. 10th, 1902, I described in detail the method referred to in this note[1], but as the matter may be of interest to a large number of practitioners I think that it would be advisable to publish a brief description of it here.

There are at present two methods in universal use for the detection of the parasites of malaria. Both consist in spreading out over a large area a small quantity of blood. In one method the blood is examined in a liquid state and in the other it is dried. In both cases about one cubic centimetre of blood is spread out over about four square centimetres of area, so that the film of blood is a very thin one. This attenuation is necessitated by the fact that a thick film of blood is too opaque to permit of the easy detection of the parasites through the mass of hæmoglobin. Unfortunately, the attenuation, though required for the reason mentioned, has one great disadvantage—namely, that if the parasites are scarce we are compelled to search in many fields of the preparation in order to find them, and it is obvious that the number of fields which we must examine varies directly with the scarcity of the organisms.

It has long occurred to me that we should be able to detect the parasites in a thick film if only we could succeed in treating the blood in such a manner as to do away with the obscuring effect of the massed corpuscles. The method which I adopt for this purpose depends upon the fact that the parasites, even the smallest of them, adhere to the stromata of the corpuscles which contain them, so that, as long as we retain these stromata we retain the parasites. Now the opacity of a thick mass of blood is due, not to the stromata of the corpuscles, but to their hæmoglobin and it is easy to wash out this hæmoglobin without washing out the stromata, either in a dried film of blood or in a dilution of blood.

I have tried numerous variants based upon these considerations, but I select the following as the simplest and easiest for general adoption. The finger is pricked by a lancet-shaped needle or by the point of a lancet. A large drop of blood, amounting to, say, 20 cubic millimetres, is taken up on the glass slide or cover glass and is *slightly* spread out by means of the needle or lancet—that is, it is spread over an area which can be covered by an ordinary cover glass. It is then allowed to dry either naturally or over a flame (without heating so much as to fix the hæmoglobin). The result is that we have a thick dried film of blood in which about 20 cubic millimetres of blood (instead of the one cubic millimetre generally used) are disposed over an area which is not larger than the area of blood usually examined by the ordinary processes. As soon as the film is perfectly dry I lay upon it by means of a glass rod a quantity of aqueous eosin solution sufficient to cover the film of blood. The solution is the one which is usually employed in order to obtain the Romanowsky effect. It is allowed to remain upon the film of blood for a period up to about a quarter of an hour. This period should be inversely proportionate to the strength of the solution. As the film of blood has not been fixed the solution of eosin will take out the hæmoglobin of the dried corpuscles and, at the same time, will stain the residual mass consisting of the stromata of the corpuscles, the leucocytes, blood plates, and parasites. After the solution has remained upon the film for the period required it is washed off by a very gentle stream of water. As the film has not yet been fixed to the glass it is most essential here to use no strong current of water, or else the whole of the residual mass will become detached from the surface of the glass. As soon as the eosin solution has been washed out a weak solution of the methylene blue which is employed for the Romanowsky stain is allowed to run over the film, just as was done for the eosin solution. The blue is permitted to remain only for a few seconds, the time varying inversely with the strength of the solution. Especial care must be taken not to stain the preparation too dark a colour. Next the blue is washed off very gently in its turn and the preparation is complete. We can now dry the stained film and mount in Canada balsam, or examine it directly by placing a drop of cedar oil upon it for the immersion lens, or we can mount it in water, place a cover glass over it, and examine as usual.

The preparation will differ from those in ordinary use in two particulars; first, it will contain no hæmoglobin and will consist only of the transparent stromata of the corpuscles, the leucocytes, blood plates, and parasites; and, secondly, 20 times the amount of blood used in an ordinary preparation will now be found disposed over the area covered by the cover glass. From this it follows that we shall find 20 times as many parasites in each field of the microscope as would be found in an ordinary preparation of the same blood; in other words, we may say that these preparations will have 20 times the diagnostic value of an ordinary preparation. If the Romanowsky stains are efficient the smallest parasites will be seen scattered over the field as small blue rings with a deep crimson dot within or upon the ring, this dot being, of course, the nucleus. If the preparation has not been over stained the pigment of pigmented parasites will also be visible. I make two preparations—one stained by the method described above and one in which the hæmoglobin is simply washed out with water. In the latter the larger pigmented parasites are very easily visible, owing to their pigment, without any staining at all.

Dr. J. W. W. Stephens, formerly of the Malaria Commission of the Royal Society and now of the Liverpool School of Tropical Medicine, kindly tested these methods for me by making comparative numerical counts of the parasites found respectively in a preparation made in the old way and one made in the new way, both from the same patient at the same time. In an ordinary liquid film of blood he found 15 parasites during five minutes' search. In a dehæmoglobinised thick film preparation of the same blood stained by the above method he found no less than 76 parasites in one minute, showing that, this preparation was 25 times better for diagnostic purposes than the former preparation. In a single field of it he counted no less than 70 parasites. In another case in which only one crescent was found in several ordinary specimens after long search I discovered five in five minutes in a dehæmoglobinised thick film preparation (unstained).

It is necessary to add that the student should familiarise himself with the appearance of the parasites in this kind of preparation. He had better practise at first with cases containing considerable numbers of organisms.

I have experimented on dehæmoglobinised dilutions of blood, "centrifuged" so as to drive down the residual stromata to the distal end of a capillary tube, but cannot say that the result is better than that given by the very simple method described above.

Skilled students have long been accustomed to search for the larger parasites in the thick edges of liquid films. I have used dehæmoglobinised thick film preparations for finding crescents since 1895, and Manson employs them for staining flagellate bodies; but I do not think that the facility with which we can detect the smallest parasites in such specimens when properly stained is generally recognised.

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[1] Journal of State Medicine, December, 1902.

VACCINATION RASHES AND COMPLICATIONS[1]

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AT a time when we are passing through an epidemic of small pox, and when large numbers of individuals are being vaccinated and revaccinated, I have thought it would be opportune and interesting to review shortly the subject of vaccination rashes and complications In dealing with this matter I have no fear of supplying weapons to those who oppose the practice of vaccination. It is the function of a science of observation like medicine to record carefully and impartially all phenomena, normal or otherwise, that we may thereby increase the sum of our knowledge and the usefulness of our art. It is not my purpose in this paper to discuss the value of vaccination—that is a point I take it, upon which we are all agreed I would merely remark that the advancement of all knowledge is a process of slow and laborious evolution I mention this because it is the stereotyped fashion in some quarters to make much of the fact that Jenner expressed the opinion that vaccination absolutely protected against small pox. We are wiser now and know that vaccination in infancy does not confer complete immunity It must not be forgotten, however, that small pox itself does not absolutely protect an individual against a second attack, any more than one attack of herpes zoster excludes the possibility of a second, although in both diseases it is extremely rare for two attacks to occur Louis XV of France is said to have had variola at the age of 14 years but that did not prevent him dying from a second attack at the age of 74[2] Again, there can be no doubt that cases of syphilitic re infection have occurred. As far as Jenner is concerned I may be permitted to say that his original contributions are models of lucidity and honesty of purpose and breathe the spirit of Harvey s noble ' De Motu Cordis "

It will add, I think, to the clearness of my remarks if I adopt the following division of the subject, suggested originally by Dr T Colcott Fox,[3] which is at once simple and natural, according with the manifestations as they present themselves clinically (1) local abnormalities or irregularities in the development of the vaccine vesicles, (2) incidental exanthematic eruptions, (3) diseases inoculated with vaccinia at the time of the operation, (4) diseases of a septic nature which find a nidus in the wounds subsequently to the operation, and (5) diseases excited in subjects specially predisposed to the same. To which I will add—(6) accidental vaccination, (7) horse pox or grease and sheep-pox in man, (8) effects of intercurrent diseases on vaccination and *vice versâ*, and (9) vaccination as a mode of treatment.

1 Among the local abnormalities extra vesicles sometimes occur due probably to the movements of the child and more points being inoculated than was intended. At other times bullæ may form instead of vesicles (vaccinia pemphigoides) In the case of calf lymph this arises as far as I can ascertain from impotent lymph. The bullæ leave no scars In such an event vaccination should be done over again with good lymph. Jenner referred to this as ' spurious ' cow pox and pointed out that it was not protective. He insisted on the necessity of re inoculation with the proper virus[4] Again vesicles may be retarded in their development or may not form at all In connexion with the late appearance of vesicles curious instances of delay have been recorded two months (Brierly[5]) one year (George Harley[6]) But the most remarkable was a delay of 14 years, recorded by no less an authority than Sir Thomas Watson The patient was a girl 14 years of age who had been vaccinated in infancy In the course of an attack of influenza vesicles developed on the old vaccination areas and, what is more, an elder sister was revaccinated with the lymph of the aforesaid vesicles with positive results[7] There are also curious instances of revivification of old vaccination areas as a result of revaccination or a subsequent attempt at vaccination where the first had failed In some cases instead of drying up in the normal way, the vaccination areas may go on to ulceration with induration of the base and exudation, forming crusts accompanied by axillary adenitis Such a condition might give rise to the erroneous diagnosis of syphilis These ulcers have been called chancriform by the French. In one instance Leloir and Hervieux investigated an epidemic of this kind 37 out of 38 children being affected The lymph was of human origin, but no specific symptoms developed.[8] Gangrene has also been observed as a local complication. Diday has recorded the growth of hair as a result of vaccination forming a coronet round the areas[9]

There has been some discussion in the journals with regard to relapse of vaccination.[10] If by that is meant a formation of typical vesicles going through a normal course and following on a successful vaccination I have never seen such a thing. But I have seen swelling up of one area (out of three) commencing a few days after the shedding of the scabs after successful vaccination. The purplish red lesion was of the diameter of a sixpence, flatly raised at first but becoming convex. It felt soft in the centre, but on making a puncture no fluid escaped, the contents being jelly-like Under treatment (europhen and blue wool and collodion) it gradually flattened down leaving (three months later) a slightly raised scar[11] There was no axillary adenitis I could only put this complication down to the staphylococcus The patient had probably inoculated the area with her nails, and this was the more likely as he had a few acne pustules about the chin. In a case under the care of Mr F Gower Gardner of Warwick, small red spots appeared after successful revaccination and gradually enlarged to the size of the vaccinated areas[12] Hypertrophic scars may develop on vaccinated areas[13] Such a condition is sometimes recorded as keloid but it is important to bear in mind the differences between true keloid and hypertrophic scar

2. As to the incidental rashes some occur early They are usually urticarial or erythematous and are in most cases evanescent, but they may also be vesicular and even bullous As to the last named in infants and young children, the possibility of impetigo contagiosa bullosa must not be lost sight of especially when there are only a few bullæ irregularly scattered about one limb or the face A fairly common condition is the so-called vaccine lichen, consisting of a number of pin point, red conical papules which come out in crops and may affect many parts of the body According to Dr H. Radcliffe Crocker, the rash comes out from the fourth to the eighteenth day, usually about the eighth.[14] The character of the eruption is in some cases papulo-vesicular, exceptionally it is pustular This kind of rash had apparently been noted by Jenner More rarely still the groups of small vesicles may run together forming bullæ, but this is a rare occurrence As a rule it soon subsides but in other cases it may be very persistent The same may be said of urticaria following vaccination The fact is that urticaria once started is sometimes difficult to quell. Erythema multiforme may also ensue, no doubt as a result of a toxæmia, the rash appearing as papules about the backs of the hands and face, or it may take the form of an erythema iris[15] or erythema bullosum These conditions may occur when the vaccination areas are nearly or quite healed. Impetigo contagiosa is not uncommon in neglected children and many parts of the body may be involved by

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[1] A paper read before the Medical Society of University College, London on March 19th 1902.

[2] Trousseau Clinique Médicale de l'Hôtel Dieu Paris 1865 second edition vol i., p 34

[3] Medical Times 1877 vol ii. p. 621 cited by Poole op cit

[4] Jenner On the Varieties and Modifications of the Vaccine Pustules occasioned by a Herpetic State of the Skin (Originally published in the Medical and Physical Journal, August 1804 No 66 Also printed separately Cheltenham 1806 This paper is not included in Crookshank's History and Pathology of Vaccination vol ii. which contains many interesting reprints of original contributions by Jenner and others) The above separately published paper is in the British Museum library

[5] Medical Times 1862, p 442. Cited by Poole in Vaccination Eruptions, 1893 p 24

[6] Medical Times 1881 vol ii., p 572. Cited by Poole op cit.

[7] Vide note 3.

[8] Cited by Delobel and Cozette in Vaccine et Vaccination p. 67 See also Kaposi Besnier second French edition vol i., p 325

[9] Radcliffe Crocker Diseases of the Skin second edition p 324

[10] Brit. Med Jour vol. i 1902, p 496 also vol. i 1902 p 568.

[11] Private Case Book C p 208

[12] Letter to Author March 3rd 1902.

[13] Ehlers: Dansk Dermatologisk Selskabs Forhandlinger 1899 p 41. Also Pernet: British Journal of Dermatology vol. xiv

[14] Op cit supra, p 323

[15] Norman Walker: Brit. Med Jour vol. i. 1901 p 1201

bacillus tuberculosis from phthisical sputum, &c., may occur is an ascertained fact, but it is not an easy thing to produce experimentally As far as vaccination is concerned it is very difficult, as Dr Colcott Fox rightly points out [31] to exclude the possibility of pre-existing bacilli having found a suitable soil in the wounded tissue or of a secondary infection from the outside.

Vaccination has also been accused of leading to an increase of leprosy Now, although leprosy is undoubtedly a contagious disorder, all attempts to inoculate the disease in sound individuals have failed. Danielssen and others have tried it on themselves and on various persons who have voluntarily submitted to the test The case of the Hawaiian criminal Keanu, inoculated as an alternative to death, is not decisive, as leprosy occurred in some of his relatives and the disease being moreover, very prevalent in the Sandwich Islands, he may have contracted it in another way The long latency of the complaint is a factor which makes it difficult to arrive at a positive conclusion in countries where the disease is endemic and in the case of individuals who have lived in those countries The source of error afore mentioned is a valid objection to the very few published cases of so-called vaccinal leprosy The careful inquiries of the Leprosy Commission in India on this point led the commissioners to report that the practical danger of leprosy being diffused in this manner was minimal, even supposing the disease to be highly contagious.[32] Arning and Auché and Carriere have found the bacillus in the vaccine vesicles of lepers so that the possibility of transmission in arm-to-arm vaccination in this way cannot be denied. But Armauer Hansen who originally discovered the bacillus lepræ and whose authority on any subject connected with leprosy is acknowledged, cannot believe that such transmission could have been frequent as some writers have contended. Further Hansen distinctly states that in Norway leprosy has steadily diminished during all those years in which vaccination has been compulsory In 1891 he put the question to all medical men in Norway who had anything to do with leprosy and not a single one had ever observed such an occurrence.[33] As the leprosy bacillus has not yet been either cultivated outside the human body or successfully transmitted to animals calf lymph cannot be accused of being a cause of leprosy

4 I have next to consider diseases of a septic nature which find a nidus in the wounds subsequently to the operation This portion of my subject and the one just dealt with overlap to some extent. Given strict cleanliness and carefully prepared lymph nothing but the vaccine virus should be inoculated at the time of the operation. Erysipelas is a rare complication. It varies in degree and may remain more or less localised to the neighbourhood of the vaccinated areas On the other hand it may spread extensively and sometimes prove fatal. Jordan[34] has called attention to the fact that erysipelas may result not only as a result of streptococcal, but also of staphylococcal, infection. Erysipelas may develop in a vaccinated child as a result of erysipelas in the mother or in a neighbour coming in contact with either the child or its parents Furunculosis, cellulitis and even septicæmia and pyæmia have been observed Impetigo contagiosa and gangrene have already been alluded to A very rare complication is tetanus. Dr W Findlay and Dr J W Findlay [35] have recorded a case of this kind following vaccination on the leg occurring in a woman aged 21 years They have further been able to collect ten other cases Of these, Toms's case followed calf-lymph vaccination on the arm, and another is recorded in the report of the Royal Commission on Vaccination in which human lymph was used. This is an interesting point Tetanus is caused by a bacillus found in the earth and *a priori* might be expected to be common in calf lymph owing to accidental contamination. But tetanus as a complication of wounds is an extremely rare condition, in this country at least, and Dr G Vivian Poore,[36] who has made inquiries, found that in the market gardens of the Thames Valley it was the rarest of diseases This agrees with the rare occurrence of tetanus among agricultural labourers

I may here refer to vaccination on the leg, demanded by some ladies I have vaccinated very few in this situation, but in one case the patient, instead of keeping quiet, took off the protective dressing put on coloured stockings in direct contact with the unhealed vaccine areas, and went to a ball. The result was a great deal of local inflammation, with the formation of a large irregular bleb full of sero-pus The patient was quite sure that it was the vaccination.[37]

5 An interesting part of the subject under review is the fact that diseases may be excited in individuals specially predisposed to the same. Here again, the *post hoc* fallacy crops up. Nevertheless, vaccination appears to have started psoriasis where there was a predisposition, but that it was actually the cause is another story Occasionally, one or more psoriasis lesions may precede the vaccination and sometimes too, rashes have broken out when vaccination has been postponed which would inevitably have been ascribed to the latter had it been carried out In a similar way an eczema may be started by vaccination. In two recent cases vaccination led to the recurrence of a cured eczema. In infants vaccinated very early in life, before congenital syphilis has developed, the specific symptoms would appear to the lay mind to be the result of the inoculation with lymph. It must be remembered, too that the subjects of hereditary lues do not always present the "old man" appearance but may at first look healthy enough I have lately seen pityriasis rosea occur in a recently vaccinated patient sent to me by Dr Percy J Edmunds, but there was no reason whatever to think that there was any connexion between the two conditions.[38] The sequence was, no doubt, quite accidental.

6. There are numerous instances of accidental vaccination scattered up and down in medical literature. I have seen it on the face and wrist. Medical men have inoculated themselves on the lip through the small wound caused by the broken end of a capillary tube whilst blowing out the lymph. When it occurs about the mouth or cheeks it gives rise to much discomfort, as may well be imagined, especially as regards opening the mouth. I have seen an interesting case in a woman nursing her vaccinated child, the accidental vaccination occurring on the cheek as the result of a scratched pimple. She had never been vaccinated, as her parents objected to the practice [39] Dr A. MacLennan [40] has recorded the case of a man in whom the chin was inoculated He thought that he got it off a towel used by other members of the house, five of whom were vaccinated The patient himself had declined to be vaccinated as he did not think it necessary Accidental vaccination in the great majority of cases occurs as a single lesion giving rise at a certain stage to much surrounding redness together with swelling and tenderness of the corresponding lymphatic glands. But Dr Arthur J Hall [41] of Sheffield has published a case in which there were 11 lesions about the dorsa of the hands The patient was a domestic servant who had never been vaccinated and who suffered severely at the time from chapped hands The vaccinia was contracted from a recently vaccinated baby she had nursed. When the lesions are single the possibility of an extra genital primary syphilitic sore may arise in the observer's mind, especially in certain stages of such accidental vaccination. The scar left by an accidental inoculation in the lip, for instance, may also be taken for the remains of an old primary syphilitic sore, especially if the patient be the subject of syphilis.

7 Much of what I have just said applies to the accidental inoculation of horse pox or grease Men looking after horses with greasy heels may contract the disease about the hands or forearms and also on the face This fact was well known to Jenner who held the opinion that such individuals, employed in milking transmitted the disease to cows giving

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[31] Little Vaccinal Lupus British Journal of Dermatology vol. xiii. 1901 p 93 This paper contains a review of the subject For other interesting facts see also Vaccine et Vaccination, op cit., supra (note 8)

[32] Report of the Leprosy Commission in India 1890-91, Calcutta, 1893 p 269

[33] Hansen and Looft's Leprosy translated by Norman Walker 1895, p 103

[34] Jordan on the Etiology of Erysipelas and its Relation to Pyogenic Infections in Münchener Medicinische Wochenschrift, No 35, 1901 p. 1371. See also abstract in British Journal of Dermatology January 1902, p [illegible]

[35] W Findlay and J W Findlay THE LANCET Feb 22nd 1902, p 506.

[36] G V Poore's Milroy Lectures THE LANCET Feb 25th (p 491 and March 4th (p 563) and 11th (p 676) 1899 Also in the Milroy Lectures and Other Essays 1902, p 6 Dr F S Palmer tells me he never saw a case during the 25 years that he practised at East Sheen.

[37] Private case-book A p 2[illegible]

[38] Private case-book. C p 271.

[39] I am indebted to Dr Radcliffe Crocker for permission to make use of this case which was seen by me whilst in charge of his hospital practice

[40] MacLennan Brit Med Jour June 8th 1901

[41] A. J Hall British Journal of Dermatology vol. xii., 1900 p. 55

the planting out of micro organisms by the nails It was evidently observed by Jenner[16] Where the lesions are numerous with much crusting it looks very formidable, and it is just such cases that have helped to make people prejudiced against vaccination, although vaccination has had nothing to do with the rash directly Eczema is a common complaint in babies and is frequently seen in those who have not been vaccinated But unfortunately with the public all skin eruptions that occur after vaccination are put down to the latter on the fallacious *post hoc propter hoc* principle

A more important but uncommon eruption is generalised vaccinia, a subject about which there has been much discussion as to whether it arose from auto inoculation or was conveyed through the blood When an irritating rash is present on the body at the time of the vaccination auto inoculation can account for the generalising of the vaccinia. On the other hand there are cases which appear to be in favour of the other view, which has many supporters in France Jenner[17] records instances where pre existing pimples and vesicles were converted into vaccinia pocks which kept pace with those on the arms in their progressive changes and further, which is an interesting point, afforded a perfect vaccine virus[18] Woodville in his account of his experiments records a number of instances in which patients developed a generalised eruption which resembled small pox This was quite contrary to the experience of Jenner, who concluded that the rashes described by Woodville had not been produced by the pure, uncontaminated cow pox virus, but that they might be explained by the fact that Woodville had inoculated a number of his patients with variolous matter on the third or fifth day after the vaccine had been applied and used lymph thus obtained for further cow pox inoculation Chauveau has shown that a general vaccine infection was possible by inducing an artificial general horse pox as it were in the horse by injecting the vaccine virus into the trachea and veins[19] In connexion with the subject of generalised vaccinia the interesting experiments of Bryce and Hicks may be alluded to They found, when a second vaccination was performed on a patient a few days after the first inoculation, that, assuming the latter to have been effectual, the second vesicle, in the words of Hicks, made immense strides to overtake the first.[20] Further, that admirable observer, Trousseau, has recorded a case of generalised vaccinia in which 27 vesicles exactly like vaccination vesicles[21] developed about the face, trunk and limbs on the eleventh day after vaccination in eight places Trousseau concluded that the rash was the result of auto inoculation, especially as the child had a fine sweat-rash at the time of the operation This led Trousseau to go on revaccinating subjects from day to day, from the fourth day onwards after the primary vaccination He found that after the ninth and sometimes the tenth day the inoculation was unsuccessful and that the earlier the re inoculation the more typical were the vesicles[22] With regard to auto inoculation the eyelids may become affected (vaccinal blepharitis) and lead to what Saemisch has called a vaccine-ophthalmia with keratitis[23]

Vaccinia gangrenosa is another very unusual condition Mr J Hutchinson[24] has described a case in which on the eighth day after vaccination a papulo-vesicular eruption appeared on the trunk which rapidly assumed a sloughing character The vaccine vesicles were unaffected Mr Hutchinson looked upon it as a true vaccinia passing on to a gangrenous condition and analogous to varicella gangrenosa. Sir William Stokes has recorded a case in which 48 hours after vaccination, purple and black spots appeared on the body, followed by gangrene The vaccine areas themselves were unaffected, and other children vaccinated with lymph from the same source exhibited no rash of any kind[25] This appears to have been a purpuric condition originally, but a "pemphigoid" rash is mentioned in connexion with the case, so that it may have been a hæmorrhagic bullous eruption I may add that the bacillus pyocyaneus has been isolated in dermatitis gangrenosa infantum, and moreover bullous eruptions have been observed in infections by that micro-organism. Bullous eruptions and a somewhat rare condition, dermatitis herpetiformis, have followed vaccination

I should like to say in passing that the inoculation of small pox in the human subject is now a misdemeanour, although at one time in this country so great were the ravages of small pox that it was considered an improvement to go through an artificially induced variola

Morbilliform and scarlatiniform rashes also sometimes occur, but they give no trouble Purpura is an extremely unusual eruption It may appear as minute punctiform hæmorrhages or the condition may be much more serious with extensive hæmorrhages into the skin, accompanied by febrile symptoms, epistaxis, hæmaturia, together with hæmorrhages into the vaccination vesicles, indicating profound changes in the blood or perhaps, in some cases depending on hæmophilia.[26]

I have seen the itch ascribed to vaccination as the rash appeared soon after the latter, but the discovery of the acarus exposed the fallacious reasoning of the patient

3 I now come to diseases inoculated with the vaccine virus at the time of the operation—a very important matter indeed and one which has led to no end of controversial writing on the part of opponents of vaccination I propose to deal in this part of my paper with syphilis, tuberculosis, and leprosy As to the first, there is no doubt as to syphilis having been communicated to healthy children and adults by means of vaccine lymph derived from congenitally syphilitic infants Instances of this unfortunate accidental syphilisation were faithfully recorded by medical men immediately they recognised them I need hardly point out that cases of the accidental mediate inoculation of syphilis occur from time to time quite apart from vaccination When the possibility of such an accident in vaccination became known the medical profession was on its guard Dr Radcliffe Crocker states that at the East London Hospital for Children, where the patients were the poorest of the poor, over 20,000 cases passed through his hands and he never saw a case of vaccinal syphilis, nor did any of his colleagues there, or he would certainly have heard of it Dr Colcott Fox has had a similar negative experience at another children's hospital[27] Now that calf lymph is in general use, inoculation of syphilis *vià* the lymph is a thing of the past It must not be forgotten, however, that in a certain stage of syphilis the blood of the patient is virulent and that an unclean lancet charged with such blood may be a source of danger in vaccination. Jullien has recorded a recent instructive instance of two surgeons contracting syphilis through wounds of the fingers whilst operating on a syphilitic woman just before the appearance of her secondary rash[28]

With regard to tuberculosis a number of investigators have looked in vain for the tubercle bacillus in the vaccine vesicles of phthisical patients and animal inoculation experiments with lymph from that source have been negative Now that human lymph has been given up the possibility of tuberculosis being conveyed from calves must be examined In the first place, tuberculosis in calves is very rare, but nevertheless the plan adopted in Belgium of making a necropsy of the animal immediately after the lymph has been collected is a sound one[29] The selection of vaccinifer calves should also be carefully made and animals having any sign of disease should be rejected Chauveau and Jusserand failed to produce tuberculosis in guinea pigs with lymph obtained from a tuberculous cow[30] Another element in the discussion of this subject is the opinion expressed by Professor Koch at the British Congress on Tuberculosis in 1901 that bovine tuberculosis was not communicable to man That inoculation of the skin by the holder, a plan originally recommended by Mareschal, a French army surgeon (*vaccinostyle individuel*), will be found useful After vaccinating a patient the pen is thrown away and a fresh one used for the next case.

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[16] Vide Note 4

[17] Ibid

[18] Reprint of W Woodville's Report on a Series of Inoculations, &c, in Crookshank op cit supra (note 4)

[19] Chauveau cited in Vaccine et Vaccination op cit. supra (note 8) p 56

[20] Thomas Watson's Principles and Practice of Physic 1848 vol ii p 793 As to Hicks see also Jenner's original papers in Crookshank, op cit supra

[21] It should be noted that the earlier writers on the subject used the word pustule" in the sense of vesicle Jenner himself admitted in op cit supra (note 4) (foot note p 6) that vesicle or pock would be a better term to employ than pustule

[22] Loc cit supra (note 2) p 64

[23] Rille: Encyklopädie der Haut und Geschlechts Krankheiten, 1900 p 250

[24] THE LANCET Dec 13th, 1879 p 873 cited by Poole op cit, p 113

[25] Medical Times 1880, vol i p 586 cited by Poole op cit, p 114

[26] Vaccine et Vaccination op cit supra (note 8) p 69

[27] Op cit supra (note 9) foot note p 325

[28] Neumann's Festschrift 1900 See also Brit Med Jour vol ii 1901 p 827

[29] Degive of Brussels cited in Vaccine et Vaccination, vide supra (note 8) p 155

[30] Op cit (note 8) p 164

Upper Gloucester place N W

A SECOND CASE OF SUCCESSFUL OPERATION FOR PERFORATION IN TYPHOID FEVER[1]

By ANTHONY A. BOWLBY C M.G , F R C S Eng ,

LECTURER ON SURGERY AT ST BARTHOLOMEW'S HOSPITAL.

THE patient was a boy, aged 10 years, who was admitted into St. Bartholomew's Hospital under the care of Dr Norman Moore on Sept 1st, 1900 He was in the third day of an attack of typhoid fever and beyond the fact that the case was severe and prolonged it called for no special comment except that after the temperature had come down to normal on the thirteenth day he suffered from a severe relapse on the twenty first day and had again a very high temperature, reaching 105 4° F on one occasion The date of the relapse was Sept. 19th. On Oct. 1st the temperature was still above normal (101°) and tympanites, which had been present throughout, was still well marked. There was also some crepitation at the bases of the lungs On the 2nd, after a slight shivering fit, the patient became blanched and cold, the temperature sinking to 97 6° but there was no subsequent evidence of hæmorrhage or pain On the 3rd he seemed to be better but the temperature was still 101° The abdomen was less distended and the bowels acted without enemata On the 4th the temperature was normal but the abdomen was again distended The pulse was 96 A little before 3 P M. he complained of some difficulty in micturition and while passing urine he was seized with severe pain in the abdomen The temperature half an hour earlier had been 102 6° but after the attack of pain the patient sweated profusely and it dropped to 98° For the next half hour the boy was screaming with pain and was exceedingly restless He then became quieter and collapsed, with sunken eyes, a cold sweat, and shivering The pulse had gone up meantime to 140 I saw him at 4 30 P M. with Dr Norman Moore and found his general condition to be as above described The abdominal wall was hard and fixed during respiration and I agreed with Dr Norman Moore that perforation had almost certainly taken place and quite concurred in his proposal that an operation should be undertaken at once At 5 P M therefore, two hours after the symptoms of perforation, the abdomen was opened in the middle line and at once free gas was found in the peritoneum. A considerable quantity of almost clear fluid welled up but there was no large collection of fæcal matter The intestines were so much distended that several coils had to be allowed to extrude and they were kept wrapped in hot towels Many areas of inflamed peritoneum indicated the affected Peyer s glands I then sought for the cæcum and after finding it I rapidly passed the small intestine through my hands till I found a perforation situated less than two feet from the ileo-cæcal valve. The bowel was not adherent or otherwise altered nor could any induration be felt in its walls, but the peritoneum corresponding to the shape of a Peyer s patch was very red and injected The opening in the intestine was quite small, being not much larger than a pin s head. I wiped the bowel clean and then closed the opening by five Lembert s sutures of fine silk. The greater part of the incision was now closed and a glass drainage-tube was placed in its lower end Owing to there being no complications the operation was completed in about 20 minutes and at the end of it the patient s general condition was none the worse for the handling and exposure of the bowel. The peritoneum was not douched but the intestines were carefully wiped clean and all fluid was completely mopped up from the pelvis and elsewhere with sponges For several days the boy remained very ill and in the early morning after the operation the pulse was still 150 the temperature being 100 4° There had been no sickness and flatus was passed. The patient was fed by nutrient enemata and only a little water or ice was given by the mouth. The abdomen remained distended After this time there was steady and rapid improvement except for some sickness on the 7th and a troublesome cough, so that by the 10th (six days after the operation) the boy seemed to be convalescent. On that day, however, he had a slight epileptiform attack and in the evening a more severe series of fits necessitating the administration of chloroform. This threw him back and weakened him but he again rallied and in spite of a return of severe convulsions on the 20th he ultimately recovered The tympanitic distension of the abdomen which had been so marked throughout continued till the end of his illness I saw the boy some months later and found him to be in excellent health

I have already recorded a similar case of operation for perforation of typhoid ulcer in vol lxxx. of the Transactions of the Royal Medical and Chirurgical Society (in conjunction with Sir Lauder Brunton) and in that case also, which had a similar satisfactory ending, the patient was operated upon late in an attack of typhoid fever, for he was in the sixth week of the illness and was at the time suffering from a relapse. In that case there were much induration of the perforated Peyer s patch and some consequent difficulty in suturing the aperture, but in all other respects the cases had much in common except that at the time of the operation the boy whose case I now record was much more ill than was the first patient and that there was greater distension of the abdomen

The two cases represent the only patients I have operated upon and there can be no doubt that they represent two lives saved. On the other hand however, I do not regard them as at all typical cases of typhoid perforation but rather as typical of a special class in which perforation occurs after the fever is practically over and in which the general condition of the patient is otherwise relatively good. In such patients as these the symptoms of perforation are generally well marked and the diagnosis is readily arrived at But in very many other cases the reverse is true, for it not infrequently happens that the perforation occurs when the fever is yet high in patients who are nearly or quite unconscious and in whom there is no perception or expression of pain and who may have distended and tympanitic abdomens before perforation occurs Many such patients are already at death's door and in not a few of such cases in addition to the perforation there are numerous other areas where the intestine is so rotten that its giving way is only a question of time It is not to be supposed that even if an ulcerated bowel is sutured many such patients can recover and in some of them at least the operation of suture may be practically impossible I saw at least one such case in South Africa with Dr H H Tooth in which the patient was quite unconscious and manifestly dying Dr Tooth suspected that there might be a perforation but as the symptoms were not clear no operation was undertaken and the same day the man died. A post-mortem examination showed that the intestine was so matted and adherent to the peritoneum and mesentery that even after death it could with difficulty be unravelled and though there was a perforation I do not think that it would have been discovered by operation, even if the patient s condition had permitted one to be performed.

As surgeons we are of course entirely dependent on physicians for the opportunity of operating on cases of perforation in typhoid fever and it is evident that it is for us to convince them that operations may save life. The case which I have recorded is one in which the saving of life was primarily due to Dr Norman Moore and in recording it I do not wish to suggest that all cases are likely to be so successful On the other hand I do think that in the present position of intestinal surgery there is good reason to advocate that the chance given by operation should not be withheld in any case of perforation and I would suggest that in all such cases where perforation is suspected a surgeon should be called in as promptly as possible.

Manchester-square W

WESTON-SUPER-MARE ISOLATION HOSPITAL.—On Dec 17th an additional ward which has been recently added to the Weston super Mare Isolation Hospital was formally opened by the chairman of the sanitary committee The new ward will provide accommodation for eight patients and has been erected at a cost of £300 The hospital now contains 28 beds rise to cow pox, this being further communicated to other milkers who were thereby rendered immune to small pox. The lesions occasioned by grease in man have sufficient resemblance to the cow pox to make one think of the possibility of such an infection especially in grooms, farriers, horse-keepers, and so forth Bosc and Bourquier[42] have recorded the case of a woman who according to them accidentally contracted sheep-pox (variolæ ovinæ) and developed variola like lesions about the hands and forearms

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[1] A paper read at a meeting of the Clinical Society of London on Dec. 12th 1902.

8 As to the influence of intercurrent diseases on vaccination and *vice versâ* Jenner[43] mentions the case of a boy who the day preceding the insertion of the cow pox had sickened with the measles Both diseases went through their usual phases uninfluenced the one by the other except that the vaccine vesicles enlarged without any surrounding efflorescence, which appeared later, having suffered a temporary suspension on account of the measles Jenner[44] had also noticed that papular eruptions which had long been troublesome were speedily swept away as a result of vaccination A similar effect is noted by Dr Radcliffe Crocker[45] as regards eczema which may sometimes be cured by vaccination, he further observes that eczematous children, otherwise in good health, may often be vaccinated without any aggravation of the eczema. This is a point of some practical importance Where there is danger from small pox, vaccination should be done in such cases on sound skin, the inoculated areas being carefully protected to avoid a transference of inoculable material to other parts of the child s body

Jenner saw scarlet fever develop on the eighth day after vaccination, but the only deviation in the respective evolution of the two conditions was just the same as in the case of measles which I have already mentioned—viz, the areola round the vaccine vesicle was delayed, but it appeared as soon as the patient got better of the scarlet fever It was otherwise, however, with the patient's sister Her scarlet fever rash and symptoms were interrupted in their development and were delayed until the vaccine vesicle began to subside and to dry up, when her throat became sore and the scarlet fever rash spread all over her[46] On the other hand, Dr Radcliffe Crocker[47] mentions a case in which the child was unwittingly vaccinated during the incubation of scarlet fever, which developed before the eighth day of vaccination. All four vaccination areas coalesced into a slough of the size of a crown piece, the child recovered. Trousseau[48] found that measles and scarlet fever arrested the vaccinia in its development, the latter resuming its course when the acute exanthem had subsided. The French observer further noted that variola and vaccinia developed simultaneously without influencing one another whereas other observers contended that variola was favourably influenced by vaccination performed during the incubation period of the former The fact is that it is the right thing to vaccinate as quickly as possible any unprotected individual who has been exposed to small pox.

As to syphilis, I have not seen any complications of either the syphilis or the vaccination in the later stages of a secondary syphilide Balzer[49] however, has recorded confluent sloughing of the vaccinated areas Such a complication might depend on various factors And it would be interesting to know if vaccination is influenced by chronic poisoning by alcohol, lead, and so forth, or by drugs If any readers know of any such facts I shall be glad of information on the point Trousseau[50] remarks that congenital syphilis either in the latent or florid state does not influence vaccination

Dr E W Goodall and Dr C Basan[51] record hæmorrhage into and around the vaccine vesicles in a girl, 11 years of age, who had been vaccinated a few days before an attack of diphtheria. She exhibited at the same time purpuric lesions about the extremities and on the trunk with bleeding from the nose and mouth About 11 days before the purpura she had been injected with 6000 units of antitoxin, this was followed by some urticaria which rapidly disappeared Dr Goodall and Dr Basan exclude the antitoxin as the cause of the hæmorrhages and rightly, I think, attribute it to the diphtheria poison itself Trousseau[52] long ago pointed out that petechiæ epistaxis, and ecchymoses occurred in diphtheria I have not seen vaccination influence an existing widespread psoriasis one way or the other, but psoriasis papules may appear on recently or old vaccinated areas occasionally Nor have I seen bad effects from vaccination in obstinate urticaria, although *a priori* one would expect an aggravation of the latter condition.

9 These considerations lead me to vaccination as a mode of treatment. It is well known that nævi can sometimes be cured by vaccinating upon them Care must be taken to scarify such very lightly Jasiewicz has gone extensively into the prophylactic and curative action of vaccinia as regards a variety of infectious diseases[53] This aspect of the matter has been dealt with to some extent in my previous remarks. But here Jasiewicz recommends the vaccine virus as a therapeutic agent on the principle that one toxin may neutralise or counteract another It may be pointed out, however, that by adding its own effects to those of the toxin already present in the body it may make matters worse. That one disease may influence another beneficially is illustrated by what has been observed with regard to erysipelas a spontaneous attack of which on the face, for instance, may act favourably on a lupus vulgaris This is the idea underlying the use of Coley's fluid

It would appear that vaccination has benefited whooping cough, a fact which Delobel and Cozette state was known to Jenner, but I have not come across the point in the papers of Jenner I have perused[54] Indeed, the French writers whom I have just mentioned say that they have personally observed whooping cough to be cured by vaccination[55] Influenza and pneumonia have also been improved, it is said It has been observed by Beaven Rake that leprosy was arrested in its development by vaccination[56] Of course, in leprosy it is sometimes difficult to tell what is due to treatment, as spontaneous involution of lesions may occur and amelioration may take place for a time without any active treatment at all As to phthisis, Tyndal has seen the febrile and other symptoms improve after several subcutaneous injections of two drops of calf lymph in 15 drops of distilled water and one gramme of glycerine[57] Winogradoff, having noticed that an intercurrent attack of variola improved pulmonary tuberculosis, is said to have also obtained good results from systematic subcutaneous injections of calf lymph in that disease.[58]

This concludes my survey of a subject of great interest. I have only taken a bird's eye view of it, for exhaustively dealt with it might be almost indefinitely expanded, the literature connected with it being enormous. It now remains for me to summarise. The upshot of my remarks is the necessity for scrupulous cleanliness. The operation is a trivial one but any interference with the continuity of the skin, however small, opens the door to infection. We can always learn something from opponents and rivals—that is, if we are not above being taught. The criticism of those who are against vaccination has directed attention to the necessity of all round cleanliness in vaccination. The next point of importance is the calf lymph It should be carefully prepared on the lines which experimental investigation has proved to be the right ones, absolute cleanliness being an essential feature. After the operation the vaccinated areas should be properly protected from the patient's nails and so forth In this way preventable rashes and complications will be prevented On the other hand there are certain factors which are not under our control, such as idiosyncrasy, renal inadequacy cardiac insufficiency, and so forth, but the eruptions which arise in these cases are usually of an evanescent and trivial nature When several patients are vaccinated at the same time with the same lymph these individual factors are brought out one patient will have a rash, the others exhibiting nothing of the kind.

The employment of the "*lancettes plumes*" on a metallic

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[42] Bosc and Bourquier La Presse Médicale No 73 1897 p 138 Also abstract in British Journal of Dermatology vol ix 1897 p 459

[43] Jenner: Further Observations on the Variolæ Vaccinæ 1799 See Crookshank loc. cit. supra (note 4) p 188

[44] Jenner: On the Varieties &c. 1804 (*vide* note 4)

[45] Radcliffe Crocker: Op cit (note 9) p 324

[46] Jenner: A Continuation of Facts and Observations &c 1801 vide Crookshank, op cit supra (note 4) p 261

[47] Radcliff Crocker: Op cit (note 9) p 325

[48] Trousseau: Op cit. pp 65 and 66

[49] Balzer: Cited by Radcliffe Crocker op cit supra (note 9) p 325

[50] Trousseau: Op cit. supra (note 2) p 65

[51] Goodall and Basan: THE LANCET Nov 30th 1901 p 1492.

[52] Trousseau: Op cit. (note 2) pp 363 et seq

[53] Jasiewicz: Bulletins et Mémoires de la Société de Médecine Pratique, 1890 p 453 Cited by Delobel and Cozette in Vaccine et Vaccination op cit supra (note 8) p 116

[54] Jenner: cited by Delobel and Cozette vide op cit supra (note 53) p 118

[55] Op cit supra (note 53) p 118

[56] Rake: Cited in op cit (note 53) p 119

[57] Op cit. (note 53) p 119

[58] Op cit (note 53) p 120

Let us now consider what these facts disclose concerning the diffusibility of the scarlet fever virus First let us take the 48 families wherein successful home isolation was conducted The patients were all children of working men. The houses consisted of a room, kitchen, and scullery on the ground floor with three bedrooms upstairs In each house a room was prepared for the patient, generally upstairs , occasionally, however, the front room on the ground floor was cleared for his reception This latter it may be stated, is separated from the kitchen or living room by a short passage about four feet square and one or two doors. Here, then, is a scarlet fever case inhabiting during the whole course of his illness and convalescence one of the apartments of a house (of dimensions described above) while throughout the whole of the same period susceptible children occupy with impunity the other rooms of the same dwelling Again let it be noted that in all those households the mother was necessarily obliged to act the double part of nurse and housewife. During those six or seven weeks she had to nurse, to feed, to wash and to attend to all the wants and requirements of the sick child and meanwhile she was at the same time cook, washerwoman, and general handmaid to the healthy members of the household Once more, during all those weeks she is passing to and fro between the infected and *non infected* apartments as frequently and freely as her multifarious and combined duties demand In each and all of those 48 houses this went on with perfect safety , there were susceptible children in every one of those houses. Nevertheless, throughout all those weeks, although there were daily and even hourly opportunities presented for the conveyance of infection through the medium of the mother, *no transmission* occurred.

As already mentioned, in each of the 34 houses of Division III , contact admittedly in each instance first took place a day or two before the occurrence of the second case—an admission strikingly confirmed by the great differences seen in the length of the intervals separating the occurrences in Division III. when compared with those of Division I It is very far from my desire or wish to appear dogmatic in any way, still I think a reasonable inference from the foregoing observations would favour the view that a healthy nurse or attendant on a *scarlet fever case does* not in ordinary circumstances carry the infection of scarlet fever, even from one room *to another*

For several years now I have been earnestly seeking after a genuine instance of a healthy person playing the part of a medium in the transmission of scarlet fever I have tacitly encouraged mothers to visit their neighbours' sick children, knowing full well that in this small community where everybody is pretty well known to me I should very quickly discover if any of the visitors conveyed the disease to their own homes I have seized every opportunity to instigate exposure on these lines in a great many other ways, with so far always the same negative results. For the sake of brevity fomites have not been touched upon , besides the mechanic does not generally carry such encumbrances to his workshop or the factory girl to her mill, and in any case should danger eventually be proved to lurk in fomites some simple regulations could surely be devised to dispose of them and to render them innocuous.

To sum up in this investigation we have had before us, say, Division III. 34 households, and *Division IV 48 households* To put it in other words, we have had under observation 82 different sets of *circumstances*, each, so far as our present knowledge goes, in every way calculated to promote the transmission of infection in the manner specified yet no transmission occurs It may be the weight of the scale containing the virus , it may be the drying or the rapid devitalisation of the virus or it may be some cause or condition as yet unsuspected which prevents the infection being carried by an attendant or nurse even from *one room* to another still the public have a right to demand from the medical profession a positive finding and *definite* pronouncement of the facts herein related and somewhat cursorily discussed.

In conclusion, let me add a case in point recently seen by me—that of a boy, six years of age, suffering from scarlet fever (there is no hospital provision in this district for scarlet fever) The boy is confined strictly to one room , no one enters it but the mother Three of his sisters have to-day been notified by the overlooker of the factory where they are employed that they are "stopped " until their brother is well. Now this means a loss of 30s a week to these poor people. Strange to say, however scarlet fever occurred in this family five years ago, and by conscientiously confining the then patient to her room all the others escaped The mother now resents this enforced loss very much and pertinently asks me why if she did not carry the infection from one room to another five years ago it can be possible now for her daughters to carry the infection to a factory two miles off?

Netherfield.

BENCE-JONES ALBUMOSURIA, WITH REPORT OF THREE CASES

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ALBUMOSE may appear in the urine as a result of pathological conditions and is dependent upon the decomposition of organised proteids except in cases of the enterogenic form. It may owe its origin to the action of bacteria upon tissues or it may result from the action of certain chemical poisons (phosphorus) It is also observed in connexion with the various cirrhoses of the liver, acute yellow atrophy, gastric cancer, gangrene, acute or chronic suppuration, acute inflammations of the serous surfaces leucocythæmia, the acute infectious fevers, after death of the fœtus and normally during involution of the uterus Rarely has Bence-Jones albumosuria been observed to be a co-existing feature of primary lesions of the bones (*myeloma*), and at least one of the cases reported below exemplifies this form of the condition In 1847 Henry Bence-Jones presented the first recorded instance before the Royal Society of London , and three years later MacIntyre published a clinical report of this case The discovery of Bence-Jones appears to have received but little attention for a period of 24 years when Kühne (Solly reported a questionable case, however in 1846) detected this substance in the urine , but it was not until 1883 that Kühne published a report of his observation in connexion with the clinical history by Stokvis. In 1889 Kahler and Huppert reported a case from a clinical and chemical standpoint respectively , Stokvis recorded a second case in 1891, Seegelken a case in 1895, and Bozzolo in 1897 recorded another under the title of 'Sulla Malattia di Kahler," thus recognising Kahler as the one first to designate the relation existing between albumosuria and primary bone lesions. Von Rustizky as early as 1873, however classified these lesions as ' *multiples myelom.*" Rosin (Senator) Ewald Fitz, Naunyn, Bradshaw, Ellinger J A. Milroy and J H. Wright contributed cases during this year Vladimer de Holstein Sternberg Askanazy, Raschkes, Hamburger Kalischer, Rostoski, Jochmann and Schumm and A. Gutterink and C de Groff have also made valuable contributions to the literature of the subject

Since the original publication of Bence-Jones's discovery of albumosuria associated with "osteomalacia fragilis rubra" there have appeared in the *literature* records of 21 cases in which neoplasm of the bones regarded as probable myelomata was disclosed post mortem In eight cases the tumours were observed ante mortem. In addition to those cases displaying a *co-existence* of albumosuria and primary myelomata von Jaksch and Fitz have each found albumosuria in a case of myxœdema and Askanazy noted it to be a prominent feature in one of lymphatic leukemia, while Zuelzer observed this body present in the urine of a dog poisoned by pyrodin. To the above cases 30 in all, should be added three of albumosuria that occurred in our own experience and are herewith reported.

CASE 1.—A man, aged 32 years first came under the care of one of us (Boston) The patient was exceptionally well developed and was fond of athletics He was born in California and had had the diseases of childhood, including scarlet fever at the age of 14 years, after which period he

A NEW DIFFERENTIAL STAIN FOR THE KLEBS-LÖFFLER BACILLUS OF DIPHTHERIA

BY J WICLIFFE PECK, F C S

AFTER using the method suggested by Neisser for staining the Klebs Löffler bacillus for some years, bacteriologists have to agree that it has a very limited use indeed In the examination of direct swabbings it is reliable in 60 per cent. of the cases only and if the culture on blood serum or Kanthack s serum agar is more than 24 hours old it is not reliable.

After making a number of experiments to find, if possible, a stain that will be of more extended use I have found one that partly satisfies the need The stain which I have used is Löffler s methylene blue and as a counter stain Neisser s brown The film is spread in the usual way, fixed in the flame, stained with Löffler s methylene blue for from three to four seconds washed quickly, then counter stained with Vesuvian 0 2 per cent aqueous solution for 30 seconds, again washed quickly, dried, and mounted in Canada balsam The film may be dried on the slide and stained without the use of a cover slip It is convenient to have two very wide mouthed, stoppered bottles of the stains, and the films simply dipped in for the proper time This method gives a better result in all instances in which Neisser's acetic acid stain has been used, and it has this great advantage that it is reliable for staining the Klebs Löffler bacillus from a culture on blood serum several days old I kept one culture at 35 5° C during a week and another at 20° C after incubating at 35 5° C for 24 hours, and while the former was very much involuted after five days the other was not so much so after eight days And I found that the new method, which might be called the ' Löffler Neisser method," was quite reliable for staining the former up to four days, while a good differential staining was obtained with the latter on the eighth day

For staining direct swabbings the Löffler Neisser stain is quite reliable In every instance which I tried of swabbings several days old I found the new method stained them well, while Neisser's method stained them very indistinctly or only indistinctly stained two or three organisms A dry four days' old swabbing was moistened with broth and two cover slip specimens were made. One, stained by the Löffler Neisser method, showed a large number of the Klebs Löffler bacilli clearly defined The other, stained by Neisser's method (30 seconds each) showed only three organisms resembling the Klebs Löffler bacillus and these were indistinct On cultivation the Klebs Löffler bacilli were in almost pure culture This stain is always ready at hand and is a very rapid method It is also interesting in being an alkaline stain, while Neisser's is very strongly acid The common mouth organisms do not stain in the three seconds that are required, and neither the bacillus of Hofman nor bacillus coryzæ segmentosus stain by this method The bacillus pseudo-diphtheriæ which is non pathogenic, occasionally stains by Neisser's and the Löffler Neisser methods, but after a number of attempts I only once succeeded in staining the (20 hours' old) organism by these methods. After three days I could not get it to stain by either method The very luxurious growth, fine orange yellow colour, and morphological appearance with ordinary blue staining preclude the possibility of mistaking this organism. Löffler s blood serum gives better results than serum agar and, contrary to what I expected, the Klebs-Löffler bacillus in pure culture grows better on a seven weeks' old blood serum than on one 10 days old, while the difference in the staining properties is not worth considering Agar being an unfavourable medium and producing involution forms so quickly is unsuitable for cultivating the Klebs Löffler bacillus and films from this medium refuse to be stained by either method One pure culture in milk two days old and another four days old stained well with the Löffler Neisser method but gave a negative result with that of Neisser The organisms are found to be clumped together in small masses so that in milk examination the diagnosis would be difficult.

The results mentioned above are the outcome of very numerous experiments with a large number of cultivations from throats and swabbings

I have to express my indebtedness to Dr F A. Bainbridge, of the Hospital for Sick Children Great Ormond-street, and of St. Bartholomew's Hospital for giving me many of the cultures I have used and for his kind advice.

Hospital for Sick Children Great Ormond-street W C

THE DIFFUSIBILITY OF SCARLET FEVER VIRUS

BY JOHN SUTHERLAND, M B , C M , B Sc EDIN.

IN conducting an inquiry lately in an epidemic of scarlet fever directed mainly towards the question of home isolation several noteworthy features relating to the natural history of that disease were disclosed, among which one in particular struck me as important and which, so far as I am aware, has not hitherto been remarked upon—that is, the wonderfully low diffusibility of the scarlet fever virus In the literature of scarlet fever it is generally assumed that this exanthem is carried and propagated by various media—e.g , fomites, visitors, &c —and illustrative examples are given wherein healthy persons coming from a scarlet fever case or from an infected dwelling are said to have carried the infection and communicated the disease to other persons living many miles distant from the supposed source. This means, in other words, that particles containing the virus in some way or other adhered to those persons or to their apparel and retained vitality until such time as the virus got implanted in the new victim The virus cannot certainly retain its vitality indefinitely or very few houses in England would be free from it. Scarlet fever is intensely contagious, and throughout the whole course of the epidemic I have seen only one instance of a susceptible child escaping this disease after contact with a desquamating case. The diffusibility, to some extent, at any rate, must depend on how long the virus can survive and retain its "striking" power after its dissociation from a desquamating subject exposed at the same time to ordinary conditions, meteorological and otherwise If it be true that healthy persons can convey the infection in the way described, then we must assume that either the virus has a separate existence or that it in the form of spores or otherwise remains effective for an as yet unknown period after dissociation from its host.

Again, the question of whether healthy persons do actually carry the infection from one to another is very important in another way, for founded on the assumption that such is the case are many restrictions on labour which bear hardly on the poorer classes In this inquiry 224 cases of scarlet fever occurring in 132 households came under review and the following is a short summary of the result. The plan of isolation consisted mainly in confining the patient to a room until such time as he or she was released by order of the medical attendant and success or failure depended on whether the other susceptible children of the house escaped or not. ' Susceptible children" means those unprotected by a previous attack of scarlet fever

Division I—Ten families either could not or would not keep the infected children apart from the others, so second cases occurred in every one of these homes after intervals of 2, 3, 6 7 8, 9 11, 12, and 14 days respectively, reckoning from the dates on which each of the first cases was seen professionally

Division II—In 40 households the patients were either the only children of the house or the only susceptible ones This group, therefore, affords us no data either one way or another

Division III—In 34 families a very well intentioned attempt at isolation was begun and maintained for periods ranging between 21 and 43 days The respective intervals in this division between the first and second cases were 40, 43, 34, 36, 33, 30, 31, 27, 29, 24, 23, 19, &c , days Now in each of those 34 families a dereliction of duty was admitted. The second case had been in contact with the isolated child two days before he sickened Sometimes the children got together by stealth others came in contact through the connivance of their parents, but the result was invariably the same—a fresh victim in two days

Division IV—In 48 families this home isolation proved pre eminently successful Susceptible children lived in each of these 48 houses and they all escaped

Ophthalmoscopic examination made by L. Webster Fox showed colloid deposits above and below the optic nerve and retinal hæmorrhages in both eyes There was no evidence of optic neuritis, but there was considerable arterio-sclerosis

On Jan. 7th 1902 the patient returned to his home in the country and his physician there reports that on account of racking acute pains in the inferior extremities he was unable to leave his bed. Exertion seemed particularly painful. About one month ago this patient died. No necropsy was permitted.

CASE 3.—A man, aged 33 years of German descent though an American by birth, first came under the care of one of us (Anders) on Oct 12th, 1900 The patient's habits as to the use of intoxicants had been rather intemperate up to a few years ago since which time, however, no stimulants of any description had been used The following significant family history was obtained the mother died from cirrhosis of the liver eight months ago , the father was living at 66 years of age and was afflicted with double cataract , he also suffered from gout and rheumatism. One paternal uncle died from Bright's disease The patient had had the diseases of childhood and from the seventh year of age had annually suffered from an attack of tonsillitis When 18 years old he had diphtheria, followed by facial paralysis of the left side , this complication was ascribed to the application of caustic to the throat. Complete recovery did not ensue and there is still noted an occasional twitching of the muscles, with a tendency to contracture of the facial muscles of the affected side. An ophthalmoscopic examination made by L Webster Fox gave this result "The right eye shows colloid degeneration of the retina as well as sclerosis of the blood vessels. The white deposits so characteristic of chronic interstitial nephritis are defined above and around the macular region. The macula itself has escaped its destructive influences, which accounts for his good vision There is a suspicion of hæmorrhage here and there throughout these deposits. The optic nerve shows slight infiltration , this may be problematic. The left eye shows a normal fundus. There are no deposits and no destruction of the retina The arterio-sclerosis of the blood-vessels is not so pronounced as in the right eye. This is rather peculiar as the blood vessels of both eyes should present the same characteristics The pupillary reaction is normal and the muscles are perfectly balanced '

The present illness was discovered six years ago during an application for life insurance, when albumin and tube casts were discovered in the urine No other subjective or objective signs of kidney disease, however put in an appearance until three years since, when he first observed some malleolar œdema This symptom had recurred at long intervals and he had also suffered from occasional headaches during the same period The physical signs at the time of his first visit showed moderate enlargement of the left ventricle with distinct accentuation of the aortic second sound and slight œdema of the legs The body surface looked pale. These signs have not undergone any noteworthy changes up to the present The urine contained Bence-Jones albumose and other morphological elements to which detailed reference is made below Examination of the blood showed that the hæmoglobin amounted to 69 per cent the red cells numbered 3 200 000 and the white cells 40 000 per cubic millimetre. A differential count gave polynuclear cells 65 per cent , large mononuclear 5 per cent , transitional 4 per cent large lymphocytes 15 per cent small lymphocytes 10 per cent. and eosinophiles 1 per cent , there were no nucleated red cells Poikilocytosis was marked Apart from some emaciation that has occurred during the last six months there has been no appreciable change in the general condition of the patient until the present.

THE URINE

CASE 1 —The urine was of a light straw colour and displayed a persistent froth on shaking , the 24 hours' product equalled 2900 cubic centimetres having the consistence of syrup and was faintly acid except for an occasional specimen which was neutral in its reaction , the specific gravity varied from 1002 to 1010 The quantity of urea was practically normal and the urine was found to be free from sugar The total amount of proteid by the Esbach method equalled 0 27 to 0 35 per cent. It was precipitated by nitric, sulphuric, and hydrochloric acids, but was not soluble in excess except by the aid of heat. 13 other reagents employed for the detection of serum albumin gave decided reaction for that body [1] Casts were not found at any time. The tests employed have been those suggested by Huppert, Mathes, and Milroy

1 More striking were the changes observed upon the gentle application of heat to the filtered urine. When heated on a water bath it showed a slight turbidity at about 50° C and at from 56° to 60° it became opaque and a white precipitate in the form of coarse flocculi was observed, which for the most part was redissolved at a temperature of from 90° to 95° C A test-tube filled to two-thirds of its depth was placed over the flame of a Bunsen burner so as to heat only the upper third of the column of urine. As the temperature reached from 52° to 54° C an opalescence was observed which developed into a dense cloud at from 56° to 60° C and formed a rather heavy coagulum when heated to a temperature between 60° and 90° C The addition of a few drops of dilute acetic acid to the urine caused the opalescence to appear at a lower temperature (37° C) In case the heating was continued at a temperature of from 95° to 100° C this coagulum would disappear (dissolve) in part and often entirely when ebullition was prolonged for one minute, but when allowed to cool the urine became equally as turbid as it was before the boiling temperature had been reached, or even more turbid

2. Upon the addition of concentrated nitric acid drop by drop to the urine after heating the upper third of the column it caused a precipitate to appear in the track of the acid as it traversed the cold stratum of the urine to the bottom where after the addition of several drops, a rather dense precipitate of a pink or yellowish hue was seen which on standing developed a golden colour

3 Nitric acid added drop by drop, shaking after each additional drop, caused a slight pinkish colour, affecting most the heated portion of the column

4 A specimen of the acidulated urine was gradually heated to the boiling point, cooled and filtered and the filtrate thus obtained apparently contained but little proteid displaying a slight opalescence with acetic acid but no precipitate resulted when nitric acid was employed. The latter caused a pink tint to appear which became yellowish on the addition of ammonia.

5 A quantity of the urine was placed in a beaker and heated to from 52° to 54° C., cooled and filtered The precipitate collected was dissolved by washing with a solution of soda of a specific gravity of 116 When thus prepared it gave well marked Millon's and biuret reactions The precipitate, when heated with lead acetate and caustic soda (30 per cent) became blackened due to the formation of lead sulphide, showing that the precipitate obtained in this manner contains sulphur in considerable amount. Boiling before filtering altered in no way these reactions

SATURATION WITH NEUTRAL SALTS.

CASE I.—A quantity of urine was saturated with a neutral solution of ammonium sulphate which completely precipitated the albumose. Saturation with sodium chloride in neutral solution caused a precipitate of but a portion of the albumose the filtrate giving a decided clouding upon the addition of a small quantity of dilute acetic acid , but the filtrate from the second precipitate did not contain albumose. The body with which we are dealing differs from proto- and hetero albumose in that it is not completely precipitated with sodium chloride in neutral solution. It resembles hetero-albumose in that it is precipitated on the addition of acetic acid, after saturation with sodium chloride, or magnesium sulphate, but differs from this body in being precipitated at a temperature of 52° C A test-tube containing urine saturated with neutral sodium chloride solution to which a few drops of nitric acid were added gave a precipitate on heating, which disappeared on nearing the boiling point but reappeared upon cooling Saturation with neutral salt exercised but little effect upon the precipitate caused by sulphuric and hydrochloric acids It was also precipitated by tannic and picric acids After acidulating the urine with dilute acetic acid and heating sufficiently to precipitate the albumose the temperature was raised sufficiently to dissolve it and upon the addition of a few drops of nitric acid the precipitate did not reappear with the usual rapidity upon cooling Urine saturated with neutral salt to which a few drops of nitric acid were added and the temperature rapidly brought to the boiling point showed but little tendency to form a precipitate upon enjoyed perfect health except for an attack of malaria at 20 years of age which was followed by several relapses continuing over a period of more than a year His father died from Bright's disease at 56 years of age and his mother from apoplexy at 55 years of age, both were large in stature weighing over 200 pounds A brother and a sister died during childhood (cause unknown)

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[1] Boston: New York Medical Journal 1902 (Albumin in the Urine A New Way for applying Nitric Acid and other Reagents)

The following is the history of the patient's last illness On Sept 20th 1900, while working at his trade he fell from the second storey of a building to the cellar, a distance of 20 feet. He was found unconscious by his fellow workmen and was taken to the hospital, where he soon recovered consciousness and was allowed to walk to his home As a result of this fall he complained of soreness in his back confined to the lower dorsal and lumbar regions, but he returned to his work a week later During the latter part of November, 1900, he developed a typical form of herpes zoster affecting the right side. At this time he was voiding 1900 cubic centimetres of a pale urine during the 24 hours He first noticed intense thirst which was allayed only by drinking large quantities of water During December he complained of weakness, dimness of vision which caused him to remain from work for a time, and pronounced frontal headaches Early in January 1901 he returned to work, when on lifting a piece of timber he was seized with severe pain in the lumbar region accompanied by a feeling of "giving away of the backbone" as he expressed it, and was carried to his home. At this time tenderness could be elicited by deep pressure over the lower dorsal vertebræ and this was also present though less marked, over the lumbar vertebræ and crest of the right ilium There was more or less constant pain in these regions and in the right thigh Two weeks later he experienced a similar 'giving away' in the right hip while ascending the stairs Repeated subsequent attacks of this nature affecting either the hip or back, were experienced In February the patient stated that he had lost 60 pounds in weight during the previous 12 weeks, he now weighed 135 pounds. There were a decided pallor and a peculiar expression the eyes having a staring prominence with œdema beneath them which at times involved the entire face and greatly distorted the features Œdema of the hands and feet was present, that of the latter increasing as the disease advanced

On March 10th the patient was seized with intense pain over the region of the liver which followed an attack of vomiting There was now present a small nodule apparently developing from the eighth rib in the mid axillary line, this soon grew to the size of a horse chestnut. Both the patient and the nurse insisted that this lump enlarged during each paroxysm of vomiting, and that firm pressure over the tumour diminished its size and gave the patient almost instant relief from pain At about this time he complained of pain (cramp-like) in the right thigh and of extreme tenderness on the inner surface of the femur at the junction of its upper and middle thirds On April 22nd (the date of death) this region displayed a tumour of the size of a hen's egg, developing from the femur Neither crepitus (a symptom to which other observers have called attention) nor fluctuation was present. A tumour had also protruded from the posterior border of the right tonsil which interfered with deglutition and prevented the use of solid foods This mass was also painful but the mucous surface of the throat presented nothing abnormal.

The area of cardiac dulness was slightly increased downwards and to the left. A soft systolic murmur was audible at the apex and was transmitted for a distance of three inches towards the axilla There was also a soft systolic murmur heard over the base of the heart (hæmic) and faintly transmitted to the carotids The pulse ranged from 75 to 120 beats per minute but was slow in proportion to the degree of prostration Later it became compressible and intermittent. There was no atheroma of the arteries Epistaxis was copious and frequent Vomiting both before and after the taking of food was an early feature and persisted throughout. Constipation developed early Cephalalgia was constantly present in the frontal region but occasionally became parietal and occipital. Upon firm pressure an extremely tender area was detected over the left orbit The hearing was dulled and tinnitus was annoying Insomnia became marked about Jan 1st, after which he was unable to sleep soundly without the aid of drugs Cramps in the lower limbs, at times limited to the thighs caused great suffering The voice was husky and the speech was slow and somewhat "drawn." In addition to the decided loss of sight before mentioned and the constant floating of specks before the eyes an ophthalmoscopic examination by L Webster Fox disclosed choked disc, retinal hæmorrhages, and the white deposits common to chronic nephritis Marked pain on voiding urine which continued throughout the act, was a late symptom The hæmoglobin was found to fluctuate between 52 and 70 per cent, the red cells varied from 3 500 000 to 4 100 000 and the white cells from 8000 to 16 000 per cubic millimetre The red cells reacted normally to stains but poikilocytosis was well marked In the stained specimens the white cells showed nothing abnormal. The urine contained Bence-Jones albumose (*vide infra*). No necropsy was permitted.

CASE 2.—A man, aged 43 years married and temperate as to eating and drinking came under the care of one of us (Anders) on Nov 18th, 1901 The family history revealed gout, rheumatism, and intense headaches among his ancestors The patient had had the diseases of childhood, including three attacks of measles, he had also been troubled with neuralgia during adolescence Three years ago he met with a bicycle accident which resulted in a fracture of the right leg, and although recovery ensued he had since then complained of pains in the seat of fracture. One year ago acute articular rheumatism developed and lasted for three weeks For a considerable period of time he had suffered at intervals from severe celphalalgia affecting the left side of the head In January, 1901, he first discovered certain urinary phenomena which were interpreted by his former physician as belonging to nephritis, he became dyspnœic and at times suffered from cardiac palpitation. The rheumatoid pains had recurred at brief intervals There had been no febrile movement observed, but there had been a rapid reduction of the body weight during the past four months, his usual weight in health was 219 pounds while when first seen it was 167 pounds Hand in hand with the rapid loss of weight the strength had also declined and the patient often alluded to a sudden "giving way' of one or other leg while attempting to walk There had been four severe attacks of epistaxis since March 1901 The speech was thick blurred and slow, the tone was dry and leathery' resembling the voice in myxœdema. The patient often complained of intensely painful shins, especially when they were warmed by the bed clothes Occasional pains affecting the lower extremities and wandering pains about the arms shoulders and back were complained of, and insomnia had been a troublesome feature during the past three months, although he slept well for a single night at intervals of several days Violent headaches in the form of hemicrania affecting the left side had been present for a period of about four months, this symptom was remittent and occasionally intermittent but it was exceedingly severe at some portion of each day, particularly during the early morning hours and demanded anodynes for its relief Pressure above the left orbit showed a painful tender spot corresponding with the point of emergence of the supraorbital nerve The sexual function had been in abeyance for a considerable period of time The appetite was poor and the liver function was decidedly sluggish In order to regulate the bowels the patient had been obliged to use a laxative daily Vomiting occurred at irregular intervals, at times on rising in the morning, and again though less commonly after food Walking early induced fatigue The temperature was slightly subnormal as a rule

The left ventricle was slightly hypertrophied and the aortic second sound was perhaps slightly accentuated, but the pulse was weak soft, and compressible. No murmurs were audible over the præcordium The eyes bulged and the gaze was staring, the skin presented a dirty yellow or sallow colour, the facies expressed suffering as a rule No tumour masses were detected, although the skull sternum, and shins were tender to pressure The urine contained Bence-Jones albumose a symptom to which allusion will be made later Examination of the blood showed that the red cells numbered 3 750 000 and the white cells 23,000 per cubic millimetre, the hæmoglobin amounting to 60 per cent. Poikilocytosis was marked and the red cells reacted normally to stains The differential count gave polymorphonuclear 72 12 per cent, large lymphocytes 8 17 per cent small lymphocytes 11 06 per cent., transitional 2 9 per cent, and large mononuclear 5 8 per cent. No nucleated red or eosinophilic cells were found 200 white cells were counted he bony skeleton. At times it is dull and constant, again cramp-like, lancinating and momentary Pressure over painful bones intensifies it, as does also exercise. While the pains are commonest over the flat bones the extremities often share this agonising symptom. Cramps involving the lower extremities are common. Toothache, loosening of teeth, maxillary necrosis, and salivation may develop Painful deglutition developed late in Case 1 of our series Facial neuralgia is mentioned in connexion with 30 per cent. of the cases Paralysis of the hypoglossal nerves and of the third division of the trifacial nerve is reported One of our cases (No 3) showed paralysis and twitching of the left side of the face. Cephalalgia is mentioned as a prominent symptom in 70 per cent. of the cases. In Cases 1 and 2 of our series it was most troublesome and in Case 3 it developed periodically Hand in hand with rapid and progressive emaciation are noticed pallor, anæmia, prostration, and gastro-intestinal symptoms as nausea, vomiting diarrhœa, and constipation In one instance jaundice developed early

Deformities—In 67 per cent of all cases deformities involving the bones of either the thorax, pelvis, spine, cranium, maxilla, or extremities were apparent during life. Pathological fractures occurring without apparent cause are a common complication and were observed in one-fourth of all cases Glandular enlargement is recorded in connexion with 15 per cent. of the cases but in none of these did microscopic study show the growths of the glands to be identical with those developing from the bones

Frequent painful micturition was a late symptom in one of our cases The urine is said to have been passed frequently in four other cases Epistaxis proved an early and annoying symptom in two of our cases and was occasionally present in the third. Changes in the voice are recorded in 16⅔ per cent. of the cases while in 12½ per cent. impairment of the auditory function existed. Tachycardia palpitation and dyspnœa are repeatedly referred to in the literature and were prominent in our cases. Insomnia was present in three of the cases furnished by the literature and in two of our series (25 per cent. of the cases) A moderate degree of pallor has been a constant feature. The skin is dry and harsh and at times presents a muddy or dirty yellow colour

Mention is made of impairment of vision in four cases furnished by the literature One developed glaucoma and another showed strabismus and double vision. In our cases failing sight was an early and progressive symptom. Ophthalmoscopic examination revealed sclerosis of the vessels, colloid degeneration of the retina, retinal hæmorrhages and the white deposits common to chronic nephritis Reference is made to a rather severe progressive anæmia in most of the cases for example, in those of Ellinger, Askanazy Vickery Musser and Fitz whilst in our series it was more moderate Record of a complete blood examination appears in connexion with but eight cases, including the three herein reported. Our cases showed leucocytosis of 16 000 23 000 and 40 000 per cubic millimetre respectively red cells between 3 200 000 and 3 750 000 and hæmoglobin between 60 and 70 per cent. Eosinophilic cells were diminished in one and absent in two Pneumonia as a complication is given as a cause of death in 12½ per cent of the cases The duration of the condition is usually less than two years, one case, however is recorded in which albumosuria persisted for more than eight years

Bence Jones albumose is a body more or less closely allied to peptones globin histon, and the digestive albumoses but it displays certain characteristics unknown to these substances. It is a normal constituent of spermatic fluid and may be found in the bone marrow in cases of myeloma. In conclusion Bence-Jones albumose when present in the urine is invaluable as a diagnostic feature in cases of obscure multiple myeloma in which no other symptoms of this disease exist. It also serves in differentiating multiple myeloma from other bone lesions as carcinoma, sarcoma, osteomalacia, &c Albumosuria if continuous is of grave prognostic significance and but a single exception is recorded wherein the disease has not proved fatal in less than two years Where the albumose has persisted for some time its disappearance signifies approaching danger and probably an early fatal issue. Since serum albumin is a common co-existent of Bence-Jones albumose its disappearance from such urine may also presage complications of a serious character

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Philadelphia.

AN AMERICAN PATENT —An American inventor has patented a combined lid or cover and canopy for coffins and caskets The specification and drawing are given in the *Official Gazette* of the United States Patent Office issued on Dec 16th The illustration shows a hinged or jointed framework attached to the upper edge of a coffin, by means of which framework the lid may be supported at a height above the coffin approximately equal to the depth of the coffin itself The purpose thereby intended to be served is not stated.

cooling At times this precipitate did not appear for one or more hours The method commonly employed in these analyses was to saturate the urine with a solution of neutral salt, then a drop or two of dilute acetic acid were added, and the temperature was gradually raised to the boiling point, the urine was filtered hot, and the collected coagulum was then readily dissolved by washing with a solution of soda of a specific gravity of 116, after which it was tested for Millon's, the biuret, and sulphur reactions The filtrate thus obtained contained albumose, contrary to what one would ordinarily expect. From 30 to 50 cubic centimetres were placed in a beaker and a drop of hydrochloric acid was added stirring gently, when a few drops of phosphotungstic acid were added and heat was gently applied which when prolonged for a few minutes caused a copious precipitate to collect at the bottom in the form of a rather tough whitish mass. The clear supernatant fluid was decanted and this second precipitate was washed and dissolved in a solution of soda of a specific gravity of 116 adding drop by drop This usually gave a colourless mixture, but occasionally it was noted to possess a blue tint which disappeared when the specimen was gently heated A 1 per cent solution of copper sulphate was now added drop by drop when a purple colour would appear, rapidly *changing to a pink or rich claret. On standing a golden* yellow precipitate collected at the bottom of the tube The second precipitate when dissolved was also treated with Millon's reagent and gave a bright red colour

In Bence-Jones's, Kühne's, and Matthes' cases the proteid contained phosphorus while in Milroy's case not a trace of phosphorus was found. No such studies were conducted in connexion with our cases Neither were Hofmeister's, Noel Paton's or Hopkins and Pinkus's methods employed for the crystallisation of this proteid.

Microscopic study showed the urine to contain few leucocytes, an occasional red blood cell epithelial cells (bladder), and a few bacteria cocci and bacilli which were only present in the neutral specimens No renal casts were found though many specimens were centrifugated and carefully examined Polyuria was present in one of Hamburger's cases in which the patient voided 3500 cubic centimetres daily, while Kahler's patient voided 2230 cubic centimetres In Case 1 of our series the patient passed 2900 cubic centimetres per diem while in Cases 2 and 3 the patients passed 2500 and 2300 cubic centimetres respectively

CASE 2 —The urine was as a rule feebly acid but was occasionally neutral. The 24 hours' product was 2500 cubic centimetres, more recently only 1875 cubic centimetres There was froth in excess, the urine was of a light straw colour and the specific gravity ranged from 1004 to 1012. The standing specimen showed only a slight amount of sediment The total proteid estimated by the Esbach method ranged from 0 233 to 0 0012 per cent Over a period of several months albumose was present at each analysis the tests detailed above having been employed During the last month of life the total amount of proteid was much reduced and a reaction for albumose could not be obtained In this particular it resembles Stokvis's case in which the albumosuria disappeared three months before death The albumosuria, however did not assert itself in his case until late in the course of the disease, and this may have been true of our case since the patient had been ill for a long time and had lost 60 pounds in weight before consulting one of us (Anders) Microscopically the centrifugated specimens contained bladder epithelium, amorphous urates few leucocytes, and an occasional red cell Casts were not found Certain of the specimens contained many bacteria (motile bacilli) and the question as to how this condition might influence the reactions for the Bence-Jones body naturally suggested itself, and further observation showed that the bacteriuria, when present, exercised no influence upon the reactions for albumose

CASE 3 —The urine was usually clear, colourless and acid, the 24 hours' product equalled 2300 cubic centimetres, the specific gravity ranging from 1008 to 1012 The total amount of proteid estimated by the Esbach method varied from 0 01 to 0 03 per cent Serum albumin was always present in large amount Bence Jones albumose which was first found on Oct 25th, 1901 was not a constant constituent until recently, it has been of late noted at each examination. When the urine contained albumose it was always noted to be of the consistence of syrup and when a drop was evaporated nearly to dryness it was found to be markedly viscid. This appears to be the sixth recorded instance in which urine containing albumose resembled syrup In Case 1 of our series it was also observed Microscopically, small hyaline, granular, and large (so-called amyloid) casts were always present, there were few epithelial cells, and leucocytes were occasionally found Casts were present in Bence Jones and MacIntyre's case and mention is made of their having been found in cases cited by Senator, Fitz, Hamburger, and Raschkes

Albumose resembles, in many respects, histon which may under certain conditions be derived from nucleo histon, a proteid of the leucocytes According to Milroy, histon resembles more closely globin than albumose and seems to be intermediate in its properties between acid albumin and albumose. Histon is precipitated from acid solutions by ammonia, while in albumose no precipitate occurs Lilienfeld found that this body (histon) yielded a precipitate when heated, which was soluble in dilute acids It was precipitated on the addition of nitric acid, this precipitate disappeared on heating to reappear on cooling It gave a distinct rose-pink colour with copper sulphate and caustic soda Huppert first observed the resemblance existing between albumose as found in Bence-Jones albumosuria and the proteid constituent of hæmoglobin. Schultz has also studied these bodies and his conclusions are essentially the same as those of Milroy "*The two bodies resemble one another in their* behaviour on the addition of hydrochloric and nitric acids and also in the fact that they both give the biuret reaction. The albumose differs from globin in being less easily precipitated by the addition of neutral salts, in giving a distinct reaction with Millon's reagent and in containing loosely combined sulphur" When precipitated by heat globin is readily soluble in dilute acids, a feature less marked in albumose

A review of the cases of albumosuria available in the literature 30 in number, and a more careful study of our own three examples reported above, making a total of 3 cases appear to warrant the following inferences

Etiology —Albumosuria is a condition which manifests itself after the age of 30 years Of our series one occurred at 32 another at 33 and a third at 36 years of age. Of the cases found in the literature one developed at 24, another at 37, 10 between 40 and 50 one between 50 and 60 and seven between 60 and 70 years of age In the remaining cases the age could not be ascertained Males are affected in 80 per cent. of the cases In 15 per cent. of the cases (including two of our own) there is a history of an accident inflicting rather severe traumatism Primary lesions of the bones which should be regarded as multiple myeloma figured in 80 per cent of the cases Of these the bones of the chest, vertebræ and pelvis suffered most destruction while one fourth likewise presented involvement of the long bones—femur, radius, and humerus An extreme grade o anæmia has been regarded by many writers as a predisposing factor, while others consider the anæmia to be secondary t myeloma. According to the blood findings in our own cases the latter view is probably the correct one. Experimentally albumosuria results from the administration of pyrodin.

Symptomatology —Albumosuria may be persistent, transitory, or less commonly remittent occurring in variabl degrees at different hours during the day In certain of the cases the urine presented this phenomenon (albumosuria after the disease was well advanced while in others it disappeared when the disease was at its height. Where the urine contained both serum albumin and albumose the former has been noted to be absent a few days before death In but two instances was the percentage of albumose estimated. The specific gravity ranged from 1040 to 1004 In six cases, including two of our own (Nos 1 and 3) the urine resembled syrup Polyuria is mentioned b Kahler, Kalischer and Hamburger and has been prominent feature in our three cases Serum albumin i stated to have been found in conjunction with albumose i 30 per cent of the cases nearly all of which showed eithe hyaline or amyloid casts A small amount of serum albumin was present in two of our cases in the third th percentage was large, while only one of them showed tub casts We are forced to regard albumosuria as a conditio not dependent upon any known pathological changes in th kidneys themselves, but one that may appear in connexio with renal lesions Pain is an almost constant feature, single exception existing It is usually referred to a bone pains rheumatism lumbago, neuralgia, &c. Th pain occurs without apparent cause, is severe, and is ofte accompanied by a 'giving away" of some portion o ength some irritation of the nasal mucous membrane nerally occurred, as evidenced by the animal standing up its hind legs and rubbing its nose with the fore paws for me little time. A 2 per cent. solution generally led to lema of the ears after a few days. One cubic centimetre a 1 per cent. solution injected about every other day presenting a proportion of about 0 00045 gramme per 100 ammes body weight led to progressive emaciation when olonged for more than a fortnight 200 grammes being st in nine days Doses of this strength would amount to out 0 006 per cent formic aldehyde in the blood, 0 002 er cent. solutions in broth have a noticeably inhibitory tion on bacillus anthracis (Flügge)

4 Chinosol ($C_9H_6NKSO_4$) in doses of 0 002 gramme per 0 grammes body weight almost invariably produced transiry paralysis, 0 0004 gramme to 0 0005 gramme per 100 rammes body weight could be given about every other day r ten days without adverse symptoms, but the weight then ll progressively, although the injections were suspended. his dose amounts to a solution of from 0 005 per cent 0 006 per cent in the blood, the former strength has een found by Benecke[15] to produce an antiseptic effect n anthrax bacilli in nutrient media after an exposure of 24 ours

5 The mixture of formic aldehyde and chinosol was given n 0 5 cubic centimetre doses each drug being represented n a proportion of 0 00028 gramme per 100 grammes body eight. The toxic effects (loss of weight and general ymptoms of malaise) were however, so marked even after wo or three injections that no further experiments were nade

6 Protargol in doses of from 0 0002 gramme to 0 0003 ramme per 100 grammes body-weight every second or third lay produced steady loss of weight from the beginning arger doses occasionally produced paralysis. This repreents about 0 004 per cent solution in the blood. Benario[16] tates that a 0 01 per cent. solution of protargol has no nhibitory effect *in vitro*

7 Sodium taurocholate is the most active antiseptic of the substances found in bile It is however very toxic when injected intravenously in rabbits 0 00005 gramme per 100 grammes body weight injected every other day producing progressive emaciation after five days. The solution in the blood was 0 0007 per cent. The exact antiseptic power of this substance has not, so far as I know, been accurately determined

The conclusions drawn from this series of experiments are —1. That perchloride of mercury oxycyanide of mercury, and protargol cannot be injected intravenously into rabbits in sufficient strength to produce an antiseptic effect lasting over several days 2. That a mixture of chinosol and formic aldehyde is too toxic even in minute doses to be of use for practical purposes 3 That chinosol or formic aldehyde can be injected intravenously so as to produce a solution which would have an inhibitory action *in vitro* 4 That sodium taurocholate can be injected in small doses but that toxic effects manifest themselves after a few days

In the second series of experiments the effects of injections of the above substances on infected animals were investigated. Perchloride of mercury however was not tried as former observers have reported very unfavourably on its action Owing to its toxicity the mixture of chinosol and formic aldehyde was likewise omitted. The anthrax for inoculation was prepared as follows The blood of a guinea pig recently dead from the disease was planted on an agar tube and incubated for 24 hours at 37° C. The purity of the cultivation having been established by microscopical examination a small platinum loop holding about 0 3 milligramme was filled with the growth and transferred to 10 cubic centimetres of broth for 16 hours at 37° C No spores were detected in this growth Six rabbits were then inoculated intraperitoneally with 0 5 cubic centimetre of the cultivation which had been diluted with an equal volume of sterile broth and well shaken up so as to form a homogeneous emulsion The drugs selected were then injected into five of the rabbits in the following proportions oxycyanide of mercury 0 00005 gramme per 100 grammes body weight formic aldehyde 0 0007 gramme per 100 grammes body weight, chinosol 0 001 gramme per 100 grammes body weight, protargol, 0 0004 gramme per 100 grammes body weight, and sodium taurocholate 0 00006 gramme per 100 grammes body weight These injections were repeated every 24 hours, those of chinosol and protargol, however, being reduced to one half the original proportion after the first dose. The oxycyanide, formic aldehyde, and chinosol rabbits were found dead on the fifth day The rest, including the control animal survived Post-mortem examination which included opening the thorax and abdomen under full aseptic precautions and the making of cover slip preparations and agar cultivations from the blood of the heart and spleen showed that all the animals died from anthrax septicæmia. The three remaining rabbits on the eighth day after the first inoculation were re inoculated with a dose of anthrax prepared in the same way as the first only of twice the strength the broth cultivation not being diluted Protargol and taurocholate of sodium were injected in the same proportions as before The taurocholate rabbit lived three days the control rabbit four days and the protargol rabbit four and a half days after the second injection The post-mortem methods and results were the same as in the first three cases.

Another series of six rabbits was then inoculated with the stronger dose of anthrax emulsion in the same manner as on former occasions Five of them were injected daily in the following proportions oxycyanide of mercury 0 00005 gramme per 100 grammes body weight, formic aldehyde, 0 001 gramme per 100 grammes body weight, chinosol, 0 0005 gramme per 100 grammes body weight protargol, 0 0003 gramme per 100 grammes body weight, and sodium taurocholate, 0 00005 gramme per 100 grammes body weight. The injections were repeated daily till the death of the animals, which occurred in the following order oxycyanide of mercury and sodium taurocholate, died after two and a half days, protargol died after three days, formic aldehyde and control died after three and a half days, and chinosol died after four days Post-mortem results showed that all animals died from anthrax In no case was there any evidence of an inhibitory action on the part of the antiseptic.

As in the case of formic aldehyde and chinosol a sufficient dose could be administered to obtain what *in vitro* would be an antiseptic action a further experiment was tried with these substances, the organism chosen being the pneumococcus owing to its more feeble resistance to bactericides This organism was grown from a virulent strain on standardised blood agar tubes one loopful (0 3 milligramme) being diluted 100 000 times in sterile broth and 1 cubic centimetre of the emulsion injected subcutaneously The dose, therefore, was 0 00001 loopful The proportion of the antiseptics injected was formic aldehyde 0 0021 gramme per 100 grammes body weight, chinosol, 0 003 gramme per 100 grammes body weight, and the dose administered three times during the first day On the second day two doses were given of formic aldehyde 0 0025 gramme per 100 grammes body weight and chinosol, 0 0035 gramme per 100 grammes body weight. On the third day the formic aldehyde rabbit received 0 0029 gramme per 100 grammes body-weight twice and the chinosol rabbit 0 0044 gramme the latter animal dying a few hours later The former animal died during the next 24 hours The control died on the sixth day Paralysis was observed after each chinosol injection The post mortem results were positive.

From these experiments the following conclusions may be drawn (1) that rabbits injected daily with non toxic doses of oxycyanide of mercury, formic aldehyde chinosol protargol or taurocholate of sodium are not thereby protected from the usual effects of a previous inoculation of virulent anthrax, and (2) that chinosol and formic aldehyde in large doses (toxic) so depress rabbits infected with the pneumococcus that they die sooner than an untreated animal

Generally then it may be said that at present there is no experimental evidence which would warrant the assumption that the course of a septicæmia in animals can be influenced favourably by the intravenous injection of antiseptic substances and that the only result to be obtained by pressing such a treatment beyond the maximum non toxic dose is to hasten the death of the animal In view of the results described in this paper and those obtained by former investigators it seems useless to continue trying to apply clinically a method which while by no means free from special dangers and difficulties is at present unsupported by any experimental evidence either as to its present advantages or future prospects

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[15] Centralblatt fur Bacteriologie Zweite Abtheilung 1897 Band III p 6

[16] Deutsche Medicinische Wochenschrift Band xxiii p 82, T 1897

INTRAVASCULAR ANTISEPSIS

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THE idea that drugs might advantageously be administered by direct injection into the circulation was first started by an English mathematician and architect and has had its latest exponent in an Italian Cabinet Minister Sir Christopher Wren in 1656 was the first to carry out the "noble anatomical experiment" and the medical profession has coquetted with the method ever since—exaggerated enthusiasm for it alternating with absolute neglect Ettmüller, Purmann, Major, and Escholtz during the last half of the seventeenth century, and Percy, Majendie Scheel, and Dieffenbach during the first quarter of the nineteenth century gave the method extended trials Since the latter period, Oré and Halford endeavoured to introduce it for special purposes but met with no lasting success, whilst recently Baccelli Landerer, Maguire and others have revived it in connexion mainly with the treatment of bacterial diseases or diseases presumably of parasitic origin That it is possible to introduce small quantities of a large number of substances directly into the veins cannot be denied but that any great advantage can be obtained by such a procedure has never as yet been experimentally demonstrated The advocates of the "Chirurgia Infusoria," as Major called it, have based their opinions as to its merits on various grounds, and it is only with the attempts to carry out one of the recent theories for its application that the present paper will deal. For many years experimenters and clinicians have been endeavouring to apply antiseptic principles to the treatment of septicæmic diseases Baccelli, who introduced the intravenous injection of perchloride of mercury in syphilis (a proceeding which, after prolonged trial throughout Europe, has been practically abandoned as presenting no special advantages) extended his method to epidemic cerebro-spinal meningitis, acute rheumatism, and other diseases notably aphtha epizoötica in cattle His early successes with the last mentioned ailment have not however, been attained by other observers , in fact, it has been conclusively shown that perchloride of mercury injected intravenously has absolutely no effect either in preventing or modifying an attack.[1] The effect was undoubtedly intended to be that of an internal antiseptic but a dilution strong enough to harm any bacteria living in the blood could not be obtained with a non toxic dose of the drug Maguire and Ewart[2] in this country have recently tried to render the lungs aseptic by injecting comparatively large quantities of formic aldehyde and protargol respectively 200 tuberculous patients have been treated by the former method and the results except in severe cases are reported as successful. A solution of formic aldehyde (1 in 100 000 in the blood) can be passed through the lungs for half an hour while Ewart has succeeded in flushing the smaller circulation with protargol of a strength equal to nearly 1 in 500 Of these two methods only the latter can be said *primâ facie* to have any chance of success the formic aldehyde solution being too weak to exert any effect *in vitro* The clinical evidence however is according to both experimenters, encouraging Credé[3] in Dresden has injected a preparation of citrate of silver, but the exact antiseptic power of the solution *in vitro* has not been accurately determined, so far as I am aware and the clinical results are too few in number and too miscellaneous in character to carry much weight.

As against these clinical experiments there is a growing mass of laboratory work which may be said to be wholly unfavourable to the idea of intravascular antisepsis In 1887 Behring[4] found that oxide of silver when injected in non lethal doses into rabbits guinea pigs, and mice infected with anthrax rather lengthened the life of the animals In toxic doses the anthrax bacilli were only rarely found post mortem in the blood and organs

The late Dr J W Washbourn[5] in 1888 injected creoli subcutaneously, but failed to cure either rabbits or mice though fewer anthrax bacilli were found in the animal treated Fischer and Fricker[6] tried intra peritoneal injections of formic aldehyde in guinea pigs inoculate with tubercle, but found that in all cases the contr animals survived those which had received the injections In 1884 Cash[7] succeeded in curing rabbits o anthrax by hypodermic injections of perchloride of mercury The injections were made for some weeks before inoculatio and were not by any means uniformly successful Koch and Behring,[9] who repeated his experiments failed to ge positive results, and Cadéac[10] stated that dogs treated in this way actually had their resistance to anthrax considerabl diminished During the past year Spissu[11] and Serafini made some accurate and extensive investigations with the same drug The former observer determined the maximum non lethal dose for rabbits at 0 0003 gramme per 10 grammes body weight, but found that even toxic doses failed to prevent the growth of anthrax bacilli in the blood Serafini's dosage was 0 00027 gramme per 100 grammes body weight and he also had negative results both with anthra and fowl cholera in rabbits With a view of obtaini further evidence on this subject the following experiment were carried out at the Jenner Institute of Preventiv Medicine during the summer of the past year I planning these experiments I had two objects in view firstly, to test the toxicity of various antiseptics when injected into the veins of rabbits and secondly to discove if any of them exerted an influence on the course of a artificially produced septicæmia. The actual injections were kindly made for me by Dr A Macfadyen

The following substances were chosen for the first series of experiments (1) perchloride of mercury, (2) oxycyanide of mercury, (3) formic aldehyde, (4) chinosol, (5) a mixture of formic aldehyde and chinosol, (6) protargol and (7 taurocholate of sodium In all cases the solutions were freshly prepared for each injection, the substances being carefully weighed on a chemical balance, the injections were made with antiseptic precautions into the marginal veins in the rabbit's ears The idea was so to regulate the doses that a number of injections could be made on successive days not merely one large injection at a given time after infection as was the case in Spissu's and Serafini's experiments In this way I thought it possible that some tolerance of the drugs might be established

1 Five rabbits were treated with perchloride of mercury in various strengths, but even in dilutions of 1 in 2000 doses of half a cubic centimetre repeated at intervals of about 48 hours produced progressive emaciation, while larger doses (six cubic centimetres of 1 in 1000) repeated daily for three days gave rise to diarrhœa and death In the former case the proportion of perchloride of mercury was 0 00001 gramme per 100 grammes body weight, which would approximate to 0 00013 per cent solution of the salt in the total volume of the blood , 1 in 2000 perchloride of mercury being necessary to kill anthrax bacilli in blood serum (Behring[13]) no further experiments were made with this substance

2. Rabbits were found to tolerate oxycyanide of mercury ($HgOHg(CN)_2$) in a proportion of 0 00004 to 0 00005 gramme per 100 grammes body weight which would produce a solution of about 0 0006 per cent to 0 0007 per cent in the blood De la Croix[14] found that 0 00125 per cent was necessary to inhibit the growth of anthrax in broth Larger doses, however, were not found practicable as the animals rapidly lost weight and died

3 Formic aldehyde in 1 per cent. solution can be injected with safety in small doses Two cubic centimetres of a 1 in 65 solution produced in one rabbit an immediate discharge of mucus from the nose and with solutions of this

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[1] Journal of Comparative Pathology and Therapeutics 1902, p 87

[2] Proceedings of the British Congress on Tuberculosis 1901 vol iii pp 438 et seq

[3] Berliner Klinische Wochenschrift Band xxxviii 1901 p 941

[4] Deutsche Medicinische Wochenschrift Band xiii p 830 Sept. 22nd 1887

[5] Guy's Hospital Reports 1888 p 365

[6] Transactions of the Chicago Pathological Society Feb 10th, 1902, p 61

[7] Local Government Board Medical Officer's Report 1884, p. 200 1885 p 185

[8] Mittheilungen aus dem kaiserlichen Gesundheitsamte 1881, Band I, p 280

[9] Bekämpfung der Infektions-Krankheiten 1894 p 35.

[10] Journal de Physiologie et Pathologie Générales tome iv p. 121, 1902.

[11] Riforma Medica Fasc. 84 p 99 1902

[12] Münchener Medicinische Wochenschrift Band xl p 649 1902.

[13] Flugge: Die Mikro-organismen Band i p 452. third edition 1896.

[14] Archiv für Experimentelle Pathologie und Pharmacologie, Band xiii p 175 1881

e food through the pyloric sphincter, thus acting as a lating agent. Perhaps the "cold," too, helped by causing neral relaxation of muscular tone

5 The ultimate recovery of the child without any operation, although the case seemed at one time well nigh hopeless. Indeed, I was sent for one night because the rse thought that the child was dying The recovery also as complete, the child regained his strength and vigour, o trace can now be found of any dilatation of the stomach, any difficulty in the passage of food from the stomach into e pylorus or of any thickening of the latter organ.

Shrewsbury

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON

ullet Wounds of the Intestines —Tuberculosis of the Œsophagus —A Case of Congenital Tuberculosis —Two Cases of Congenital Heart Disease —Cholesteatoma of the Pineal Body

A MEETING of this society was held on Jan. 6th, Mr R J GODLEE, the Vice President, being in the chair

Mr G LENTHAL CHEATLE showed the Lesions in a case of ullet Injury to the Abdomen. The wound was inflicted by Jeffery's modification of the Mauser bullet. It had passed through the cæcum, left the small intestine practically uninjured, and then caused the man's death by inflicting large wounds in the sigmoid flexure from which extravasation of fæces occurred The bullet remained impacted in the skin wound of exit. The wounds of the cæcum were quite free from extravasation and there was practically no perifæcal peritonitis Microscopical sections of the wounds of penetration and emergence demonstrated that extravasation was prevented by the valvular condition of the opening made by the bullet and induced by the different degree of elasticity possessed by the various tissues forming the different parts of the intestinal wall. The most important factor in bringing about this result was probably the muscular coat. The sections clearly showed that prolapse of the mucous membrane could not have had any share in preventing extravasation Incidentally Mr Cheatle pointed out that skin wounds of exit usually showed, at any rate microscopically, extrusion of adipose tissue between the epithelial margins. He showed that the tissue might contain sweat glands in its extruded meshes, and also that skin wounds of exit have a larger subcutaneous hæmorrhage than those of entrance. This case showed (1) that a bullet of low velocity was capable of inflicting as insignificant an injury as one of high velocity, (2) that a bullet might traverse the region occupied by the small intestines without perforating them (3) that an expanding bullet need not, and he believed did not expand when it came in contact with soft parts (4) that the absence of extravasation in small bore bullet wounds of the intestines was prevented not by prolapse or extrusion of mucous membrane, but by the valvular form of the tissue assumed by the track of the bullet, and (5) that the best and often the only means of deciding upon the direction in which the bullet travelled was by making careful microscopical sections of all the tissues struck. This point, Mr Cheatle said, might be of considerable importance in medico-legal questions.—Mr S G SHATTOCK said that he had had the opportunity of examining one bullet wound at the seat of entrance and had been able to find hardly any evidence of injury, the tissue was but little displaced and there was no necrosis.—Dr PURVES-STEWART asked whether Mr Cheatle could give any explanation why the bullet came into the exit wound with the blunt end foremost. He said he had seen one case in which the bullet had entered the skull in the frontal region and had been found in the occipital region of the brain with the nose of the bullet pointing in the direction of the entrance wound. In this case the position was to be explained by the rebound from the inner wall of the skull but such an explanation would not serve in Mr Cheatle's case.—Mr CHEATLE in reply said that it was probable that the bullet had a low velocity at the time of entrance and that it revolved on its long axis and therefore came to lie with its hind end outwards.

Dr W T MULLINGS and Dr F C SHRUBSALL showed a specimen of Tuberculosis of the Œsophagus This condition seemed to be very rare, since no case had been described in the British Isles. The specimen was from a man, aged 50 years, who was admitted to the Brompton Hospital under the care of Dr T D Acland suffering from hydro pneumothorax. During life the only evidence of œsophageal lesion was dysphagia which came on suddenly a few days before death, the pain on deglutition was considerable and was only relieved by swallowing a solution of cocaine. There was no evidence of pharyngeal ulceration, though early tuberculosis of the larynx was discovered. At the necropsy tuberculous lesions were found in the lungs, intestines, right testicle trachea, and great bronchi. The bronchial and mediastinal glands showed no macroscopic evidences of tubercle The extreme upper portion of the œsophagus was not examined. The middle portion showed extensive ulceration over a length of three and a half inches the individual ulcers being oval with their long axis in the long axis of the tube. Below this there were a few scattered ulcers Microscopically typical tubercles with giant cells and tubercle bacilli were demonstrated. The case was one either of extension from the pharynx or a local infection through the sputum, the evidence being more in favour of the latter cause —Dr. P HORTON-SMITH said that he considered that the condition was extremely rare In some 200 necropsies which he had performed on tuberculous subjects he had never met with ulceration of the œsophagus and in some 2500 necropsies performed by Dr S. H. Habershon the condition had been met with on only two occasions.

Dr F W ANDREWES showed three rare specimens which he had recently investigated from amongst the contents of the museum of St. Bartholomew's Hospital and which had hitherto not been adequately described. The first was an apparently authentic example of congenital tuberculosis in man. The specimen consisted of the thoracic viscera of an infant stated to have died shortly after birth—a statement confirmed by the size of the organs and by the fact that the ductus arteriosus was still pervious The tracheal and bronchial glands were much enlarged and caseous and the lungs contained numerous miliary tubercles The histological appearances were characteristic of tubercle. The glandular lesions must evidently have arisen long before birth and it was suggested that infection might have occurred per os by the swallowing of amniotic fluid. The other two specimens were instances of rare forms of congenital malformation of the heart In one there was complete absence of the right auriculo-ventricular orifice, with a double orifice on the left side, the right ventricle being rudimentary the foramen ovale widely patent the interventricular septum perforated by a small aperture, and the ductus arteriosus practically closed. The two orifices connecting the left auricle and ventricle were provided with separate and well formed valve curtains and chordæ tendineæ The possible origin of this rare abnormality was discussed In the second case there existed a thick muscular septum dividing the proper cavity of the right ventricle from that of the conus arteriosus perforated only by a minute aperture admitting a good sized probe. This form of pulmonary stenosis was evidently a true developmental anomaly and not due to fœtal endocarditis

Dr H M FLETCHER showed a Cholesteatoma of the Brain from a youth, aged 19 years who while lifting a parcel on to a van suddenly became unconscious and died 36 hours later in St. Bartholomew's Hospital The tumour which was of the size of a small walnut, was situated in or beneath the velum interpositum, behind and compressing the pineal gland It was hard and had a pearly lustre It consisted of a dense fibrous-looking outer portion with a soft granular core The lining epithelium was of the stratified squamous variety with a well marked corneous layer forming concentric laminæ with abundant cholesterine crystals In the majority of cases described the tumour had been found at the base of the brain. Cholesteatoma was usually regarded as a proliferation of the endothelial cells lining the subarachnoid trabeculæ, but Dr Fletcher was inclined to look upon it as allied to dermoid cysts in origin.—Dr F J POYNTON said that he had seen one case of cholesteatoma in which there were two tumours one considerably larger than the other, situated symmetrically at the base of the brain between the pons and the cerebellum He called attention to the suddenness with which coma and other symptoms developed in cases of simple tumour of the brain —

1609

A CASE OF HYPERTROPHIC STENOSIS OF THE PYLORUS IN AN INFANT, RECOVERY WITHOUT OPERATION

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PHYSICIAN TO THE SALOP INFIRMARY ETC

IN connexion with the paper on this subject which was recently brought before the Royal Medical and Chirurgical Society by Dr E Cautley and Mr C T Dent, and the discussion which ensued,[1] the following case, which occurred in my private practice, seems to be of interest.

The patient, a healthy male and a first child, was born on Jan 30th, 1902 He weighed at birth 8 pounds 8 ounces He was brought up until the illness commenced entirely by the breast and was in perfect health until March 20th, when he began to suffer from diarrhœa At that time his weight was 11 pounds 8 ounces It was then found that the mother, too, was out of health, and her milk was noticed to be very thin Some three weeks previously the nurse had left and since that time it was thought that the mother had been doing too much Notwithstanding treatment both for mother and child the diarrhœa persisted and on March 30th vomiting commenced On about April 10th, as the child had been gradually getting worse, he was finally taken from the breast and various kinds of food were tried—viz, a malted proprietary food, bread jelly, unsweetened condensed milk, and peptonised milk, all diluted to varying degrees All, however, caused more or less vomiting usually about half an hour after they had been taken, except in the case of the bread jelly, which, though prepared with the utmost care, was generally returned at once The child at first steadily, and then rapidly lost weight On April 24th his weight was 9 pounds 12 ounces and a note was made that he had lost nine ounces in the last five days All food was then stopped except whey With the increase of the sickness the diarrhœa had ceased and the bowels had become constipated, the scanty motions being green and slimy and very offensive. On the 26th the child was apparently sinking He was then ordered to be fed with a teaspoonful of whey every 20 minutes. It was found that brandy in any form and even in the smallest quantities was immediately vomited About this time visible peristalsis of the stomach was first noticed The cardiac end of the stomach would form into a ball almost of the size of a small Tangerine orange and this ball would pass as a wave obliquely across from left to right and slightly downwards until it reached the site of the pyloric orifice where it would stop and, as it were melt away This recurred in quick succession and could generally be perceived whenever the abdomen was laid bare, or if not it could always be provoked by the application of a cold hand or by any slight stimulation

On April 29th I asked my surgical colleague, Mr L J Godson to see the child with me He discovered on deep palpation a somewhat soft ill defined, rounded swelling which was situated behind the left rectus in the region of the pylorus and seemed rather smaller than a pigeon's egg This tumour was often afterwards searched for and could generally, but by no means always be felt. The vomiting was at this time less owing to the extremely careful feeding but the child was still losing weight The question of operation was therefore considered and it was put to the parents that an operation might be the only means of saving the child's life It was not however, strongly urged partly because we were ignorant as to the pathology of the condition and as to the significance of the tumour which we felt, and partly because we did not then know that any such operation had ever been performed with success (An exploratory operation with the possibility of gastro-enterostomy was what was in our minds.) The parents however decided to wait a little longer and very gradually the child began to improve The lowest weight recorded was 9 pounds 5 ounces on May 4th From that time the vomiting, though still very troublesome and occasionally severe gradually became less frequent The bowels for a long time remained obstinately constipated and had to be relieved by olive oil enemata. Whey was for a long time ordered as the principal diet, a little malt was soon added, dissolved in the whey, then barley water and maltine were given occasionally as a change Gradually a little raw meat juice, or sometimes a little white of egg, was cautiously added to the food and the quantity was gradually increased from one to two three, and four teaspoonfuls at a time, the interval between the feeds being prolonged. Later a few drops of cod liver oil or of cream were sometimes added and a little grape juice but for a long time care was taken not to give anything that could possibly leave any residue The addition of a little milk to the food was tried but it was found not to suit The sickness gradually abated and the child slowly regained weight until about the beginning of June when he caught a severe cold and developed a troublesome cough He then rapidly lost weight again, falling in a week from 9 pounds 8½ ounces to 9 pounds 2 ounces—the lowest weight registered during the whole of his illness Curiously enough, however, when the cough and cold commenced the vomiting ceased and diarrhœa appeared in place of constipation. When he recovered from the cold he rapidly increased in weight and he was never again troubled with sickness On June 22nd it was no longer considered necessary for anyone to sit up with him at night Since the middle of August he has never had a bad symptom of any kind Early in October he was successfully vaccinated. He is now a healthy looking child plump and firm of flesh, the only point against him being that he has as yet cut no teeth When last weighed at the age of 10½ months he scaled 20 pounds—two and a half pounds above the average

This case appears to present all the characteristics of those described by Dr Cautley and Mr Dent under the name of "congenital hypertrophic stenosis of the pylorus"—viz, (1) the obstinate vomiting, (2) the constipation, (3) the wasting, (4) the visible peristalsis of the stomach, and (5) the presence of an ill defined tumour in the region of the pylorus As to whether the stomach was dilated or not I cannot say not being sufficiently familiar with the normal size of an infant's stomach, it certainly was not greatly dilated, but it was noticeable that sometimes when the child had not been sick for some hours he would suddenly, to the despair of his mother and his nurse bring up seemingly all the food he had taken during that time just as an adult often does when suffering from a dilated stomach.

The noteworthy points about the case appear to be the following —1. There seems no possible doubt that the affection was not congenital Not only was the child at birth two pounds above the average weight (8 pounds 8 ounces as against 6 pounds 8 ounces, the average), but at the age of seven weeks, when the illness commenced, he had reached 11 pounds 8 ounces—three pounds above the average, which is given as eight pounds, or, to put it in another way he had during those seven weeks gained three pounds in weight, the average gain during that time being given as 1 pound 12 ounces. There could hardly therefore, during those first seven weeks of his life have been anything wrong with his digestive apparatus

2 The disease seems to have been caused at first by there being something wrong with the mother's milk owing to the mother herself getting out of health It would seem as if the milk as it became thin and poor gained at the same time some irritating quality The first effect of this was the diarrhœa, which had lasted some ten days before the vomiting commenced, then came the spasm of the pyloric orifice, probably at the same time as the vomiting It would almost seem as if the pylorus was trying to shut out the noxious milk and to prevent it entering the bowel. One supposes that the spasm thus induced caused after a time hypertrophy of the muscular coat of the pylorus, and so produced the thickening which could be afterwards felt as a tumour This muscular hypertrophy and probably also an irritable condition of the mucous membrane causing ready spasm would, in their turn be the cause of the increased peristalsis and the vomiting and so the trouble would persist even after the food had been changed.

3 The fact that improvement only commenced when everything that could possibly have left any undigested residue had been discontinued as food and when only very small quantities at a time were given. The pyloric sphincter would then get almost perfect rest.

4 The curious fact that what completed the recovery was the cold and the cough which accompanied it, though the child himself was greatly reduced in weight and strength thereby It occurs to me that the cough must have forced

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[1] THE LANCET Dec 20th 1902, pp 1679 and 1693

Cave showed that often it was of a septic nature, the infective agent reaching the system through the alimentary canal. 3. Arthritis deformans or monarticular arthritis. This, probably, was also microbic in origin, in which, however, trauma and a debilitated constitution played an important part. The various forms of spondylitis deformans and their relation to osteo-arthritis, gonorrhoeal arthritis, and affections of the meninges were alluded to. In conclusion Dr. Dreschfeld dealt with the treatment of chronic rheumatoid arthritis.—Professor G. A. WRIGHT spoke of the need for an entire revision of the nomenclature of joint diseases and the desirability of abolishing all names with rheumatism in them. He laid stress upon the frequency of specific joint diseases of various kinds, septic, exanthematous, and others.—Professor J. DIXON MANN, whilst fully admitting the micro-organismal causation of acute rheumatism, could not accept the view that streptococci which were capable of producing ordinary septicæmic conditions were the micro-organisms in question. The characteristic feature of acute rheumatism was that the fibrous structures in relation to the joints, the heart, and the lungs were attacked by a most active type of inflammation which led to effusion and to fibrinous exudation, but which systematically stopped short at that and rarely went on to the formation of pus. Whereas when the system was invaded by micro-organisms of the type in question the formation of pus along with other characteristic manifestations of the septic state as *ordinarily understood* were distinctive characteristics. On these grounds he doubted the efficacy of Menzer's serum obtained from animals that had been inoculated with cultivations of streptococci which had been scraped from the tonsils of patients in the early stage of acute rheumatism. Many cases that simulated acute rheumatism partook of a septic character and were probably of a mixed etiology.—Dr. A. T. WILKINSON considered acute rheumatism to be a definite disease due to a micro-organism in which, however, as in diphtheria, a mixed infection might occur. The mobility of the joint lesion was the strongest indication for the use of the salicylate. He agreed with Dr. Dreschfeld in preferring moderate doses and always prescribed with it tincture of nux vomica and citrate of potassium. In single rheumatic joint lesions and in the solitary gonococcal swellings in which the disease took the joint on lease small local blisters usually gave most relief. Dr. Wilkinson also referred to a case of acute herpes following the branches of the right anterior crural nerve in which changes resembling those seen in subacute osteo-arthritis developed in the knee-joint but gradually subsided in the course of six months.—Professor R. B. WILD considered that the name rheumatic arthritis covered a group of pathological conditions and that with their present knowledge an accurate differentiation of the members of the group was impossible. One member, however, acute rheumatism or rheumatic fever, appeared to be more sharply defined and differed in many ways from the others in its course. Among the points of difference attention was drawn to the type of the fever and especially its comparatively slight depressing action on the central nervous system, secondly the peculiar tendency of the arthritis to affect joint after joint and rapidly to disappear, the evanescent character of the arthritis in any one joint being comparable to the acute onset and rapid disappearance of the lesions of the skin in urticaria, a disease which was produced by absorption of toxic substances from the alimentary canal, and thirdly the very slight anatomical lesions found in the inflamed joints when examined post mortem were worthy of note. With respect to treatment the salicyl compounds in full doses certainly relieved the symptoms and the probability of their having a specific action upon the rheumatic toxins was suggested by the *fact* that similar good effects were not produced by closely allied chemical compounds such as benzoic acid, pyrocatechin, or even the meta- and para-hydroxy benzoic acids which were isomeric with salicylic acid.—Dr. C. W. BUCKLEY said that a damp subsoil was a most important factor in the production of rheumatoid arthritis and considered that a change of residence should be made if possible to a place with a dry soil and a bracing climate, or in default of this as long a stay as was possible should be made in a health resort of this type. Balneological treatment was of the utmost value when combined with such climatic factors. Of the many forms of electrical treatment now in vogue he had found the constant current bath to be by far the most useful.

Mr. W. THORBURN showed a case of Charcot's Joint Disease of the Knee developed after a slight injury and preceding other ataxic symptoms which had been treated by arthrodesis.

LIVERPOOL MEDICAL INSTITUTION.

Exhibition of Cases and Specimens.—Squint.

A MEETING of this society was held on Dec. 18th, Mr. RUSHTON PARKER, the President, being in the chair.

Dr. K. A. GROSSMANN showed a case of Congenital Malformation of the Iris in both Eyes. The patient, a poorly developed boy aged 14 years, was subject to nervous twitchings of the head and horizontal nystagmus. Microcornea was present in both eyes. The right iris was represented by a narrow band stretching across the base of the lower quadrant. In the left eye only the lower quadrant was missing. From the presence of chorio-retinitis, nasal bone changes, and the teeth, a diagnosis of specific intra-uterine uveitis was made. Dr. Grossmann also demonstrated a case of Peculiar Choroidal Traumatism.

Mr. F. T. PAUL showed a gardener aged 59 years whose Right Subclavian Artery he had Ligatured in the Second Part for an Aneurysm of the Axillary Artery extending up to, and involving, the third part of the subclavian. The patient had suffered from syphilis and had been subjected to local strain of the artery. There was evidence of extensive endarteritis and the vessel when ligatured was considerably diseased. Catgut sterilised in xylol was used and was not drawn tight. The wound healed by first intention, the aneurysm filled with firm clot and was now, two months after operation, shrinking satisfactorily.—Sir WILLIAM H. BANKS had seen three cases of traumatic axillary aneurysm—a disease of by no means frequent occurrence. The first case occurred in a sail maker and distinctly followed a strain, but the vessel might quite well have been atheromatous. Two years after successful ligature of the subclavian artery it was impossible to know that there had been any aneurysm. In the second case degeneration of the artery was unlikely as the patient was a young healthy man, the condition being due to a railway crush. The aneurysm had spread into the neck and was as much subclavian as axillary. With the aid of his colleague, Mr. Paul, Sir William Banks made a strenuous attempt to ligature the first part of the left subclavian artery in the thorax, the pleura was a good deal injured and the patient died from pleurisy. In the third case the aneurysm resulted from injury produced by an attempt to reduce a dislocated shoulder. At the operation in which he assisted Dr. Nathan Raw the pectorals were divided and a temporary ligature was placed at the highest point of the axillary artery, the aneurysmal sac was opened, and the vessel was tied above and below. Complete recovery followed.—Dr. E. MOLYNEUX had discovered the aneurysm in the case brought forward by Mr. Paul quite casually. It had caused no discomfort whatever. The patient had for years suffered from gout and he thought that the gouty diathesis had more to do with the case than had syphilis.—The PRESIDENT had seen three cases and in all a traumatic factor was present.—Dr. PUTNAM also spoke and Mr. PAUL replied.

Dr. B. F. P. MACDONALD described a case of Multiple Rodent Ulcer. There was no history of syphilis in the patient, a woman, aged 45 years, or of cancer in the family. The ulcers were seven in number situated over the left mamma, the sternum, and above the left clavicle. The condition had existed untreated for two years. He had been unable to trace a record of any similar case. The patient showed all stages, from the initial node to the final typical crater like ulcer. The diagnosis of rodent ulcer was based on (1) the slow growth, (2) the good health of the patient, (3) the marked tendency to heal, (4) the non-implication of the axillary glands, and (5) the evidence of the microscopical sections prepared by Dr. W. Anderson and others.—Mr. PAUL said that the histological characters were those of glandular carcinoma, and if it was certain that the disease had originated in the skin they might have been consistent with the appearances presented by some varieties of rodent ulcer. On seeing the patient, however, he had no hesitation in deciding that it was a rare form of ulcerating cancer of the breast.—Sir WILLIAM BANKS and Dr. ANDERSON spoke and Dr. MACDONALD replied.

Mr. EDGAR A. BROWNE read a paper on Squint in the course of which he said that in the history of squint there

Dr F E BATTEN said that he believed the sudden onset of symptoms in cases of non malignant tumour of the brain was often due to the rapid increase of *intra ventricular* pressure owing to the occlusion of the iter —Dr C OGLE said that a few years ago he had shown two specimens of tumours of the pineal gland In both these cases the prominent symptom had been continual drowsiness, in one case the boy slept for several weeks. He attributed this drowsiness to the fact that fluid tended to increase in the ventricles He pointed out that the other symptoms connected with tumours in this position were total blindness dilatation of the pupil, and an absence of reaction of the pupil to light. He stated that in more than one of these cases it had been noted that there was an unusual development of the genital organs —Mr GODLEE referred to the case of a man who had a melanotic sarcoma of the brain, whilst in hospital the man obtained a considerable quantity of whisky, which he drank, and rapidly passed into a state of coma and died He thought that the disturbance of the vascular supply of the brain was the cause of the acute symptoms in the case and that in all probability the onset of acute symptoms in other cases of tumour of the brain had a similar explanation —Dr FLETCHER, in reply, said that he thought that the rapid onset of symptoms was due to a vascular disturbance, and in the case recorded extreme drowsiness had been a marked symptom

MANCHESTER MEDICAL SOCIETY

Rheumatic Arthritis and other allied Joint Affections — Exhibition of Case

A MEETING of this society was held on Dec 3rd, Dr THOMAS HARRIS, the President, being in the chair

Dr J DRESCHFELD opened a discussion on Rheumatic Arthritis and other allied Joint Affections and their treatment He pointed out that the subject naturally divided itself into acute and chronic joint affections Of the acute variety the first place was occupied by acute rheumatic arthritis Recent observations had thrown considerable light on the etiology of this affection, though a good deal still remained obscure Most pathologists and clinicians were now agreed that it was an infectious disease but the question whether it was due to a pathogenic micro-organism or whether more than one micro organism might give rise to the same symptom complex, or whether it was due to a non specific micro organism which only under certain hereditary or predisposing conditions became active, was still a disputed point Recent observers had looked upon the tonsils as the portals of entrance of the micro organism causing acute rheumatic arthritis, and the observations of E Meyer Wassermann, and more recently of Paine and Poynton and Menzer had shown the presence of a streptococcus in the form of a diplococcus in the tonsils of patients affected with acute rheumatic arthritis, which could be cultivated and when injected into rabbits produced lesions such as they saw in rheumatic fever As yet, however, one could not look upon these diplococci as the pathogenic organism of acute articular rheumatism as pointed out by Menzer [1] for other micro organisms had produced the same results, the diplococci described by the various observers showed marked morphological differences and diplococci found in the healthy tonsils and in the tonsils affected with angina and other affections had occasionally when injected into animals produced similar lesions, though it must be observed that Widal and Besançon in a very large series of experiments obtained mostly negative results It must further be observed that in some cases the injection of the streptococci obtained from the tonsils produced at times septic and at other times pyæmic lesions It would appear from these experimental data that though the exciting cause in acute rheumatic arthritis was a micro organism, special favourable conditions depending on an inherited or some peculiar constitutional predisposition or some accidental causes (exposure to cold, to damp &c.) played a prominent part in the causation of acute rheumatic arthritis and favoured the entrance of the micro organism into the blood. The importance of these secondary causes should not be overlooked The experimental researches on this subject had further shown that acute rheumatic arthritis septic arthritis, and pyæmic or suppurative arthritis were more closely related than was at one time supposed and supported the clinical evidence, such, for example, as was shown in the relationship between rheumatic or papillary endocarditis and septic endocarditis. The treatment of acute rheumatic arthritis offered little scope for discussion The salts of salicylic acid were given, they reduced the temperature, relieved the pain, caused a diminution of the swelling, and were said to increase the elimination of uric acid, but they did not shorten the duration of the disease, and did not prevent relapses, and unless alkalies in fairly large doses were given also endocarditis often occurred Local treatment was essential. One form of acute arthritis was especially alluded to in which often the wrist and the ankle became affected and in which besides excessive pain there were a good deal of inflammatory subcutaneous œdema and inflammation of the sheaths of tendons The disease was very obstinate to treatment and often left the joint ankylosed Davies-Colley described this affection occurring in women affected with leucorrhœa. It was a septic arthritis, often due to gonorrhœa, but was occasionally found independently of gonorrhœa, in some rare cases most of the joints might become involved. Acute osteo-arthritis was no doubt a rare affection, but occasionally cases were seen in which there were marked pyrexia, profuse and acid perspiration swelling and pain of the joints, and in which the joint, instead of returning to its normal condition, showed the appearance seen in osteo-arthritis In the present state of their knowledge it was impossible to say whether there was a double infection or whether the disease was primarily one of osteo arthritis The infective arthritis of fevers was next dealt with. Pneumonia, typhoid fever, scarlet fever, diphtheria, small pox influenza, and cerebro-spinal meningitis were sometimes accompanied or followed by an acute swelling and pain of one or more joints The physician had to deal here with various affections: 1. A toxic affection, due to a toxin Some doubted the existence of a toxic arthritis but that such an arthritis existed was shown by the arthritis sometimes following very soon after the injection of antitoxin serum in diphtheria. 2. An arthritis due to the pathogenic micro-organism, as in the cases of *pneumococcal* arthritis described by Cave and Nathan Raw and in some of the reported cases of arthritis in typhoid fever 3 A mixed infection—the effusion into the joint, which might be serous or purulent (pyæmic) containing septic micro organisms 4 True rheumatic arthritis as a complication of the primary infective fever Occasionally, as in typhoid fever the vertebral column might be affected (typhoid spine), characterised by excessive pain and stiffness of the vertebral column this again, being sometimes a nervous affection and at other times a purely toxic affection, at other times there were distinct osteitis and periostitis Gonorrhœal arthritis in its various types was alluded to. Occasionally the vertebral column was also affected Dr Dreschfeld next considered chronic affections, first describing chronic rheumatic arthritis In most persons who had had acute rheumatic arthritis the joints assumed again their normal appearance, *occasionally* however, the smaller joints formed a spindle shaped swelling and remained so permanently, in a few cases with a marked family history of rheumatism the symptoms of rheumatic arthritis came on slowly and insidiously, the joints became stiff and painful. the muscles in the neighbourhood of the joints underwent atrophy marked deformities of the hands and feet ensued, and the patient might become quite crippled The distinction in such a case between rheumatic arthritis and rheumatoid arthritis was almost impossible Such differences as had been pointed out by some observers were scarcely enough to differentiate them He then referred to chronic rheumatoid or osteo arthritis a chronic disease in which one or more joints were affected with marked changes in the cartilage and bones of an atrophic or hypoplastic character and atrophy of muscles and resulting in marked deformity of the joint Various affections had been classified under this head 1 Heberden nodules It was very doubtful whether this was osteo-arthritis In some cases the affection was true gout, in others the lesion was a trophic one, due to overstrain and a general debilitated state of the system Still described two cases in children who had congenital syphilis. 2. The general progressive osteo arthritis Most would agree with Garrod that more than one affection was included in this group The older observations of Wohlmann, Baumtgen and Baxall and the case described by Still pointed to its infectious nature, the more recent ones of

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[1] Die Aetiologie des Acuten Gelenkrheumatismus Berlin 1902.

Mr HAROLD J STILES showed the following cases — 1 A boy, aged eight years after Operation for Hydatid Cyst of the Liver The patient lived in Shetland and had been recommended by Mr Watson Cheyne who had diagnosed the case. The abdomen was opened by a vertical incision three inches in length midway between the edges of the right rectus On palpating the liver it was found to contain a large cyst. The surface of the liver was then stitched in a circle to the parietal peritoneum and posterior layer of the rectal sheath by a series of looped sutures Inside these a continuous circular suture was applied, so as to unite the surface of the liver to the cut edge of the peritoneum In this way an area of the anterior surface of the liver measuring two inches by one and a half inches was completely shut off from the general peritoneal cavity The wound was stuffed with iodoform gauze A week later the stuffing was removed and the cyst was opened. A large quantity of clear fluid escaped and on introducing the finger the cyst was found to be of the size of a child's head After all the fluid had been evacuated the cyst wall partly detached itself spontaneously and was removed A long empyema tube was employed to drain the cavity On the evening of the operation a rash somewhat resembling measles appeared all over the body, as happens frequently after the aspiration of a hydatid cyst. This rash lasted for ten days The discharge was at first copious and consisted of blood stained mucus Later the mucus was deeply stained with bile and gradually diminished in amount until the tube was removed in the fifth week after the second operation. 2. A girl, after Operation for Congenital Urinary Umbilical Fistula. The parents were first cousins and one of the other children had supernumerary digits A sound introduced per urethram could be passed to within an inch of the umbilicus and there rotated from side to side. There was evidently a fusiform extension of the bladder upwards almost to the umbilicus rather than a mere patency of the urachus The operation consisted in making a mesial incision three inches in length commencing just below the umbilicus An attempt was made to strip the peritoneum from the posterior surface of the upper part of the bladder but it was found that the serous membrane was too thin and adherent to allow of this being done. The abdomen was then opened and the upper part of the bladder was drawn well out of the wound Two intestinal clamp forceps were then applied to the bladder, the one below the umbilicus and the second fully an inch lower down The intervening portion was then cut across just below the upper clamp Both ends of the divided bladder were then closed with a double row of silk sutures, the mucous membrane not being included The clamps were found of great service in checking bleeding and in keeping the parts in good position. After removing them the edges of the parietal peritoneum were so united as to retain the sutured stump of the bladder as far as possible outside the peritoneal cavity The abdominal wound was closed and a strip of iodoform gauze from the sutured bladder was left protruding A self retaining catheter was kept in the bladder for a fortnight and the recovery was uninterrupted. Mr Stiles brought the case before the society on account of its rarity and the infrequency of operation in such cases 3. A girl, aged three years after Intestinal Anastomosis for Stricture of the Lower End of the Ileum due to tuberculous disease of the ileo-cæcal region. The symptoms had been weakness, enlargement of the abdomen diarrhœa, vomiting and "noise in the child s abdomen" Resection in so delicate a child was deemed inadvisable. The only other alternative was to short-circuit the ileocæcal region by establishing a lateral anastomosis between the ileum and the ascending colon. This was done and the child made an uneventful recovery Subcutaneous saline infusions were given twice daily for the first three days and seemed of much service in improving the pulse and preventing thirst. Twelve weeks after the operation the child had improved greatly in her general health. Vomiting and diarrhœa had ceased, the tumidity of the abdomen had gone, and there was no exaggerated peristalsis The enlargement of glands had also disappeared, no doubt due to the rest given to the diseased bowel by the short-circuiting

Mr F M CAIRD exhibited a young man who had received a Bullet Wound on Oct. 24th, 1901 The entrance wound was situated three inches below the right anterior iliac spine His early symptoms were frequency of micturition and hæmaturia. His bladder was carefully sounded but no bullet was discovered. In the hospital at Netley an x ray photograph was taken and showed the bullet *in situ* in the pelvis On admission to the Edinburgh Royal Infirmary he suffered from dysuria and tenderness of the right testicle He found that the process of defecation was easiest while in the reclining position as compared with sitting or squatting When under an anæsthetic the bullet could be felt neither digitally nor by the sound The abdomen was opened and low down in the recto-vesical pouch the bullet was felt and seen to be covered with glistening peritoneum It was removed and was found to be crusted over with phosphates showing that it had been partly in the bladder A good deal of difficulty was experienced in suturing the wound so low down After a somewhat complicated convalescence the patient was now well

Dr W ALLAN JAMIESON showed a case of Xeroderma Pigmentosum after treatment by the x rays The patient was a little girl, the younger of two children Both suffered from xeroderma The child began to develop freckles at the side of the nose when about a twelve month old. Later telangiectasis and whitish spots began to develop on the face The disease had now extended to the hands and wrists There were no other signs of disease When seen on Oct 1st there was an epitheliomatous growth on the tip of the nose of about the size of a sixpence and numerous warty growths were scattered over the face Treatment by the x rays was then commenced, and up to the present the patient had had 34 exposures of five minutes each applied to the face and 13 exposures to the right hand The epitheliomatous growth on the nose and all the warts on the face had disappeared under the action of the rays. An x ray dermatitis was produced, the nose was now whiter than the rest of the face and there was a marked improvement of the right as compared with the left hand Such a case demonstrated (Dr Jamieson said) that the x rays were not the ordinary actinic rays of the spectrum, for the latter tended to increase pigmentation in the skin

Dr T F S CAVERHILL exhibited several tuberculous patients to show the beneficial results of Sanatorium Treatment on Nordrach lines He stated that their own climate was quite well adapted for the cure of such cases and that hygienic measures alone were efficient to obtain cures

Apparatus and card specimens were exhibited by Dr BRUCE and by Dr A. MILES

WINDSOR AND DISTRICT MEDICAL SOCIETY —The third meeting of the session of this society was held on Dec 17th, Mr W B Holderness, the President, being in the chair —Cases and specimens were shown by Mr J O Skevington, Dr P J A. Seccombe Dr C R. Elgood, and Mr James Startin and Mr A W Wigmore —Mr Startin read a paper on the History of the Early Application of the X Rays to cases of Lupus, Rodent Ulcer, Psoriasis, Eczema Acne, and other Skin Diseases by Dr F H Low and Dr J H Sequeira of London Dr G M Lowe of Lincoln, and Professor Schiff and Professor Reund of Vienna, and also referred to his own and Mr Wigmore s work at the London Skin Hospital since 1898 He then described the technique of the treatment After alluding to the action of the x rays on micro-organisms, he proceeded to give an account of the histology and pathology of the skin after exposure to the x rays as described by Mr G Pernet and Dr M Stephen Mayou and the observations made by himself and Mr Wigmore were detailed He next alluded to the physiological effects of the direct spark discharge and high frequency currents and the effect of the x rays on various diseases of the skin Finally after referring to the notes of the cases that had just been exhibited and demonstrated to the members he read a report detailing the result of a year s cases that had been treated at the London Skin Hospital with more or less good results. The number of exposures amounted to 2700 —Mr J H. Tomlinson read a paper on the Present State of Knowledge of the Physical Nature of Roentgen Rays He referred in the first place to the spectrum of ordinary light and showed experimentally that the infra red rays could influence a radiometer through a sheet of ebonite quite opaque to visible light He then described the chief properties of the ultra violet rays—viz, their chemical activity, including their action on photographic plates, their power of exciting phosphorescence and fluorescence, their power of discharging an electroscope charged with negative electricity, and their therapeutic action in lupus, were two eras—the era of Diffenbach who with his followers recognised the obvious misplacement of the eye in relation to the palpebral aperture and remedied the deformity by cutting the (supposed) offending muscle Subsequent improvements in technique had rendered it possible for anyone with a moderate degree of skill in ophthalmic surgery to turn an eye in any desired direction. Indeed so successful in appearance were operations on the muscle that squint was regarded as a muscular affection and innovations in treatment were regarded with suspicion. There was no probability that operations for squint would be discarded in any reasonable length of time—indeed, they must always remain useful in neglected cases—but they were purely empirical proceedings and were sure to give way before a rational knowledge of causation The era of Donders was that of the slow coördination of exact observation of actual facts and their relative importance that constitutes science Donders's "theory" was often spoken of, as other "theories" were, as if it were something outside the range of practice From Donders would proceed the rational treatment of the future He bequeathed two legacies, one a generalisation that hypermetropic eyes squinted towards the mesial line and that myopic eyes squinted out. This remained true and the measurements afforded by the Maddox rod of small degrees of latent squint (or heterophoria) tended to show that the rule had a wide application. But his explanation of why hypermetropic eyes squint was probably only partially true But Donders effectually drew attention to the optical nature of squint The muscles were not at fault. Their contraction was due to their motor centres causing them to perform their natural functions and they had to search for the cause that set the centres in action Squint was not a disease. Its onset was regular, always at the same period of life, always on the same lines and in the same stages It was an accident of development The stages were (1) potentiality—a period when every child whose ocular development was not proceeding regularly might pass into (2) periodicity—when squint took place invariably under excitement or strong desire to see, (3) habitual, when fixation with one eye only was the rule but when parallelism was likely to be restored in sleep, under chloroform, &c—from this two different developments might occur (4) a secondary periodic stage not mentioned in books, ending in recovery, or (5) a stage of permanent deformity involving distortions of the capsule of Tenon, &c, and demanding operation for cosmetic considerations Attention had been too strongly fixed on convergence as the essential phenomenon of squint, but it was the last link in the chain of events An intimate relationship was found to exist between amblyopia and squint. The hypermetropic eye was an incomplete eye and its nervous elements might in certain cases be reasonably supposed to be that of a slow development The sense of vision required practice as well as natural endowment, and if from high hypermetropia or astigmatism one eye was more deficient in clearly formed images than the other, it was likely to lose its instinctive desire for sharp focussing and to become poorly developed from want of exercise, like any other function There was no sense of diplopia when there was a clear image in one eye and a blurred image in the other Hypermetropia was not *the* cause of squint but exhibited the most favourable conditions, especially in the matter of exercising the muscles of convergence. Therefore squint might equally occur in young myopic eyes before the internal recti had lost their preponderating power, if the other conditions were fulfilled Squint, therefore, was a failure in a peripheral sense organ to acquire its complete function, leading to independent and uncontrolled action of the motor centres of the internal (and, in fact, superior) recti Initially nothing took place but what was natural but in later stages deformities and secondary changes became developed Treatment had for its objects restoration of desire for (1) distinct vision, (2) binocular vision, and (3) diminution of accommodation effort. Directions for attaining these objects were given. The obstacles to success were numerous and difficult to overcome. Prevention of squint could hardly be expected till the general practitioner coöperated with the specialist and superintended the treatment in the homes and supervised the ocular hygiene of children in schools —Mr R J Hamilton urged the earliest discovery of, and therefore treatment of children with an unusual degree of hypermetropia Full correction by glasses and operation at an early age were recommended. Stereoscopic exercises, though scientifically sound, could not in practice be carried out.—Dr Grossmann said that there was not the slightest doubt that Donders's explanation was perfectly correct for some cases, but for some only Hypermetropia existed, it was true, in the majority of cases of squint, but also in the majority of non squinting eyes Squint also occurred in myopia (converging concomitant squint). Vision was developed after birth and thereupon depended the importance of the educational treatment. The relationship between accommodation and convergence was completely an acquired one in man, so also was binocular fixation The treatment of convergent squint should be threefold—by glasses, by educational methods, and by operation —Mr Richard Williams could only accept Donders's theory of the causation of squint in a very partial degree To him squint was essentially the result of deranged nerve impulses and hypermetropia played only a minor part. As to the educative treatment, he thought that the result was nothing like commensurate with the trouble involved and patients were mainly interested in getting their eyes "put straight."—Dr Edgar Stevenson said that he first became acquainted with Mr Browne's ideas when he was his house surgeon and he regarded them as heterodox But he had lately had an opportunity of studying this subject and had been struck especially by the practical results attained. He instanced the case of a girl aged 15 years, in whom treatment had been begun at the age of 11 months and in whom the cosmetic results were perfect He was convinced that the views were in the main correct and that the treatment was the most advantageous to the patient, however tedious and difficult it might seem —Mr Hugh E Jones, Mr C H. B Shears, Dr J J O'Hagan, Mr T H Bickerton, and Dr J H Abram also spoke, and Mr Browne replied

MEDICO CHIRURGICAL SOCIETY OF EDINBURGH

Exhibition of Cases and Specimens

A special clinical meeting of this society was held on Dec 7th, Dr W Craig the Vice President, being in the chair

Dr D Chalmers Watson exhibited several patients to show the Results of Treatment by a Preparation of Bone Marrow Two children suffering from ichthyosis simplex were shown on whom the treatment had just been commenced Another was a case of severe generalised eczema in a man, a plasterer by trade, who after five or six weeks of this local treatment had been cured. Two cases of impetigo had benefited by the bone marrow and a case of widespread psoriasis of 20 years duration in a man was giving fairly satisfactory results though slow in comparison with the other cases shown Dr Watson enunciated two theories in explanation of the beneficial results of the local application of bone marrow

Dr H Alexis Thomson demonstrated two cases of Chronic Gastric Ulcer with Pyloric Obstruction treated by Gastro-enterostomy The younger patient, a male, aged 23 years, had suffered from gastric troubles for about two and a half years The other patient was a man, aged 53 years, who had shown gastric symptoms for 10 years Severe hæmatemesis had occurred with signs of pyloric obstruction and cumulative vomiting every second day Both patients had increased in weight to a great degree since the operation

Dr Byrom Bramwell exhibited a case of Tabes in a man aged 50 years The patient first came under observation in April, 1901, and had then symptoms of pre ataxic tabes. He had contracted syphilis 18 years previously and suffered from lightning pains and diplopia. The gastric crises at this time were very severe and rectal feeding had to be carried out He again presented himself in October, 1902, when he was reduced to a skeleton, the crises had occurred every second day during the preceding six months He had lost 3 stones 2 pounds within four months and on Nov 7th weighed only 7 stones 9½ pounds The patient had been subjected to x ray treatment applied to the dorsal part of the spine for five minutes each day This treatment had resulted in an extraordinary improvement. The crises had practically disappeared and in one week he gained 10½ pounds. He had gained 2 stones 4½ pounds since Nov 7th At the present time he partook of ordinary hospital diet. How much the improvement might be due to merely psychical effects it was impossible to say

Gardner (Bournemouth), Dr F Bagshawe (Hastings) Dr G A. Leon (Sidmouth) and the President, and Dr Lewis replied.

CHELSEA CLINICAL SOCIETY —A meeting of this society was held on Dec 16th, Dr C C Gibbes the President, being in the chair —Mr A. F Penny read a paper on Oral Sepsis as a Factor in the Causation of Disease. He referred to the extraordinary manner in which local septic conditions in connexion with diseased teeth were overlooked. Books on medicine impressed on the student the importance of examining the teeth and gums in cases of suspected lead poisoning, syphilis, scurvy, and rickets but with this passing comment they dismissed the subject. Oral sepsis was the commonest and most noxious of all forms of infection in rich and poor alike. The organisms in connexion with dental cario-necrosis were pus forming organisms of a most virulent type and the infection was of a mixed character The most marked effects of oral sepsis were to be found in the stomach and the intestines. Cases were related illustrating the extraordinarily beneficial effect produced in chronic dyspepsia by remedying the oral septic condition, and stress was laid on the advisability of examining the teeth in every case The matter was of great importance from a surgical, medical, and dental point of view The surgeon took every possible precaution, as he imagined, to render his patient aseptic before operating and performed operations of the gravest character on the stomach and intestines while the patient s mouth was septic and full of necrotic teeth. The dentist extracted teeth and left open wounds in a place which was most prone to infection. Cases showing the grave toxic effects were described, including a case of what at first sight appeared to be subacute rheumatism but which cleared up rapidly after the mouth had been rendered aseptic.—A discussion followed.

TORQUAY MEDICAL SOCIETY —A meeting of this society was held on Dec. 18th Dr F D Crowdy, the President, being in the chair —Mr H T Newling showed a youth, aged 18 years, with a peculiar Skin Disease of three years duration, exhibiting more or less symmetrically disposed patches of violet colour on the shoulders, on the back, and on the front of the thighs It was thought to be a mild type of scleroderma.—Mr P H Gardner showed a girl, aged 13 years, whose Diseased Hip-joint he had curetted and then injected with iodoform emulsion last August She was now apparently quite cured.—Mr Gardner also showed a boy upon whom he had satisfactorily performed Bassini s operation for the Radical Cure of Inguinal Hernia.—Dr T Horton showed a boy with Genu Valgum. A skiagram apparently showed that an abnormality about the head of the tibia was the chief cause, but an operation rectifying this was followed by no improvement. Macewen s operation on the femur was then performed with an excellent result.—Dr Horton also showed a girl with a Spontaneous Arterio-Venous Aneurysm between the dorsalis pedis artery and the internal saphenous vein.—Mr Rupert Wheatley read a paper on the Dental Aspect of a Few General Diseases in which he called attention to the general neglect of the state of the mouth and teeth with all their septic organisms during the course of general diseases. Alluding to the proved virulence of some specific microbes in the presence of other different organisms he suggested that the occasional malignancy of some general diseases was due to their association with other septic organisms derived from the mouth.—Most of the members present took part in the discussion.

WATER-SUPPLY OF BATH.—A public meeting was held in Bath on Dec 20th under the presidency of the Mayor to consider the proposals of the corporation to promote a Bill in Parliament to enable it to carry out works to increase the water supply of the city at an estimated expenditure of £44,000

DEPARTMENTAL COMMITTEE ON THE NURSING OF THE SICK POOR IN WORKHOUSES —The committee of the Workhouse Infirmary Nursing Association has drawn up a memorial to the President of the Local Government Board, protesting against the proposed creation of 'qualified nurses —viz women trained for one year in a small workhouse and holding a certificate of good conduct and proficiency from the superintendent nurse, the chairman of board of guardians, and medical officer

Reviews and Notices of Books.

A Manual of Medicine Edited by W H. ALLCHIN, M D, F R C P Lond, F R S Edin., Senior Physician and Lecturer on Clinical Medicine, Westminster Hospital Vol. IV Diseases of the Respiratory and of the Circulatory Systems. London Macmillan and Co, Limited 1902. Pp 493. Price 7*s* 6*d*

THIS volume commences with a chapter on the General Anatomy and Physiology of the Respiratory System by Dr Leonard Hill, F R S, lecturer on physiology at the London Hospital Medical College Dr Hill's remarks will be found very instructive, especially those dealing with the mechanism of respiration The Diseases of the Upper Respiratory Tract are described by Dr Lewis A. Smith physician to the Poplar Hospital. A good clinical account is given of adenoids, but with regard to the treatment of this affection we are not entirely in accord with the writer He says "The treatment of adenoids consists in their removal." If we understand him correctly we consider that he is too sweeping in this statement Surely the question of operation is dependent upon the quantity of adenoid growth present. If small in amount atrophy may well be hoped for and operative procedures may for a time, at any rate be postponed. In describing the method of operation Dr Smith advises a general anæsthetic but states that the operation is quite possible under cocaine and adds "Some authorities use no anæsthetic, either local or general" This last procedure he quite disapproves of, we should go further and condemn the application of cocaine alone Dr Hector W G Mackenzie, physician to St Thomas's Hospital and to the Hospital for Consumption, Brompton, writes on Diseases of the Lower Respiratory Tract. The article as a whole is excellent but in our opinion its value is impaired by the general arrangement which has been adopted. A large number of diseases are described but instead of considering each disease in full, as is the plan followed in most text-books—that is to say, discussing the etiology, pathology, morbid anatomy, symptoms, prognosis diagnosis, and treatment under the heading of one particular disease—preliminary sections have been written on general etiology morbid anatomy and pathology, and general symptomatology We do not consider this plan a convenient or praiseworthy one. For purposes of reference it is most cumbersome and we doubt whether it will be found of value to students. The information contained in Dr Mackenzie s contribution is ample and accurate but it is a retrograde step to separate etiology and pathology so completely from the clinical description. The section on Diseases of the Pleura is by Dr F de Havilland Hall, physician to the Westminster Hospital, whilst Dr Allchin describes the Disorders of the Diaphragm.

The Physiological Introduction to the Vascular System is by Dr Leonard Hill and we can speak in terms of the highest approbation of this section of the book. The first principles of the circulation are described in a manner which rivets the attention and cannot fail to instruct. The physiology of the component parts of the vascular system is considered in such a manner as to convey the maximum amount of information in the space allotted to the writer We can cordially recommend a careful study of these pages to students about to commence their clinical work. The section on Diseases of the Circulatory System is by Dr J Mitchell Bruce. His remarks on the general etiology and morbid anatomy and pathology of diseases of the heart are excellent. The general symptomatology of these diseases is graphically described and a clear idea is conveyed to the reader of the different phenomena which may be encountered in dealing with cardiac affections. One

&c. He next referred to the successive phenomena seen when an electric discharge was taking place in a Crookes's tube which was being exhausted. The kathode rays were due to streams of electrified particles emitted from the kathode at a high velocity They could be deflected by a magnet, they excited fluorescence, cast shadows of interposed objects, rendered platinum foil red hot when focussed upon it, and by the bombardment of the anti kathode they set up quivers in the ether which were propagated in all directions and which constituted the Roentgen rays. These rays possessed all the properties of the ultra violet rays enumerated above but could not, like them, be reflected, refracted, or polarised, nor could they be deflected by a magnet like the kathode rays. Roentgen considered that his rays were longitudinal waves in the ether, others had held that they were transverse waves of very small wave length, their failure to be refracted being due to their being unhindered by the molecules of ether in much the same way that a mouse might pass through a thicket which would delay a man. Mr Tomlinson finally alluded to Becquerel's discoveries and described the new elements polonium, radium, &c., which had the power of spontaneously emitting Roentgen and kathode rays —The proceedings terminated with a cordial vote of thanks to Mr Startin, Mr Tomlinson, and Mr Wigmore.

HARVEIAN SOCIETY OF LONDON —A meeting of this society was held on Dec. 18th, Mr W Watson Cheyne, C B, F R.S, the President, being in the chair — Dr A. Morison exhibited a child, five months old, who showed the Dilated Veins which a French writer described as "venous dystrophy" and attributed to specific disease Dr Morison could find no evidence of specific disease in the case which he exhibited and he ascribed the malnutrition of the child and the increased intracranial pressure to over production of children by a delicate mother rather than to specific disease.—Dr Wilfred J Harris showed a woman, aged 24 years, who suffered from a Sore throat, not diagnosed as diphtheria at the time (January, 1901) A few weeks later she had difficulty in swallowing and nasal regurgitation with altered voice The muscles of the lips and eyes afterwards became affected. In November she was treated by hypodermic injections of strychnine but she became worse. There were at the present time complete paralysis for reflex and voluntary movement of the palate, bilateral wasting, and almost complete paralysis of the orbiculares palpebrarum, less marked in the orbicularis oris The tongue was partially atrophied and weak. Sensations in the pharynx were diminished The deep reflexes were all brisk but the plantar reflexes could not be obtained. Electrical reaction was very slight to strong faradism in the soft palate with well marked reaction to galvanism, K.C C being greater than A.C C There was very slight reaction to faradism in the orbiculares palpebrarum with better marked reaction to galvanism, K.C C being greater than A.C C Under treatment with galvanism of the affected muscles for five months and with iodide of potassium in from 10 grain to 15-grain doses three times a day the condition had scarcely altered —Dr J S Risien Russell showed a case of Peripheral Neuritis with paralysis of the right side of the face of peripheral type, paralysis of the right external rectus, slight paresis of the left external rectus, and well marked optic neuritis subsiding into atrophy Under treatment the paralysis of the face and of the external recti had disappeared and the limbs were also improving, though the patient was still unable to stand or to walk No cause had been determined but the appearance of the patient and the features of the paralysis of the limbs made alcohol most probable.—Dr E Cautley showed for Mr P L. Daniel a woman, aged 63 years, on whom Resection of the Supra-orbital Nerve had been performed for severe neuralgia The pain followed a bad attack of herpes in the region supplied by this nerve and was accompanied by marked trophic changes in the skin and hair affecting also the blood vessels Medical treatment proved useless The operation had done no marked good to the pain, but the nutrition of the affected parts had somewhat improved.—Mr F Jaffrey said that he had seen marked improvement in certain cases of severe trigeminal neuralgia by the injection of osmic acid into the affected nerve In a case under his own care where the third division of the fifth nerve was affected, he trephined the ramus of the lower jaw and injected osmic acid into the inferior dental and gustatory nerves with complete success —The cases were also discussed by Mr Campbell Williams and Dr G A. H Barton

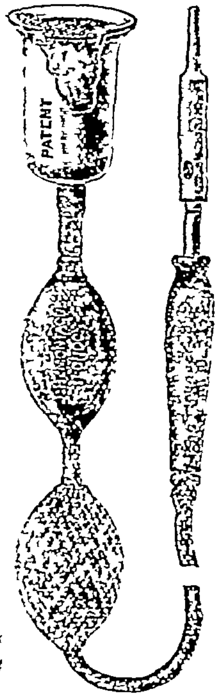
ÆSCULAPIAN SOCIETY —A meeting of this society was held on Dec. 19th, Dr Thomas G Stevens, the President, being in the chair —Mr Reginald Brown showed a man, aged 33 years, whose Ulna was broken two years ago and though treated in various ways was unhealed He cut down upon the fracture and scraped away the fibrous union, placing the arm and forearm on a splint Healing resulted in six weeks —Mr F Hewitt Oliver showed a radiogram of an Ununited Fracture at the outer inch of the clavicle in a woman, aged 55 years, who suffered but little inconvenience from the non union —Dr Arthur T Davies showed a specimen of an Aneurysm of the whole Aortic Arch from a man, aged 52 years He died from hæmorrhage into the left bronchus following a slight cough that ruptured the aneurysm. Dr Davies remarked on the rarity of rupture into the left bronchus —Dr Lewis A. Smith read a paper entitled "Errors I have Made and Seen" In it he said that gonorrhœal rheumatism was often mistaken for acute rheumatism. Gonorrhœal rheumatism affected the peri articular tissues and acute rheumatism the articular tissues Pain referred to the left scapula in a man, aged 34 years, was thought to be rheumatism but four months later was proved post mortem to be due to an aneurysm. Any fixed pain should give one pause before labelling it as rheumatic Typhoid fever might resemble other diseases besides typhus fever and thus collections of pus that were hidden, miliary tuberculosis, and appendicitis were often mistaken for typhoid fever Glycosuria was not synonymous with diabetes, for it might be transient, resulting from overstrain of mind or faulty digestion Yet he believed that the simplest occasional passage of sugar in the urine was at the lowest end of the diabetic scale at the other end of which was the most acute wasting with polyuria, acetonuria, and coma. Confusion might arise readily if a patient's statement unproved were accepted when vomiting was reported, for a mere regurgitation might be called vomiting Vomiting as a symptom in tabes dorsalis must be kept in mind, as also must repeated small doses of an irritant poison Acute abdominal pain was not due always to abdominal disease but might be reflected from the thorax, as in pleurisy and pneumonia. A young man who was anæmic, had been constipated for four days, and had vomited and suffered severe abdominal pain, was prepared for laparotomy when he was noticed to have a sulphide line due to lead and so his abdomen was not opened A man, aged 34 years, who had severe, sudden abdominal pain that did not lessen and whose pulse was worse in a few hours, was operated upon and was found to have hæmorrhage into the pancreas. He died in 24 hours and it was found that the blood vessels to and from the pancreas were thrombosed Empyema was often overlooked and should not be, for in any doubtful case of one sided chest dulness an exploratory needle should be inserted Dr Smith said that all their mistakes taught them to have more care and always to make a post-mortem examination

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY —A meeting of this society was held on Dec. 17th, Dr E Symes Thompson (London) the President, being in the chair —Dr Percy G Lewis (Folkestone) read a paper entitled "Convalescence and Chronic Illness," of which the following is a summary The symptoms of convalescence were those of lowered vitality The system suffered from granular degeneration of the different organs affecting their functions, hence deficient elimination and auto-intoxication. Specially noteworthy was the effect of acute illness on the heart Most convalescents were found to have dilated hearts which required appropriate treatment. Chronic invalids also suffered from auto-intoxication. It was important that a convalescent should be as carefully watched as an acute case. In treatment change of air to the nearest seaside health resort was advisable as soon as possible. This was of use not only by helping the patient to resume the habits of health and to cast off those of illness but the pure stimulating sea air with the influence of sunlight had a remarkable effect in restoring healthy metabolism and aiding repair Graduated medical exercises with heart tonics and careful attention to diet were recommended.—The paper was discussed by Dr J Groves (Carisbrooke), Dr W V Snow (Bournemouth) Dr Harry Campbell (London), Dr C Begg (Bath), Dr T F portrait of the late Dr David Little Among the editorial paragraphs is one calling attention to the fact that Sir Dyce Duckworth s recent introductory address has been printed and bound in covers resembling those of twopenny notebooks and suggests the possibility of students reading novels bound in similar covers during the course of a lecture This reminds us that some years ago a correspondent wrote a letter to the press complaining that he had seen a young lady in a second class railway carriage reading a copy of one of Zola's most realistic books bound in a cover entitled "De Imitatione Christi," and we ourselves have seen a copy of the ' Kreutzer Sonata " bound up under the title of "English Spelling as it is." The Christmas number of this *Gazette*, which for the most part is devoted to matter of a light nature, is an excellent one

New Inventions.

A SAFER METHOD OF PROVIDING VAPOUR FOR HEATING PAQUELIN S CAUTERY

THE ordinary method of obtaining vapour for heating Paquelin s cautery—by forcing air through benzoline contained in a glass bottle which is attached to the clothing of the operator and often in close proximity to fire—is not, even under the most favourable condition entirely free from the risks of accident from violent explosion. In order to eliminate the risks of explosion while using Paquelin s cautery and to facilitate the heating of it I have had a particular *form of open* metal evaporating apparatus constructed for attachment to the hollow cautery handle in the place of the customary closed glass bottle With this new arrangement the vapour employed for increasing and maintaining the glow of the cautery is obtained not by driving air through a mobile liquid confined in a closed glass bottle but by drawing air through an open metal container filled with cotton wick moistened with benzoline intended for evaporation The mixture of air and inflammable vapour thus formed is driven by the force of a ball bellows into the platinum point. The metal container in which the wick is placed (lengthwise) communicates above with the inlet of the bellows, but below is open to the air, the lower opening however is protected by a wire gauze screen. This screen has two functions the first to retain the cotton wick in place, the second and more important, to protect the inflammable fluid and vapour present in the container from ignition by fire. To charge the apparatus a few drops of benzoline (say half a drachm or more according to requirement) are poured through the wire gauze screen on to the wick, in doing so the liquid should be poured evenly over the whole of the exposed surface of the wick. When heating the cautery the terminal should be heated to a dull red glow in the flame of a spirit lamp before the vapour is driven into it otherwise the vapour will fail to ignite within the terminal but will ignite at the vent holes, should this occur it is merely necessary to cease pumping until the error has been corrected There is not the least danger of the apparatus exploding, it may even be passed through the flame of a spirit lamp with safety The vapour is protected from ignition below by the presence of the wire gauze screen, above by the valves that intervene between the container and the cautery



I am indebted to Mr J H. Montague of 101 New Bond street, London, W for the manufacture of this little apparatus

Old Burlington-street W

GEORGE FLUX

Looking Back.

FROM

THE LANCET, *SATURDAY, JAN* 8, 1825.

FOREIGN DEPARTMENT

ANALYSIS OF FOREIGN MEDICAL JOURNALS

Beobachtung einer Entzundung des linken Ohres durch mehrere maden veranlasst, deren vollstandige Verwandlung nach ihrem Abgange gelang, Von Dr Kuntzmann

A case of Inflammation of the left Ear, occasioned by the presence of several larvæ in the external meatus

A Surgeon of Berlin Mr MOHR was consulted some time since, by a little boy of six years of age, who had been suffering for five days a very severe pain in the left ear, without intermission and which pain was daily increasing in intensity On examination of the parts he found that the proper auricle was sound but that the external auditory passage was very much swollen, and from it pus mixed with blood was discharged In other respects the child appeared to be well. Mr Mohr ordered an infusion of chamomile, with honey of roses and tincture of myrrh, to be injected into the ear, and an emollient poultice to be afterwards applied The next day when injecting the ear, Mr Mohr was very much surprised to see several moving bodies, and with a small forceps he drew out six worms of the same size and figure. Soon afterwards the pains ceased, and in a few days the patient was quite well, without having any deafness or other inconvenience.

Each worm or *larva*, was rather more than half an inch long, and one twelfth of an inch in breadth, of a yellowish white colour, and composed of many soft circular portions locking the one into the other On the head of each were two brown crooked projections, bent downwards, between which was found a little conical figure called, by Reaumur *dard* This dard was not straight as it is in the domestic fly but curved backwards the same as the little horns, although less so

Mr Mohr gave two of these larvæ to Dr Kuntzmann and he placed them in a little box containing some finely powdered dry earth, a small piece of meat, and a little dung they would not touch either of the two last substances, but plunged themselves immediately into the earth Two days after he found them both changed into perfect chrysalides These were brown in colour, cylindrical in figure thin, and obtuse at each end, immovable and apparently composed of many rings In about five days they became perfect insects with wings spotted with grey and black and Professor Illiger, when they were shown to him, said that they belonged to the genus *Tachina*, but that they formed a new species of that genus

This boy had been frequently in the habit of sleeping in the open air in a wood near his home, and there can be no doubt but that the eggs from which these larvæ are produced were deposited in his ear by an insect while he was asleep.—*Journal der Practischen Heilkunde, August*

LEICESTER MEDICAL UNION AND VACCINATION —The memorial to the President of the Local Government Board which follows has been sent by the Leicester Medical Union and this body hopes 'that any other medical societies who agree with it will forward similar ones '

[COPY]

To the Right Honourable Walter Long M.P President of the Local Government Board this memorial of medical practitioners constituting the Leicester Medical Union respectfully sheweth —

That in the opinion of your memorialists it would conduce to the practice of vaccination in this country if Parliament were to enact that every duly qualified medical practitioner shall be put on the same footing in regard to the practice of vaccination as that on which public vaccinators now are

It is well known to your memorialists that many adult persons who refuse to visit the public vaccinator would have their children vaccinated and would be themselves revaccinated if this could be done free of cost to themselves by their regular medical attendant

(Signed for the Leicester Medical Union)
O F BRYAN President
JAMES PEACOCK, Honorary Secretary
335 Humberstone-road Leicester Dec. 20th 1902.

of the best sections is that headed, General Course and Prognosis of Heart Disease It is more especially this aspect of disorders of the heart that the student finds difficult to understand From the point of view of his future professional life it is, of course, of the utmost importance that he should fully comprehend the various details which have to be taken into consideration when forming a prognosis in any given case Dr Bruce's remarks will be found most valuable as an aid in this direction. We may further draw attention to the observations on cardiac failure, which are well worthy of note The section entitled "The Principles of Treatment in Disease of the Heart" should also be carefully studied. The many suggestions found in the pages devoted to this branch of the subject will be found useful to students and to practitioners alike.

The volume ends with an excellent article on Œdema by Dr Allchin The pathology of the condition is well described and its clinical aspect is considered at length.

LIBRARY TABLE

Executors a Summary of their Powers, Duties, and Liabilities, together with an Epitome of the Death Duties By H P C KELLAND, Chartered Accountant Second edition Published by the author at 53, Victoria street, Westminster —The duties of an executor cannot be too clearly understood by those who are called upon to discharge them In practice executors are almost always advised by a solicitor as to the course that they should pursue, but for many reasons a man may wish to know without taking legal advice what his powers and liabilities as an executor are He may, for instance, want to make up his mind whether he will accept office or not and may prefer to do so without the formality that is implied in seeking legal advice In such and similar circumstances Mr Kelland's little book will be found to contain all the necessary information put in a very clear and concise form Similarly, the epitome of the death duties, legacy duties, and succession duties, which makes up the latter half of this pamphlet, is very comprehensible and brief. Medical men are not always good men of business, so that it is not unlikely that some of them may find Mr Kelland's pamphlet to be of great practical use

Whitaker s Almanack, 1903 London 12, Warwick lane, Paternoster row —We have at length found something in the incomparable "Whitaker" at which to grumble, and that is the new perpetual calendar published in this year s issue. Somehow it does not seem to us so convenient for reference as the one published in last year's issue, but that may simply be because we have not yet got accustomed to it It is, we think, a matter for congratulation that "Whitaker" should not be always at the apex of perfection or we fear that he would meet with the fate of Aristides and be ostracised, because people were tired of hearing his praises sung In all other respects the almanack is as admirable and indispensable as usual.

Whitaker s Peerage 1903 London J Whitaker and Sons, Limited —This valuable work is not only a peerage but a baronetage, knightage, a list of companions of orders of Privy Councillors, and of bishops both spiritual peers and others The introduction is full of interesting matter and the amount of information in the volume is marvellous So is the manner in which the details are kept up to date.

"*Who s Who" for 1903* London A. and C Black. Price 5s net.—"Who s Who" for this year is almost entirely biographical, all the tables which appeared in former issues having been omitted with the exception of a list of the Royal family and a small obituary list. The publishers, however, state that it is hoped to issue separately the tables which have appeared in former issues. As to the biographies, while some are interesting others are not, and the want of proportion in their length is very noticeable. But the book as a whole is enormously useful, as every working journalist knows, and the amount of trouble expended in its production must be very great.

The Englishwoman's Year Book for 1903 London A. and C Black. Price 2s 6d. net —This useful volume contains a mass of information as to women's employment and the work which they do in literature, education, temperance, social reform, the religious orders, and sundry other spheres. There is a full summary of laws as affecting women and children which will be found to be serviceable.

HOSPITAL MAGAZINES

St Bartholomew's Hospital Journal for November contains the concluding part of Mr D Arcy Power's paper on the Elizabethan Revival of Surgery *Apropos* of the retirement of Sir William S Church, Bart, K.C B, senior physician to St Bartholomew's Hospital, there is an interesting sketch of the life of the President of the Royal College of Physicians of London in his connexion with the institution at West Smithfield and there is another instalment of Smithfield Letters collected by "John Street Road." "Four Generations of Ophthalmic Surgeons to the Hospital" is the title of a not very well reproduced photographic group of Mr Henry Power, the late Mr Bowater Vernon, Mr Walter H. H Jessop, and Mr W T Holmes Spicer

Charing Cross Hospital Gazette for December describes a visit to the hospital clinics at Bonn. The writer says that "a month's grind at Hugo s System and three five-pound notes will carry one along for four weeks very comfortably" Mr C Carter Braine gives an account of the anæsthetic registers of the hospital from 1895 to 1900

St George's Hospital Gazette for November opens with a very interesting and instructive little note entitled "A Breath of Ozone," dealing chiefly with baths and bathing, by Dr Robert Barnes In it he incidentally mentions that his first contribution to medical literature was a case of Severe Vomiting after Immersion in a Tartar Emetic Bath published in THE LANCET in 1839 Among other interesting matter in this number is the report of a lecture by Dr H A. Des Vœux on the Treatment of Disease by Exercises, Active and Passive.

Guy's Hospital Gazette of Dec 20th is a very good number and the pencil of the caricaturist has been busy An excellent reproduction of the illuminated "Arms Crest, Supporters, and Motto belonging to the Hospital in the Parish of St. Thomas's in Southwark founded by Thomas Guy" and signed by "John Anstis, Garter," forms a supplement to this issue which also contains a copy of the original grant in the counting house of Guy's Hospital

St Mary s Hospital Gazette for December publishes a very interesting account of Life in a Pioneer Town of West Australia by Mr Graham Blick. "The Leucocyte s Lament," which is described as a physiological ballad by Augustus O'Leary, is amusing

St Thomas s Hospital Gazette for December contains the concluding portion of Dr W S Colman's paper on Three Distinguished Amateur Physicians which is well worth reading Naturalists will appreciate a paper on Egg Collecting

University College Gazette for December chiefly devotes its pages to college notes, meetings of college societies, and such like matters It contains a brief memoir of Dr J H. Gladstone—"a link with a former generation of professors and students."

The *Manchester Medical Students' Gazette* for December reproduces as a supplement to the *Gazette* a very good

FREYBERGER as a pathologist to be employed by coroners in the County of London for the making of post mortem examinations Dr FREYBERGER has been consequently employed to make such examinations and to give evidence at inquests, particularly by Mr TROUTBECK, the recently appointed coroner for South-West London In the interests of the public and of the medical profession alike there are in our opinion many reasons which render the innovation described undesirable, but we propose for the present to postpone the discussion of these and to examine the legal aspect of the question only, to which attention was particularly called at the recent meeting of the South-West London Medical Society Our report of this meeting which will be found on page 126, sets out the opinion of Mr MUIR MACKENZIE, obtained at the instance of the society Our own views were formed some time ago, but the publication of them was delayed in order that the development of the question might be watched and that, if possible, the precise legal positions adopted by the London County Council and by Mr TROUTBECK might be ascertained. These we do not find easy to determine, although we readily concede that both the Council and the coroner are acting in good faith and under the impression (in our view a mistaken one) that the course adopted is for the public good The position of the Council may, however become clearer when that body replies to the South West London Medical Society

As matters stand at present, the chairman of the Public Control Committee of the County Council has made a statement on the subject which has been published in THE LANCET[1] to the effect that the Council has been for some time dissatisfied with the existing law as to the making of post-mortem examinations and has in vain urged successive Governments to alter it. In these circumstances, he says, the Public Control Committee "considered in what way improvement could be made by the Council under the existing law and on July 1st last they reported to the Council the result. They recommended amongst other reforms 'That all coroners be informed that in the opinion of the Council it is desirable that post-mortem examinations in inquest cases of a special nature should be intrusted to a specially skilled pathologist And the Council approved this recommendation On the same day Mr TROUTBECK was appointed coroner for the south western district and he agreed to give effect to the Council s resolution." The statement from which we have quoted further informs us that Dr FREYBERGER was found to be an experienced pathologist and was also prepared to make the post-mortem examinations and give evidence in cases requiring special pathological experience and skill for the statutory fee of two guineas," and that it was accordingly "suggested" that he should be employed in special cases, but not so as to supersede the medical attendant on the deceased in ordinary cases. We do not propose to discuss at present whether in point of fact Dr FREYBERGER has only been employed in cases of special difficulty, but on the general question of the arrangements made with regard to him we would point out that the statement referred to admits that the law with which the Council was dissatisfied remains unaltered, and speaks of a resolution with a view to an improvement "under the existing law," without attempting to show that the existing law justifies or permits the "improvement" It will be observed, however, that Dr FREYBERGER is to be paid the statutory fee and that it is therefore apparently admitted that unless his employment is justified by statute the fees paid to him have not been properly paid.

Mr TROUTBECK in the course of an inquest held on Dec. 22nd, 1902, made some observations upon the adverse criticism which his employment of Dr FREYBERGER had evoked, making references to the Coroners Act of 1887 and to arrangements made by the County Council with Dr FREYBERGER. He, however, like the chairman of the Public Control Committee, did not make clear the source of the power under which the County Council made its arrangement with Dr FREYBERGER and its "agreement" with himself. He appeared to regard the choice of a medical man to make a post-mortem examination or to give evidence at an inquest as a matter wholly within the coroner s discretion, but we are not informed that he has at any time quoted any authority for this proposition. The calling of medical witnesses and the holding of post mortem examinations are governed by Section 21 of the Coroners Act, 1887 (50 & 51 Vict, c. 71), the gist of which is sufficiently given in Mr MUIR MACKENZIE s opinion. We quote in full the third subsection only, because it defines the conditions under which special medical evidence is to be obtained. Section 21, Subsection (3), is as follows —

> If a majority of the jury sitting at an inquest are of opinion that the cause of death has not been satisfactorily explained by the evidence of the medical practitioner or other witnesses brought before them, they may require the coroner in writing to summon as a witness some other legally qualified medical practitioner named by them, and further to direct a post-mortem examination of the deceased, with or without an analysis of the contents of the stomach or intestines, to be made by such last-mentioned practitioner, and that whether such examination has been previously made or not, and the coroner shall comply with such requisition, and in default shall be guilty of a misdemeanour

It will be seen that this subsection, at all events, does not provide for the selection of a pathologist by any public body such as a county council or for the employment of any such person to make post-mortem examinations by the coroner upon his own initiative In the event of the jury being dissatisfied with the evidence of the local practitioner, called under the two preceding subsections, they are to require the coroner to obtain other expert evidence, the selection of the person to give it resting with the jury although, no doubt, the coroner's guiding influence would properly make itself felt upon such an occasion. The 22nd section of the Act provides for the fees of medical witnesses summoned to give evidence "under this Act," and we do not know of any power to pay fees to any medical witnesses not so summoned. This points to a possible remedy for those aggrieved which apparently was not suggested to Mr MUIR MACKENZIE but which seems to have been successfully adopted in the case to which we are about to refer

We are not aware of any difficulty having before arisen in England that could call forth a legal decision upon the matter under discussion, but a similar attempt to introduce a general medical referee for the purpose of inquests was

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[1] THE LANCET Dec. 20th, 1902 p 1717

THE LANCET.

LONDON SATURDAY JANUARY 10, 1903

The Imperial Vaccination League

IN the absence of organisation there can be no guarantee of victory and the apathy of human nature renders such organisation necessary in order that the truth may be made known and its teachings brought home to those whose duty it is to modify the laws in accordance with the demands of science In the matter of vaccination there is a crisis approaching At the end of the current year the provisions of the Vaccination Act of 1898 must be ended, extended, or mended, and it is of the greatest importance to the public health, in so far as its freedom from small-pox is concerned, that such provisions shall be amplified and improved We discussed in a recent leading article the question as to who should administer the coming Vaccination Act [1] and we see no reason materially to modify the position which we then took up—i e, that of the several bodies more or less concerned, the Local Government Board, the guardians, and the district or county councils, the last-named bodies are best fitted to undertake the administration of vaccination. Among the reasons which we adduced for this view were the facts (1) that county councils are least likely to be influenced by the small section of well meaning enthusiasts to be found in every community, and (2) that county councils would be able, either alone or in combination, to erect laboratories which in the first instance would serve for the preparation of calf lymph, but which might afterwards be so expanded as to provide for general bacteriological and chemical examinations for the county Thirdly, we pointed out that the county councils in their capacity of education authorities would possess great facilities for administering the Act. County councils were created in 1888 by a Government of the same political views as that which is now in power, and it would be a graceful act on the part of the Government, showing its appreciation of the work done by certain county councils in furthering the public health, if the proposed powers were conferred upon them We have also urged from time to time the necessity for placing revaccination upon the same basis as primary vaccination—i e., that such revaccination shall be compulsory at school ages in the same sense, and with the same loopholes for what is called 'conscience," as primary vaccination There is, too, need, as we have for many years insisted, to render "one mark" vaccination a thing of the past and to make it impossible for a practitioner who degrades his profession by advertising "one child, one mark, one shilling" to pursue his calling This point and many others equally important are made by Dr DUKES in the able letter upon the present position of vaccination which we publish this week.

Now, the Imperial Vaccination League, which is presided over by the Duke of FIFE, and which contains in the list of its vice presidents an array of names which from the point of view of academic distinction it would be difficult to beat, has for its programme a scheme very similar to the one that we have sketched. The object of the League is also to assist in the education of the people in the matter of vaccination and particularly, we may add, revaccination. The League has our entire sympathy and we should be glad to see it so supported financially by those who agree with its aims as to enable it to provide legal assistance in cases in which baseless allegations are made against vaccination, allegations which are generally supported by legal assistance from a society of very different calibre to the Imperial Vaccination League. If those who appreciate the value of vaccination were possessed of a tithe of the energy of those who fail to appreciate it there would be but few "consciences" left for our magistrates to deal with. A deputation from the Imperial Vaccination League is to wait upon the President of the Local Government Board during the coming week and we have no doubt that the *influence and ability which the members of the League* possess will enable the deputation to put its case before Mr LONG with such clearness and force as to carry conviction. It is, however, to be hoped that the deputation will be *content to advocate certain principles and to leave* the application thereof to the Cabinet Minister who acts to some extent as Minister of Public Health. These principles should, we think, embrace the following points (*a*) the removal of vaccination administration from boards of guardians, (*b*) the enforcement of revaccination in the same sense as primary vaccination is now enforced, (*c*) the definition of "efficient" vaccination, and (*d*) the provision of laboratories under the general supervision of the Local Government Board in which supplies of calf lymph should be prepared We feel that if the League contents itself with enforcing these principles it will be doing a greater service, and one which is more consistent with its aims and constitution, than if it raises a discussion as to whether county or district councils shall administer the coming Act

But the League must state its case emphatically and should point out to Mr LONG that if he, as the protector of the public health, wishes practically to eliminate small pox he must follow the example of the German Empire which has so eliminated the disease Let the League be no consenting party to apologetic measures. And let it not be forgotten that the protection of the *public health* is not a political question it is an elementary duty incumbent upon both parties. We trust, therefore, that the League, having put its case before Mr LONG, will also put it before those who sit on the opposite side of the House seeing that their attitude will decide whether the coming Bill is to be regarded as a non-contentious measure or is to be made an excuse for the exhibition of party bias

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The Medical Man, the Coroner, and the Pathologist

UNDER the above heading reference has recently been made in THE LANCET upon several occasions to the selection or indication by the London County Council of Dr LUDWIG

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[1] THE LANCET Oct 25th 1902 p 1138.

Annotations.

'Ne quid nimis."

THE LANCET RELIEF FUND

THE annual report of the Almoners of this Fund will be found on page 124 In the case of an institution such as THE LANCET Relief Fund founded for well-defined objects, the history of the past will form largely the experience of the future, and a retrospect of the incidents of the year's work just concluded reveals no new features The majority of the cases brought to the notice of the Almoners are still those of the widow and orphans suddenly plunged into grief and distress by the loss of the husband and father upon whose existence their own practically depended. The details of these cases plainly reveal the struggle to make both ends meet which prevailed whilst the bread winner was yet alive. It is not easy to picture a more distressing position than that of a mother of a family who, as she turns away from the death bed of her husband, almost before she has realised the severity of her own personal loss, is compelled to contemplate the worldly side of that loss as she finds that the entire support of herself and of her children is gone During the past year 73 applications for assistance were received. Of these, 24 were relieved by gifts of money ranging from £5 to £30 which involved the expenditure of £318 Many letters from those who have benefited have again been received expressing gratitude for the prompt relief which has enabled them to bear, and oftentimes to overcome, their difficulties To those who have so ungrudgingly helped us in carrying out the work of the Fund it is again our privilege to make public acknowledgment of our indebtedness—to Sir William Selby Church, Bart K.C.B., the President of the Royal College of Physicians of London, to Sir Henry Greenway Howse, the President of the Royal College of Surgeons of England (to whom, as one of our Almoners, we offer our congratulations on the distinction of knighthood conferred upon him by His Majesty the King), to Sir William Turner, K.C.B., the President of the General Medical Council, and to the veteran Sir Henry Pitman, for many years the registrar of the Royal College of Physicians of London The application form of THE LANCET Relief Fund will be found in our present issue and can be readily detached for use in case of need. We again take an opportunity of asking those of our readers who may have occasion to assist in furthering any application made for relief to note carefully the conditions which entitle applicants to participate in the benefits of the Fund, as it is still found that many requests are made in behalf of cases outside the scope of its working All applications should be made on the prescribed form and should be sent to the Secretary of THE LANCET Relief Fund, THE LANCET Offices, 423, Strand, London, W C

THE NECESSITY FOR AMENDMENT OF THE REGISTRATION ACTS

IT is an indubitable fact that our very loose system of registration of deaths opens the door to both crime and fraud. The latest example of this which has come under our notice was the cause of an inquest held by Mr S Brighouse, who is one of the county coroners for Lancashire, concerning the death of a child, aged two months, named James Gallagher The coroner in opening the case related the following remarkable story The child was born on Oct. 9th and was attended for illness by Mr W Hamilton of Wigan. He last saw the child on Dec. 10th and on Dec. 12th the mother told Mr Hamilton that the child had died that day Mr Hamilton therefore gave her the certificate On Dec 13th the mother registered the death and obtained a club paper by which she would be able to draw £2 for funeral expenses The registrar handed over the burial certificate which the woman promptly lost Curiously enough, it was found the same evening by the manager of a firm of undertakers, Mr Johnson He called that same night at the address given and found that the child was still alive. The mother demanded the certificate back but Mr Johnson refused to part with it and handed it over to the police. On Dec. 13th the mother again went to the registrar and said that she had made a mistake and that the child had died at 2 A M that morning The registrar told her to get another medical certificate On the 15th the representative of the undertaking firm called again and found the mother washing the child who was still alive. On the 18th the mother appeared at the registrar's office with another certificate and the registrar promptly forwarded the whole story to the police who communicated with the coroner who ordered an inquest and a post-mortem examination. The mother, who gave evidence, said that she quite thought that the child was dead when she went for the first certificate. Mr Hamilton, who had attended the child, said that he gave the certificate on the mother's statement because from what he had seen of the child he had every reason to anticipate his death. He had made a post-mortem examination and had found the cause of death to be pneumonia. The jury returned a verdict of "Death from natural causes." As we understand that proceedings may be taken against the mother we are thereby precluded from commenting upon her conduct, but it is obvious from the facts which we have recounted that it should be made obligatory for any medical man before giving a death certificate to satisfy himself of the fact of death For such certificates a fee should be made legally payable.

SILLY ADVICE

JUST recently a great deal has been heard from the clergy as to their objections to having lay managers set over them to decide as to what they shall or shall not teach This being so it is somewhat remarkable to find a parish priest going out of his way to advise unorthodox treatment in the case of illness. We have upon various occasions animadverted upon the conduct of religious houses which sell some elixir or salve warranted to cure all and sundry diseases, we have also rebuked various clergy of the English Church for issuing circulars prescribing three drops of carbolic acid as a cure for 'fever" or for undertaking medical treatment in other forms Such persons, however, though foolish, were of no influence outside their proper spheres and therefore not of much importance But from a correspondence which we have had forwarded to us we are sorry to have to put on record a grave dereliction of duty on the part of a metropolitan parish priest who is by no means a fool, who is on the contrary a brilliant writer, an able preacher, and who has given up most of the good things of this world in pursuit of his calling It appears that a supporter of the Rev Mr —— is afflicted with some incurable disease of the œsophagus. The Rev Mr —— thereupon wrote to his supporter and said, "I wish you would try Mr Simms, 36 High street, Oxford, for your trouble you have which prevents you from swallowing He has some wonderful stuff which has an effect in dispersing 'growths' of many kinds. I really think that it would be worth trying" The sufferer accordingly, at the earnest request of his wife, wrote to Mr Simms and received an made at Dublin in 1877 and was held to be illegal under the provisions of the Coroners Act (Ireland), 1846,[2] a statute which regulates the calling of medical witnesses at inquests upon lines generally resembling the provisions of the English Act. In this instance the corporation of the county of Dublin had agreed to pay a fixed yearly salary in lieu of fees to a medical practitioner *permanently appointed by the coroner to attend as a medical* witness at all inquests to be held in the city of Dublin. The question was raised by a ratepayer who moved to prevent the public auditor from passing payments so made and the court in giving judgment intimated that the appointment of a permanent medical witness was illegal and that medical witnesses should be appointed from time to time as circumstances might require.[3] A perusal of the report of this case will, to those who have access to it, suggest the consideration of a further question which will have occurred to some already. The chairman of the Public Control Committee in a passage which we have quoted has said that Mr. TROUTBECK "agreed" to give effect to the County Council's resolution. We would ask for a more definite statement upon the subject of this "agreement" either from the County Council or from Mr. TROUTBECK. We should hesitate to infer that a coroner about to occupy a judicial position of some importance bargained with the body appointing him as to the manner in which he would carry out duties already defined for him by law. We should certainly question the propriety of any promise ostensibly binding anyone filling such an office to summon a particular witness before him to the exclusion of those who might otherwise be called, more especially should such a promise involve the payment of fees to the nominee of a body holding the position occupied by the London County Council in relation to the London coroners. The matter, however, may, with regard to all the points we have touched upon, be susceptible of explanation more complete than that which has at present been afforded. We do not question the desire of those concerned to make coroners' inquests effective and thorough, even if we doubt the advantages of the method adopted, and if without the fuller explanation suggested we are also sceptical as to its legality. With regard, however, to any possible alteration in the existing law we would point out that it was consolidated and re-enacted less than 20 years ago, and that no such change as that apparently desired by the London County Council could reasonably be made by Parliament without consulting to some extent the heads of the medical profession and ascertaining whether in their view the present system is unsatisfactory and if the proposed change is likely to effect an improvement.

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Sir Michael Foster and the Representation of the University of London

THE present position of affairs with regard to the representation of the University of London in Parliament has an interest for the medical profession as a whole as well as for those who are London graduates and members of Convocation. SIR MICHAEL FOSTER'S election in 1900 was in large measure the result of the desire of his constituents that the University member should be a man who could speak with authority in matters where science and learning are concerned, who would command attention in the House of Commons, and whose presence in Parliament would strengthen the administrative business of the country in a way which would hardly be possible in the case of a Member elected on political and party lines. This view was very strongly held by graduates in medicine and science, the great majority of whom supported Sir MICHAEL FOSTER, and it has been thoroughly justified by events. Sir MICHAEL FOSTER has come to occupy a strong position in the House of Commons, where it is recognised that he can not only express the views of an expert but can show the way by which expert knowledge can be turned to account in legislation and administration. The plea for science which he made in his speech on the Beer Bill of 1901—a speech believed to have influenced many votes—was a good illustration. Few men have a broader understanding of the principles which should guide the State in its relations with medicine and with matters of public health, and his keenness to secure amendments of sanitary legislation and improvement in the present condition of the public health service is well known. His work on the Royal Commissions on vaccination, sewage disposal, and tuberculosis in particular, has placed him in an exceptional position of influence when these matters come to occupy, as they shortly must, the serious attention of Parliament. We are certain that the announcement which Sir MICHAEL FOSTER made in his letter to Sir JOHN ROTTON published on Monday last, will be received with relief by his supporters and by the medical profession. We do not feel that Sir MICHAEL FOSTER'S published communications on the matter have been very lucid or fortunate, but we understand that he has been placed by others in a difficult position. The main point is that personal circumstances, which had seemed to make his resignation imperative, have altered sufficiently to enable him to retain the seat. He is prepared to do so, remaining as before practically independent of party claims, but as his action has resulted in three candidates having been put forward for the vacancy believed to be pending he has thought it right to ask Sir JOHN ROTTON, who acted as chairman of his committee at the last election, to ascertain the wish of the constituency. This is about to be effected by means of a circular letter addressed to the University voters. We have no doubt that a ready response will be forthcoming. It is a misfortune that a series of accidents has caused the three candidates, Sir JOHN WILLIAMS, Sir PHILIP MAGNUS, and Sir W. J. COLLINS and their respective supporters to be put to trouble and inconvenience, and it is evident that Sir MICHAEL FOSTER is very sensible of the awkward position which has arisen. But it would be a still greater misfortune to the University and to science if Sir MICHAEL FOSTER were no longer in the House of Commons.

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[2] 9 & 10 Vict. c. 37.

[3] R. v. Finlay, Irish Reports 11, Common Law 498.

refreshments being provided *en route*), berth in sleeping car from Paris to Madrid (outward journey only), fees to hotel and railway servants, carriage drive on one day in Madrid, free conveyance of 56 pounds of baggage, omnibuses to and from hotels while with the conductor, and the services of a competent conductor who will undertake the general supervision of the arrangements throughout. In order that the necessary arrangements for sleeping car berth, hotel accommodation, conducting, and the like may be completed in good time it is requested that intending passengers will register their names by paying a deposit of £10 each as early as possible. When paying deposits passengers are requested to state the full name of each member and to say whether married couples, single ladies, or single gentlemen in order that the necessary rooms may be arranged. The balance of fare must be paid one week before the date of departure. Owing to the large demand for hotel accommodation in Madrid it has been necessary to reserve rooms in advance, the amount of the deposit therefore cannot be returned if for any reason the tour is not taken. Arrangements have also been made for an additional tour from Madrid to the South of Spain. This tour will occupy nine days, and Seville, Cordova, Granada, and the Alhambra will be visited. The inclusive fare is 18 guineas for members and their wives and 21 guineas for friends. The party will leave Madrid by the night express for Seville on Thursday, April 30th, and will arrive at Madrid again at 10.25 A.M. on Saturday, May 9th. Intending visitors to Spain are strongly advised to insure their luggage before leaving England and they must provide themselves with passports. Dr. Seelig, Ph.D., acting for the Voyages Pratiques of Paris, has also made arrangements for conveying members to the Congress. His address is 11, Ludgate-hill, London, E.C.

"SECRETIN."

IT has long been known that the passage of acid chyme from the stomach into the duodenum caused a flow of pancreatic juice and this has always been recognised as due to a so-called "local reflex." In a recent paper by Dr. E. H. Starling and Dr. W. M. Bayliss, read before the Pathological Society of London, of which an abstract is published in THE LANCET of Dec. 27th, 1902, p. 1753, they prove that the flow of pancreatic juice is not due to a "local reflex" but to the absorption into the blood of a product of the mucous membrane of the small intestine, which acting chemically on the cells of the pancreas produces a flow of pancreatic juice. This substance is produced in the mucous membrane as the result of the introduction of acid into the small intestine and can be obtained even from alcohol-dried mucous membrane by the action of weak acids. To this body Dr. Starling and Dr. Bayliss have given the name of secretin, although it has not yet been isolated in a pure condition. By injecting this secretin into the veins of animals they were able to produce a flow of pancreatic juice the quantity and time of production of which depended on the amount of secretin injected. Using this secretin for the artificial production of pancreatic juice they have been able to study the properties of this juice with greater accuracy than has hitherto been done and it has been found that of the three ferments present in pancreatic juice—viz., that which acts on starch, that which acts on fat, and that which acts on proteid—only the first two are active when the juice is collected from the duct of the gland and that in order to make the fluid active on proteid it is necessary to mix it with the succus entericus of the small intestine; this secretion contains a body first described by Chepowalnikow and named by him "enterokinase," which when added to pancreatic juice inactive on proteid converts its trypsinogen into an active tryptic ferment. Two further points have been brought out in this work which may have important clinical bearing—firstly, they showed that pancreatic juice in the absence of acid chyme in the small intestine produced an acute enteritis and they suggest that the introduction of enterokinase into the pancreatic duct might cause an acute pancreatitis owing to the production of an active tryptic ferment. It follows from this that though a flow of pancreatic juice may be induced by the injection of secretin there would be considerable danger of giving rise to an enteritis unless the time for such an injection was made to coincide with the time of passage of acid chyme from the stomach into the small intestine. The second point of interest is the observation by Pawlow that as long as the contents of the duodenum remain acid so long does the pylorus remain in a state of contraction and it is only when the contents of the duodenum have been rendered alkaline or neutral by the pancreatic secretion that the pylorus relaxes and allows a further flow of acid chyme from the stomach. The possible bearing of such an observation on the condition of hypertrophied pylorus in infants is one which is of considerable interest and suggests further lines of treatment for that affection.

CHOLERA IN EGYPT AND ELSEWHERE.

THE following figures show the distribution of cases of, and deaths from, cholera throughout Egypt during the week ending Dec. 15th. 60 cases of cholera have occurred during this period against 42 during the previous one, thus showing an increase of 18 cases. During the same week 41 persons have been found dead out of hospital and 10 have died in hospital, against 27 deaths out of hospital and 7 deaths in hospital during the past week, thus showing a total increase of 17 in the number of deaths. During the same period 59 cases have occurred in Alexandria, against 32 in the preceding week. Since Nov. 4th no cases of cholera have occurred in Cairo. For the week ending Dec. 22nd the figures are as follows: 17 cases of cholera occurred, against 60 in the preceding week, thus showing a diminution of 43 cases. During the same week 7 persons have been found dead out of hospital and 7 have died in hospital, against 41 deaths out of hospital and 10 deaths in hospital in the previous week, thus showing a total diminution of 37 in the number of deaths. The 17 cases above referred to have occurred at Alexandria. During the preceding week 59 cases occurred in that city.—For the week ending Dec. 29th, 49 cases of cholera occurred, against 17 in the previous week, thus showing an increase of 32 cases. During the same period 13 persons were found dead out of hospital and 19 died in hospital, against 7 deaths out of hospital and 7 died in hospital during the previous week, thus showing an increase of 18 in the number of deaths. During the same period 6 cases occurred at Alexandria, against 17 in the preceding week. A rather sharp outbreak was reported a few days ago from Khoos el Bousa, a small village about one hour's distance from Sohag and situated on the banks of Sohagia Canal. Dr. C. Goodman and a staff of well borers and disinfectors were at once ordered to the village. The Local Government Board for England has issued a circular dated Dec. 24th, 1902. The circular is addressed to all port sanitary authorities, to the King's habourmasters of dockyard ports, to all officers of customs, to all medical officers of health of the sanitary authorities aforesaid, to all masters of ships, to all pilots, and to all others whom it may concern. The circular sets forth the regulations made on Nov. 9th, 1896, concerning the flying of a yellow flag on every ship infected with cholera, yellow fever, or plague when such ship shall be within three miles of any part of the answer from Mrs Simms inclosing two bottles of a preparation called "Oxonia," for which the charge was 6*s* in addition to a fee of £2 2*s* Mrs Simms gave as a reference a person at Blackheath who promptly wrote a letter saying that his mother had been greatly relieved by using "Oxonia" for a similar complaint. Then the sufferer wisely communicated with his medical man who has forwarded the whole correspondence to us Mr Simms, of course, is a quack, but unfortunately the law cannot touch him unless perchance one of his "patients" were to die. But we do think that the conduct of the cleric in question is deserving of the gravest censure. He has raised false hopes in one who is in sore trouble and the only redeeming feature of the case is that the patient has sought orthodox medical relief in vain, so that Mr Simms and his backer cannot be accused of having delayed treatment But we would ask the Rev Mr —— how he would feel if we were to write to one of his flock who had sought spiritual consolation and who had been told, like Tannhäuser, that there was no help and advise him to seek aid from the Rev Giles Jowles or any other self constituted "minister" The Rev Mr ——'s position and abilities make his advice all the more dangerous when he is wrong, and we earnestly hope that he will take our remarks to heart.

THE DIFFUSIBILITY OF THE VIRUS OF SCARLET FEVER

UNDER the above heading we publish at p 92 of our present issue an interesting communication on a series of cases of scarlet fever which have been under the observation of Dr John Sutherland and which afford, he claims, evidences of "the wonderfully low diffusibility of the scarlet fever virus." Few epidemiologists will disagree with his contention that the virus of scarlet fever cannot retain its vitality indefinitely, as it is clear that there is a limitation of vital activity with regard to the virus of all communicable diseases. There will not, however, be the same unanimity of opinion with respect to Dr Sutherland's proposition that scarlet fever is "intensely contagious," and this notwithstanding his assertion that throughout the whole course of the epidemic to which he is referring he has only seen one instance of a susceptible child escaping the disease after contact with a desquamating case We are not quite clear whether he regards the desquamating cuticle as the vehicle of infection, but if he does so he will find that many modern authorities do not agree with him at the present moment, and it would be well that Dr Sutherland should hesitate before he generalises from the series of facts which have come beneath his notice. It would not be difficult to furnish another series of well attested facts to show that whatever the channel of infection may be it is not the desquamating cuticle In this connexion we would refer him to the large number of desquamating cases of scarlet fever which a few years ago were discharged without harm accruing from the Leicester Fever Hospital at a time when the beds at that institution were required for cases of small pox. The main thesis, however, which as far as we gather, he wishes to establish is that there is no danger of the conveyance of scarlet fever from one person to another through the agency of a third person such as a nurse or by any aerial convection of the infection from one room to another We do not quite follow Dr Sutherland's reasoning when he states that if healthy persons can convey the infection of scarlet fever we must assume that the virus has a separate existence after dissociation from its host. On the contrary, it seems to us only necessary to assume that the virus does not forthwith perish when so dissociated Has the virus of small pox a separate existence because its striking power is great or is the question solely one of resistance to atmospheric conditions? But Dr Sutherland's generalisations seem to be drawn from the consideration that in 48 families home isolation proved pre-eminently successful because "susceptible" children lived in each of the 48 houses and all escaped the disease, the term "susceptible" being used to imply children who had never to the knowledge of the parents suffered from the disease. According to him all these children were properly isolated either in one of three rooms on the ground floor or one of three rooms on the first floor We cannot help suggesting that these 48 families were somewhat remarkable if the heads thereof were able to prevent all intercourse between the sick child and the other "susceptible" children for from six to eight weeks. Our own experience of this class does not quite lead us to expect this exemplary behaviour on the part of children thus circumstanced The view we rather take of the whole series is that out of 10 + 34 + 48 = 92 families secondary cases occurred in 22. Dr Sutherland's statement that in Division III. the second case always occurred two days after exposure is so precise that we think he may have been misled on this point. This tendency to look for mathematical accuracy in the behaviour of an infectious disease, in which none of the factors necessary to bring it about can be regarded as exact quantities, is, we think, somewhat unfortunate It is surely sufficiently recognised that the majority of "susceptible" children who are exposed to scarlet fever fail to contract it forthwith, and similarly it is only infrequently that the disease is caused by a third person. But these facts hardly justify Dr Sutherland's practice of tacitly encouraging mothers to visit their neighbours' sick children.

THE FOURTEENTH INTERNATIONAL MEDICAL CONGRESS, MADRID

THE Fourteenth International Medical Congress will be held at Madrid from April 23rd to 30th Messrs. Thomas Cook have arranged the following itinerary, to be directed by experienced conductors, the inclusive cost being 33 guineas for members of the congress and their wives holding cards of invitation and 39 guineas for other friends of members of the congress The party will leave Charing Cross Station at 2.20 P M on Monday, April 20th, and will arrive in Paris at 9 15 P M. Hotel accommodation will commence with supper on arrival at the Hôtel du Palais d'Orsay on Monday night On Tuesday, April 21st, the journey will be continued by train de luxe from Paris, starting at noon Berths in the sleeping car will be reserved for the party and meals will be served *en route* Madrid will be reached about 3 P M on Wednesday, April 22nd, and those who apply first for tickets will be able to secure rooms at the Hôtel des Ambassadeurs. The return journey will commence on Thursday, April 30th, when the night express will be taken to Biarritz, where the party will stay until Saturday, May 2nd They will leave Biarritz by the 6 27 A.M express for Paris, arriving about 10 30 P M, luncheon and dinner being served *en route* A conductor will travel by the morning express *viâ* Boulogne and Folkestone, arriving in London early in the afternoon of Sunday, May 3rd The party may be left at Paris, as the holders of tickets may return at any time within 45 days The inclusive fare provides first-class tickets from London back to London, hotel accommodation and meals *en route*, commencing with supper in Paris on the outward journey and terminating with breakfast in Paris on the return (Sunday), according to the dates named in the itinerary (the accommodation consisting of bedroom, lights, and service, plain breakfast, table d'hôte luncheon, and dinner at table d'hôte, while travelling it will be necessary to modify this arrangement, the previous operation. Passing on to the experiences of Southend, Dr Nash states that the population of the borough roughly numbers about 30 000, of whom about 10,000 may be reckoned to be children under 15 years of age, and of these about 9000 are vaccinated Revaccination has been so freely resorted to during the last twelve months that 15,000 persons—i.e, one half of the population—may be assumed to have been vaccinated within the last 15 years The remaining 15,000 inhabitants may be divided into two groups—one of 13,000 who have not been vaccinated for over 15 years and one of 2000 unvaccinated. During the six months under review no case of small pox occurred in the group of 15,000 vaccinated within 15 years, 15 cases of small pox with one death occurred in the group of 13 000 not vaccinated for over 15 years, and 10 cases of small pox with four deaths occurred in the group of 2000 unvaccinated. Both the attack rate and the mortality rate were therefore very much higher among the unvaccinated than among the vaccinated.

THE RELATION OF RICKETS TO MENTAL ENFEEBLEMENT

THE relationship of rickets to certain forms of mental defect and weak mindedness has only been recently established. Trousseau in his famous lectures delivered at the Hôtel Dieu, Paris (1868), said that 'rachitics were of superior intelligence to other children of the same age," a statement now known to be only partially correct The mental condition of rachitic children has been closely studied by Eichhorst Bourneville, and others who have shown that in combination with liveliness of spirits and some precocity the rachitic child undoubtedly exhibits mental deficiency Dr Paul Renoult of Paris in a recent *Thèse de Paris* (1902) gives a careful study of the mental and cerebral conditions in rachitic children. Anatomically the rachitic skull is he says characterised by persistence of the fontanelles and late closure of the sutures while both swelling and softening of the bones of the cranial vault are also present The result is a protuberance of the frontal region of the head, giving rise to the so-called "Olympian forehead.' The parietal eminences or bosses are prominently developed while the intermediate sagittal suture is depressed and gutter like in appearance The rachitic skull tends to be large and brachycephalic in form, while the marked development of the parietal and frontal eminences often gives it a quadrate appearance Certain interesting anatomical differences are pointed out between the skull of the 'degenerate" and of the rachitic. The skull of the degenerate tends to be plagiocephalic—i.e, of asymmetrically oblique formation. Such a condition is never seen, adds Dr Renoult, in the rachitic skull. Scaphocephaly, or a keel like elevation of the sagittal line of the skull, is frequent in degenerates but is rare in rachitic subjects Finally hydrocephaly and microcephaly are characteristic of idiocy and the grosser forms of degeneracy but are not met with in rickets. As regards development of the face and jaws it is pointed out that whereas an asymmetrical face and a narrow and high arched palate are very characteristic of idiocy the former is not present in rickets though the latter is occasionally found A slight or moderate prognathism of the upper jaw is often associated with rickets. Abnormalities and malformations of the eyes, eyelids, ears and genital organs are not infrequently found in idiots and imbeciles but seldom in cases of rickets. On the other hand, characteristic osseous deformities of the spine (scoliosis and kyphosis) pelvis (flattening and obliquity), and lower limbs (curved tibiæ) are frequent in rickets and rare in idiocy From careful studies and measurements made on 430 idiots and imbeciles at the Bicêtre, Paris Dr Renoult has ascertained that the following osseous malformations or peculiarities of development are present in rickets beaded ribs in 24 cases, natiform skull in six cases, "Olympian forehead" in 10 cases, prognathism of the superior maxilla in three cases, scoliosis of the spine in five cases, incurved shape of the tibiæ in six cases, incurved shape of the femora in eight cases, and genu valgum in two cases Of the 430 patients examined 35 exhibited signs and symptoms of rickets, a proportion of nearly 12 per cent. The mental condition of these rachitic patients, says Dr Renoult, was not one of marked or low grade idiocy They were mostly imbecile or feeble minded Moreover, they did not present many or marked anatomical stigmata of degeneracy like the idiots The defect of intelligence in these rachitic patients is not regarded by Dr Renoult as congenital but as acquired in infancy as the result of gastro-intestinal or pulmonary infection. Infants, he adds are prone to catarrhal affections of the alimentary and respiratory tracts, subacute and persistent in character, attended by moderate febrile disturbance, and followed by marked symptoms of toxæmia. As a result of such toxæmia two sets of changes may be produced—viz., a rachitic alteration of the osseous structures and a degeneration of the cerebral nerve cells with partial arrest of their development The latter is the underlying cause of the mental deficiency—backwardness in speech and general intelligence—exhibited by the rachitic child Detailed accounts of necropsies of five cases are given which support the above views In conclusion, says Dr Renoult we are not entitled to say that rickets is the cause of weak mindedness but that both rickets and weak mindedness are sometimes due to the same infective processes and toxæmias of infancy

THE WINTER EXHIBITION AT BURLINGTON HOUSE

THE 1903 exhibition of works by the "Old Masters' certainly deserves its name, for the works shown go back to the time of Daedalus, say to 2000 B C Though none of the actual works of that versatile artist, who was somewhat comparable to Giotto, Leonardo da Vinci, M. Santos Dumont, and Sir Joseph Whitworth rolled into one, are exhibited, yet there are photographs and coloured drawings of works by him or by his pupils These exhibits are mostly the result of researches and excavations undertaken by Mr Arthur Evans between 1894 and 1902 inclusive But a few articles are shown by Mr D G Hogarth who has also been excavating in Crete. All the exhibits are of extraordinary interest and show the marvellous height to which the arts had risen in the time of Daedalus To begin with, the palace of Minos at Knossos, of which Daedalus was the architect, had a complete system of baths with a drainage system supplied with ventilating shafts and other sanitary arrangements on an almost modern plan Photographs are shown of a set of ivory statuettes representing youths leaping, in which the anatomical modelling and the muscular action are represented with extraordinary power and accuracy In a water colour drawing from a fresco we see a bull fight There are no horses in the ring but there is the bull, a magnificent animal together with three bull fighters Two of these are ladies They are scantily dressed, but what struck us most was the size of their waists Presuming that the Knossian lady was of about the same size as a modern Englishwoman her waist would have been about 12 inches in circumference. As the clothing of the lady in question consists simply of a corset made apparently of some golden fabric and a small scarf depending in front and behind from it, it would seem that the fulminations which the medical profession has for ages been hurling at tight stays can no longer be sustained on coast of England or Wales during the whole of the time between sunrise and sunset But the circular further orders the exhibition of a night signal as follows —

The master of every ship infected with cholera yellow fever or plague shall when the ship is within three miles of the coast of any part of England or Wales or is within the limit of a port, cause to be hoisted at the peak or other conspicuous place where it can be best seen and at a height of not less than 20 feet above the hull of the ship during the whole of the time between sunset and sunrise a night signal consisting of three lights which shall be arranged at a distance of not less than six feet apart in the form of an equilateral triangle, and of which the light at the apex of the triangle shall be white and the other lights at the ends of the base of the triangle shall be red in colour

THE METROPOLITAN WATER-SUPPLY

THE report on the condition of the metropolitan water supply during the month of October was issued by the Water Examiner at the beginning of December last. The Thames river water was in good condition during the whole of the month, and the level of the flow varied from a point one inch above to one six inches below the average summer level The rainfall at West Molesey during the month amounted to 1 55 inches. The average daily supply delivered from the Thames was 133 864 635 gallons, from the Lee 23 586,638 gallons, from 'springs" and wells 57,369,740 gallons, and from Hampstead and Highgate ponds 1295 gallons The total average daily supply was 214,822,308 gallons for an estimated population of 6,425 346, and this represents a daily consumption per head of 33 43 gallons The Chelsea Company delivered the largest amount per head daily (40 71 gallons) and the East London Company the smallest (28 17 gallons) The Lambeth and the Southwark and Vauxhall Companies distributed a larger amount of water per head than they did during the corresponding month of the year 1901 , all the other companies supplied a smaller amount The estimate as to the amount of water "delivered per head' is, we believe, arrived at from calculations as to the amount of water pumped from the distributing stations of the water companies In the case, therefore, of any serious defects in the distributing mains of the companies any water wasted through these defective mains is accounted for as having been used by the customers of the company It has been already pointed out in THE LANCET[1] that our present knowledge of the condition of the mains of the metropolitan water companies is distinctly fragmentary and it may be remembered that the August report of the Water Examiner recorded the occurrence of the curious fact that water from the Langham Hotel well had found its way into the mains of the West Middlesex Company As we remarked at the time of the issue of the report[2] a detailed account of this occurrence would have been of interest. The subsequent reports of the Water Examiner have failed to add to our knowledge on the point. During October the East London Company obtained supplies of water from the Southwark and Vauxhall Company and "from the New River Company aided by the Grand Junction and West Middlesex Companies" The average daily amount "passed on" by the Southwark and Vauxhall Company was 8,998 387 gallons The quantity "passed on" by the New River Company ' if spread over the whole of the month was equivalent to a daily average supply of 2 218 855 gallons ' The supply, however, was not 'spread over the whole of the month" but was given from the 10th to the 31st inclusive This is the account given in the body of the report of the Water Examiner The figures given under the heading "details of the metropolitan water supply and works of the water companies" are not exactly identical with those given above The table of details of the "average daily supply during the month in gallons" is to be found on page 8 column 5, and is as follows Supply from river Lee and storage, 6,721,139, from Thames, 8,480,000 , from wells, 14,953,861 , from Hanworth springs, 2,069,000 , from Thames per Southwark and Vauxhall Company, 8,992,000 As on previous occasions on which figures on the same subject have been given in different parts of the report, and have not been identical, no explanation is given as to how it happens that the discrepancy occurs It would add to the value of the report if the Water Examiner would in such a case append a few words to make the matter clear Theoretically, of course, the report is written for the instruction of the President of the Local Government Board and presumably he is satisfied with it. It might be interesting if a Member of Parliament would discover whether he understands and can explain it The proportions of brown tint observed in a two-foot tube ranged from 2 to 15 degrees of the standard in use "The water of the Lambeth Company exhibited the deepest average tint of brown." The Water Examiner states that "all the samples of water collected at the works of the companies were efficiently filtered" It is not stated that any sample of water collected at any "works" of any company was submitted for analysis to Dr T E Thorpe, F R.S , the chemist to the Local Government Board, nor does the Water Examiner say on what authority he makes the statement quoted above. Dr Thorpe examined during the month 14 samples of each company's water The samples which were collected on Oct. 13th were fully examined and the results of the analysis showed that the relative amount of organic impurity contained in the specimens is numerically represented as follows Kent, 9 , New River, 10 , Lambeth, 20 , Southwark and Vauxhall and Grand Junction, 21 , East London 22 , West Middlesex, 25 , and Chelsea 26. Dr Thorpe reports that "the East London Company's supply taken in a district served with water from the works at Sunbury contained an amount of organic impurity practically identical with the average found in the London waters but the proportion of oxidised nitrogen was, as usual, with the Sunbury supply distinctly higher The water," he adds, "was clear and of good chemical quality " It is a matter for congratulation that Dr Thorpe has bestowed special attention on the Sunbury supply of the East London Water Company, which, as far as we remember, has not hitherto been specially referred to in the Water Examiner's report although THE LANCET has many times given the reasons which make it desirable that the water from the filter beds should be analysed at periods during which the Thames is in flood Dr Thorpe's present report refers to an analysis taken when the Thames water was in a good condition. It will be interesting to compare this with an analysis made at a time when the Thames water is muddy

THE PREVALENCE OF SMALL-POX

IN his recently issued report on the occurrence of small pox in the borough of Southend on Sea from January to June, 1902, Dr J T C Nash, the medical officer of health, devotes considerable space to the important question of the efficiency of vaccination and revaccination Much misapprehension on this point no doubt exists in the community at large and fallacies ingeniously devised for the purpose of discrediting vaccination have by this means been made to pass current as incontrovertible truths The essential fact is, as Dr Nash points out, that vaccination does not consist in the mere insertion of lymph in an incision or scratch in the skin but in the production of a definite local effect which, in the case of primary vaccination consists of a vesicle possessing certain special characteristics and leaving a permanent, depressed, foveated scar In revaccination the local effects are slighter in proportion to the amount of residual immunity left in the individual from the ground that these articles are a modern innovation, nor can it be said that they impede muscular action. Possibly, however, the lady in question only girded herself in the fashion shown when she was in the ring, and so escaped gastroptosis, digestive troubles, a red nose, and fits of "the vapours"—all of which have been ascribed to tight stays of modern type

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[1] THE LANCET Nov 15th 1902 p 1336

[2] THE LANCET Oct 18th 1902, p 1065

MEDICAL OFFICERS IN THE MERCHANT SERVICE

WITH reference to the case of Dr T W S Paterson, the particulars of which were reported in THE LANCET of Dec 13th, 1902, p. 1642, we learn by cable that the appeal of the Peninsular and Oriental Steamship Company against the decision of the magistrate was heard before the Appeal Court at Shanghai in December, 1902. The court reserved its decision, and on Jan 5th judgment was pronounced in favour of Dr Paterson The Peninsular and Oriental Company has given notice of appeal to the Privy Council. We are told that Dr Paterson has begun an action in the High Court of Justice in England against the Peninsular and Oriental Company, claiming damages for malicious prosecution

THE PROSTITUTION OF THE POST OFFICE

IN THE LANCET of Dec. 20th, 1902, p 1712, we referred to an abominable advertisement emanating from the United States in the form of an envelope inclosing an account of some coal tar derivative. The envelope was adorned with a large scarlet heart held by a skeleton hand. We forwarded a selection of these envelopes to His Majesty's Postmaster General and have been favoured with the following reply —

> GENTLEMEN —With reference to your letter of the 15th instant I am directed to inform you that the designs on the covers which you enclosed are not offensive within the meaning of the Act restraining the transmission of objectionable articles by post and in these circumstances the Postmaster-General is not able to take any steps such as you suggest to prevent their circulation
>
> I am Gentlemen your obedient Servant
>
> To the Editors of THE LANCET H BUXTON FORMAN

All we can say is that the sooner the law enables the Postmaster General to take steps for the stopping of the transmission by post of circulars of this nature the better it will be.

HEMI-HYPERTROPHY OF THE BODY WITH ENLARGEMENT OF THE OPPOSITE SIDE OF THE BRAIN

WE have recently called attention to a case of hemihypertrophy of the head and face associated with neurofibromata of the cranial nerves on that side, in which the hypertrophy was supposed to be due to an abnormal trophic influence of the affected nerves.[1] In the *Australasian Medical Gazette* for September another curious case of hemihypertrophy is recorded by Dr C Reissmann, and though widely different is analogous in that an abnormal trophic influence of nervous origin is again suggested. In this case the whole half of the body was affected and the associated nervous affection was enlargement of the opposite side of the brain. The patient was a boy, the youngest of a family of three. The mother was healthy and attributed the deformity to a shock which she received when two months pregnant on seeing a friend who was accidentally killed. The pregnancy continued to term, but the abdomen was larger than in the previous pregnancies and at the fifth and seventh months there were false labour pains. There was some difficulty in the labour in consequence of the size of the head and the child was delivered with forceps. He weighed 14 pounds On the fifth day after birth the right leg was noticed to be larger than the left, then it was found that the right arm and the right cheek were the larger At the age of five months he weighed 28 pounds. At the age of seven months he came under the observation of Dr Reissmann. The left side of the cranium was much larger than the right. The anterior fontanelle was widely patent and the posterior fontanelle was just patent. There was slight proptosis of the left eye. The ears were of equal length. The right cheek, jaw, and gums were distinctly larger than the left. The right side of the tongue was greatly enlarged, which enlargement when the organ was protruded caused deviation to the left. The right shoulder, arm, forearm, wrist, hand, fingers, and nails were much larger than the left. From the deltoid tubercle of the acromion to the styloid process of the ulna measured 20 centimetres on the right side and 17½ on the left. The enlargement appeared to involve skin, subcutaneous tissue, and muscle, and certainly involved bone. Little difference was noted in size between the two sides of the chest The right side of the abdomen was slightly larger than the left, particularly the skin and subcutaneous tissue which formed on the right side a loose fold above Poupart's ligament. There was an umbilical hernia. The right buttock, leg, foot, toes, and toe-nails were much larger than the left. The right leg was longer than the left by five centimetres The enlargement appeared to involve all the parts of the limb—skin, connective tissue, muscle, and bone. The muscular tone was good and equal on both sides, but the movements of the right side were more clumsy than those of the left, the attempt to grasp an object with the right arm was less decided then with the left. The knee jerks were not so readily obtained on the right side as on the left. Thus there was enlargement of almost the whole of the right side of the body and of the left side of the cranium, and therefore also of the left side of the brain. Dr Reissmann infers that there was also enlargement of the right side of the spinal cord, as it was improbable that the enlargement of the brain was due to mere overgrowth of neuroglia. He thinks that the nerve cells and their axis cylinders the upper neurons were enlarged. If the upper neurons were enlarged the lower ones were probably enlarged also But he seems to overlook the fact that a numerical increase of the neuron without enlargement is equally probable and would equally account for the facts This enlargement of one side of th brain and of the opposite side of the body is as curious a it is rare. No doubt it is rational to explain the latter by a abnormal trophic influence of the affected side of the brain But this only goes one step backwards The question arises how is the cerebral overgrowth to be explained ?

PRACTICAL ARMY HYGIENE IN THE FIELD

IT is not so much the want of sanitary knowledge as th difficulty or impracticability of applying it in the circum stances of war that has to be overcome in a campaig Apart from forced marches, night attacks, and hurried move ments often in entire ignorance of the position that a forc will occupy until it actually finds itself there, all of whic are more or less incidental to modern warfare, there has to be considered what is the best sanitary organisation to be adopted. The Army Hospital Services Inquiry Committee following the Egyptian campaign of 1882 recommended that a conservancy body should be organised in connexion with the Quartermaster General's department. Not only does the provision of a special sanitary corps presuppose the presence of a directing staff of well trained and competent officials to point out and to advise what has to be done, but it requires a properly organised executive of sanitary engineers and workmen with all the necessary appliances to do it If the latter are to consist largely of the civil element—navvies and artisans, for example, with carts, picks, and shovels—they would require, not being themselves armed or trained to arms, the protection of a military force during their operations, whereas a military and armed body of men could protect themselves and, if need be, could even add to the fighting strength of the army. As it is at present the men of the Royal Engineers and the soldiers belonging to different corps units acting under constituted authority are supposed to carry out all field and camp sanitary work, and it would seem that any special army sanitary corps would require to have a military organisation. The formation of such a corps would, no doubt, cause some initial expense, but it might very well exist in a skeleton stage during peace and be brought up to any given strength when required for war. Among the manifold changes and reforms in the army that are being talked of at the present time this subject of army sanitation in war is one that seems to us well worthy of being very carefully considered. If we are to take the results of the latest investigations into the causes of the spread of enteric fever as the basis of our sanitary action it will apparently have to be upon the lines of complete isolation of the sick—not easily to be accomplished in war.

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[1] THE LANCET Dec. 20th 1902, p 1711

THE RECENT TRAGEDY AT THE FULHAM BATHS

THE death of two persons from electric shock at the Fulham public baths is a startling event which calls attention in a very emphatic way to the factors which determine the safety or danger of contacts with "live" wires. Like most electric-light fatalities the deaths were caused by leakage from a charged conductor to earth through the body. Contacts with conductors charged to 200 volts are not, as a rule, dangerous because the resistance of the body under ordinary conditions is sufficient to prevent the passage of more than a small current when that pressure is applied to it. Thus a person with dry hands and with dry boots on may touch a 200-volt conductor and feel little or nothing, even if he be standing upon a damp floor. In the victims of the Fulham accident all the natural protection which boots and dry hands provide were abolished. They were bathing, or about to bathe, their hands were wet with hot water, and they were standing in hot water or on wet concrete in the best of metallic connexion with earth through the waste pipes or the steel floor. It is well known that the moistening of the skin with hot water reduces its resistance enormously, so that a procedure of this kind is a regular preliminary to almost all therapeutic applications of electricity. When a patient is immersed in a bath of warm water a pressure of six or eight volts is sufficient to produce a commencement of tetanic rigidity in the muscles with an alternating current like that employed for electric lighting at Fulham, so that the effect of 200 volts under the conditions of the accident can readily be understood. The charged conductor with which contact was made seems to have been an iron bar or girder which traversed the tops of the partitions between the cubicles to strengthen and to support these partitions. Its connexion with the electric light wires was entirely accidental and it is difficult to say how long it may have been charged, thus constituting an unseen danger to those who used the baths. We are informed that it was not the electric-light casing which was the charged body, but some uncertainty exists as to this point in the newspaper reports, it appears, however, that contact was made by putting the hand on the top of the partition rather than by touching the metal electric-light wire casing which ran along the partitions at a lower level. It is worthy of note that in the case of one of the victims death was not instantaneous. He had time to call out and the caretaker was able to go to him and to break open the door and to try to detach him. His death seems to have been due to the prolonged action of a current which was not strong enough to kill instantaneously. Points to be learnt from the accidents are that touching electric-light switches should be avoided by those having a bath and that bath rooms should never have their electric-light fittings placed where they can be reached by a person in the bath, also that gas-pipes, water pipes, and drain pipes are "good earths" and that leakage currents from faulty electric fittings will be felt more strongly if contact is made simultaneously with two of these.

THE RESEARCH LABORATORIES AT THE UNIVERSITY OF LONDON

THE provisional arrangements for research in the physiological laboratory of the University of London have just been issued. The following courses of lectures will be delivered during January, February, and March, commencing on Tuesday, Jan. 20th, at 5 P.M. Dr. W. D. Halliburton on the Chemistry of Muscle and Nerve (Tuesdays), Dr. T. G. Brodie on the Circulation (Thursdays), and Dr. A. D. Waller on Experimental Pharmacology and the Action of Anæsthetics and Narcotics (Fridays). The laboratory has been established with the objects (1) of affording to the lecturers of the University of London and other duly accredited physiologists a place in which the results of current research can be presented by lectures and by demonstrations and (2) of giving to advanced students of physiology opportunity for the prosecution of research. The laboratory includes a lecture room, a workshop, a chemical room, a general laboratory, and two rooms assigned to the physiology of the special senses (inclusive of physiological psychology). Courses of research lectures with demonstrations are delivered during each academic term and a limited number of students are admitted as laboratory workers for advanced work. Applications "to occupy a laboratory table" should be made in the first instance to Dr. Waller, University of London, South Kensington.

THE LEAGUE OF MERCY

SIR HENRY C. BURDETT has just addressed to the press a letter not far short of 2000 words in length pleading for personal service and support for the League of Mercy, instituted about three years ago by the King. The league has revealed, he states, possibilities for good to London and Londoners quite apart from its monetary side—viz., that it gives everyone the opportunity to emulate the example of the Good Samaritan. All the officers joining pledge themselves to render personal service by inducing small givers to become associates. A subscription of one guinea a year, however, entitles the subscriber to be enrolled as an honorary member. Some members at first were inclined to resign on the ground that it was such a trouble to ask twenty people each to give at least 1s. to the hospitals, but when it was pointed out that this very trouble constituted their expression of thankfulness for the blessings they enjoyed these same members approached their work with a new and successful spirit and also inspired others. Sir H. Burdett says that everyone who at present subscribes to a hospital should become a member of the League, as its work by widening the area of givers must tend to lessen the burden entailed upon each in support of the hospitals. He will be glad to receive at the Lodge, Porchester square, London, W., the name and address of every Londoner who desires to find a channel in daily life for the expression of the sympathy felt by the healthy for the sick and suffering.

THE MOSQUITOES OF THE ATLANTIC ISLANDS

DR. MICHAEL GRABHAM of Jamaica, a zealous exponent of the West Indian culicidæ, is at work upon the mosquitoes of the Atlantic islands and has already obtained interesting results. The Azores have yielded no specific forms of any interest but from the Madeiras he has sent to the British Museum four or five new varieties of culex in addition to one or two already well known and described None of these, however, is of human interest, and one small one only is blood feeding in habit. In the case of the Canaries, however, matters are very different. Dr Grabham has found at Teneriffe, on the south side, a small anopheles identical with, or allied to, the malarial insect of the West Coast of Africa. This species is fairly common in the ravines and tanks He has found also the same mosquito as is concerned in the spread of yellow fever at Havana These discoveries are of great interest, for though the islands are free from malaria and yellow fever it is quite easy to contemplate either disease spreading when introduced if these subtle means of conveyance are at hand. Yellow fever was epidemic at Palma not many years ago and lasted two years Dr Grabham sends an interesting account of Guimar, 23 miles from Santa Cruz along a splendid road, but singularly destitute of vegetation He found the fertile valley of Guimar grandly situated, full of terraced cultivation, and with groves of orange trees bearing fruit luxuriantly Rain seldom falls and the hotel patients were sleeping out on the roofs or verandahs The water was supplied from a distant source in a concreted channel.

Sir Ernest Cassel has, it is announced, offered the sum of £40,000 for the investigation of ophthalmia and of other diseases of the eye among the natives of Egypt The chief object of the scheme is to train native medical men in the diagnosis and treatment of ophthalmic diseases, for native medical men alone can induce their poorer compatriots to learn habits of cleanliness and so to minimise, if not to prevent altogether, the ravages at present due to ophthalmia.

A course of ten lectures on the Mechanism of the Secretory Process will be delivered at University College, London, by Dr W M Bayliss in the physiological theatre on Mondays at 5 P M, beginning on Jan. 12th The lectures are open to all internal students of the University of London without fee, as well as to qualified medical men on presentation of their cards

SOME REFLECTIONS UPON THE PROFESSIONAL AND ETHICAL QUESTIONS ARISING OUT OF CONTRACT PRACTICE

By W Muir Smith, M D Glasg

The time limit, under the standing orders, apportioned to readers of papers and to subsequent speakers during the proceedings in the Section of Ethics at the annual meeting of the British Medical Association at Manchester was unfortunately all too short, leading to effete and incomplete conclusions Of ethics pure and simple there were almost none. The effect of this is evident from the terms of the resolution adopted on specific contract work [1] which runs as follows —

> That club and friendly society contract work is undesirable in the best interests of both patients and the profession

The utility of this resolution is more than obscure, in application it is of no effect, while it is negative by omissions which involve denial without directly denying—and by inference it implies—the existence of a positive. It is quite possible to convert the negative resolution into a positive proposition by inserting some form of qualifying condition or conditions to supply the omission as an amendment, accordingly—

> That in club and friendly society contract work only members whose average weekly income does not exceed 25s and who contribute 7s 6d per annum for that purpose shall be entitled to the benefits of medical attendance

affords positive data for discussing the system in some of its aspects and bearings. Club and friendly society contract practice has existed, does exist, and probably will continue to exist, and if abuses prevail surely these must either be amended or ended by practical measures.

"Contract" is an undertaking between two or more persons, in terms usually expressed verbally or in writing, to do a certain work or supply a certain article for a specified consideration The principle of contract not only pervades all, even the most menial, action in everyday life but also regulates the manner in which the obligation is discharged. Contract embodies a functionary "barter"—i.e., exchange of one thing for another The bargain is estimated according to the quality of personal judgment. The spirit of the parties in bartering is more or less selfish, the intention being to gain an advantage by questionable methods. In the best sense professional services are priceless The manner of discharging obligations varies according to the conception of moral responsibility To state that the standard of professional ability and integrity, even with an enhanced dignity thrown in, is commensurable with the amount of fee charged, is sheer nonsense Contract invites speculation, and it is the mercenary disposition of the bargaining spirit occasionally running riot in our midst that makes for evil ways in 'shady" transactions No doubt there are some who accept the existing conditions, see no harm and perhaps some profit in every form of contract work, deny any offence against moral certitudes or legal enactments, acclaim their right to liberty of conduct, and resent friendly admonitions as insults, determined that as preservers of their own well being they will rely upon their judgment for that end.

The conduct of professional life is regulated more by moral precept than by legal enactment. The General Medical Council in relation to State administration occupies a unique position A sessile appendage, yet recognised as an integral part of the Privy Council, its function therein is purely advisory in matters connected with or affecting the profession Devoid of legal power, unfettered by stereotyped formulary—being a law unto itself—judgment on questions of conduct is based upon, or at least is influenced by, prevailing opinion—i.e., the consensus of professional opinion—for the time being on any contentious subject, and which becomes binding on the whole body If the composition of the General Medical Council be invidious the manner of administration is very democratic, while its disciplinary powers, being unlimited, could be used more arbitrarily than the edict of a despot Thus the State in absolute faith hands over certain administrative work to the General Medical Council, and so it comes to pass that the general profession have to frame their own laws and shoulder the responsibility of the General Medical Council's actions This ever increasing condemnation, being a sincere desire to protect the public from imposition and to conserve professional integrity is the outcome of years of discussion and is declaimed with such persistence and effect that the volume of righteous repudiation can no longer be ignored

From their peculiar nature the public are unable to appreciate the quality of services tendered The contract practitioner taking advantage of his opportunity performs his duties mechanically and prescribes inferior or unsuitable substitutes, soothing his conscience in the reflection that such conditions preclude giving of his skill the best and treating as he should if the pay were more. The General Medical Council has already issued a warning to the profession, threatening all the penalties of the Yarmouth case on individual offenders This sounds as if coercion might remedy the evil by restricting individual liberty, a principle apparently contrary to the best form of constitutional government. Liberty if uncontrolled becomes a licence and a licence unrestrained becomes an abuse, a grave injustice, and an injury to others, hence the law steps in to check its mad career and to protect the interests of others Because the law does not interfere with a man's action that man is not necessarily free. It is a fact that extensions of law need not imply diminution of freedom, but quite the opposite There is a moral restriction as well as a legal restriction. The profession bends to its will all who form part of it and the practitioner must submit to the customs and formalities of his calling Liberty to go to practise elsewhere by reason of fancied grievance is an empty privilege when the conditions are everywhere the same. No one can be free to decide for himself the conditions of his employment. Before receiving State licence to practise every probationer must subscribe to certain specified conditions regulating his conduct in professional life, *which conditions were not of his own framing nor those of any individual, but a solemn covenant binding on every member*

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[1] The Lancet August 9th 1902, p 391.

It is more justifiable that the majority should impose their will on the minority by means of a law for the ultimate good of all than that the minority through their economic power should impose their will on the majority to the common detriment, moreover, that which is acclaimed by the majority as acceptable must either in whole or part benefit the minority where a community of interests exists

In any contract two at least are required to make a bargain. Habits and customs growing up with childhood, youth and manhood become an integral part of the generation and are likely to be more deeply rooted in the nation's sentiment if handed down through successive generations. The condition of the poorer classes seems in many respects scarcely bettered. The progress of education with the experience gained of local self government and the organisation and management of numerous coöperative societies, &c., has failed to give that amount of self enlightenment which is necessary to provide efficiency for the needs of the case. It seems as if the self reliance and enterprise of at least a very considerable portion of the working classes are insufficient to overcome difficulties without help

Poverty exists because men follow their lower instincts without due consideration. Civilisation in every respect is a struggle against the animal nature and the degree attained is proportionate to the amount of restraint exercised. The habitual drunkard although condemned and despised by all professing good moral individuals, meets with their sympathy and benevolence, nay more, this very vice is one of the chief grounds used as an appeal for assistance towards the needs of a large family depending on him for support. Experience shows that the mass of mankind never judge moral questions for themselves and cannot or will not discriminate between right and wrong even when plainly told. The benevolent are equally culpable, aiding and abetting the drunkard's addiction to the vice, being too lazy to determine aright and too disinclined in the exercise of reason and judgment to put them to the test.

Everyone has a right to live. Many because of poverty's pinch could scarcely exist were it not for extraneous forms of help—i.e. parish relief or the doles of private benevolence. To give monetary assistance or in some measure to relieve the people of financial obligation, whether under the cloak of charity or in the nature of employment, without exacting a specified obligation in return, so that prudential motives shall act powerfully on them, is to benefit without attaining the object. When payment is made for work found as charity only inefficiency will be likely to be the result.

Before the Poor law enactment facts were experimentally ascertained in scattered parishes of England whereby it was shown that the amount of support guaranteed could be freed from any injurious effects upon the minds and habits of the people if relief, though ample in respect of necessaries, was accompanied by conditions which they disliked, consisting of restraints on their freedom and foregoing some of their indulgences Subsidies in aid of income enable the people to live with less remuneration by their efforts and in the long run lead to lowering of the standard of wages by the equivalent amount of subsidy No extraneous assistance can be of the least benefit which does not operate on the minds and through the habits of the people. Thus "contract" practice, a form of subsidy, in giving professional services for almost nothing affects prejudicially the habits of the people. It is universally admitted that the amount is wholly inadequate in return and disproportionate to the possibilities of the people It must either enable the people to live on lower wages, to gratify their indulgences, or to add to their comforts. If the standard of wages is lowered the employer of labour will probably be the chief beneficiary In sequence, if wages are lower the standard of professional tariff will also be reduced. Thus, this form of practice subsidises the industries of the country at the cost of a tax on the whole profession, moreover it is a grave source of evil, prejudicial to professional interests and morality, in conduct discreditable, and reprehensible for the honour of all concerned Further, it is of no benefit to the people but quite the reverse, inasmuch as the incentive to exercise self restraint is suppressed, while the stimulus to foster self reliance is withdrawn, thereby deleting from the people's life those aspirations which make most for a nation's greatness The cause of the whole mischief arising from this specified form of practice is the insufficient and unequal rate of remuneration The fault lies, not in the principle, but in the system It is impossible for the public alone to adjust the balance, therefore the profession must take the matter in hand and endeavour to coöperate with the public.

Three causes, then, combine to justify interference. 1 The conditions under which the profession is bound up with certain specified forms of contract practice are in many respects so bad that to tolerate them longer is scarcely possible, and that the *laissez faire* policy is not likely to bring about a cure. 2 Self reliance is a powerful force, but not powerful enough to remedy unaided the evils that affect the profession 3 The General Medical Council is more determined than ever to regulate the conduct of the profession consonantly with its best interests, and experience has shown that such regulation is neither inconsistent with its well being or prosperity nor tends to undermine self reliance nor operates prejudicially to the general welfare.

The principle of insurance seems still the more efficient method, but conducted on lines with necessary safeguards which at present do not generally apply Even a wage-limit would not be a sufficiently wholesome restriction. Whatever system be adopted combination must be the basis and "pooling" the method of insurance by the people On the other side, the profession must be in absolute agreement not only locally but generally It is hopeless to expect, even with a most adaptable sliding scale of wage limit, a satisfactory solution so long as the principle of "barter" is retained—that is, exchange by questionable means, a bad bargain, cheating The proposition already stated, therefore, could not be acceptable, so that the resolution still stands This practically amounts to an abolition of the whole system Another amendment might probably meet the requirements of the case —

> That club and friendly society contract work is undesirable in the best interests of both patients and the profession unless provision be made for payment of individual service according to a scale of fixed charges

This proposition provides a method for outflanking two obstacles—viz., an annual compounding payment and a wage limit—while it embodies two essential principles—namely, the independence of the medical attendant and payment for individual service In operation this system might be modeled on the lines of the National Deposit Friendly Society under "medical pay" with this alteration—that one common fund be substituted into which all the contributions of the members should be "pooled" and from which all medical charges should be paid.

According to the thirty-third annual report of the National Deposit Friendly Society for the year ending Dec. 31st, 1901, out of 68,400 benefit members (compared with 56,120 in 1900) 13 087 drew medical pay to the amount of £8410, being an average of 12*s* 1*d* per *sick* member As a basis for calculating the amount of individual contribution requisite to meet the charge of £8410, let the membership for the year 1900 (56,120) be taken as the total number entitled to full *financial* benefit for the year 1901, it gives 3*s* per member per annum as the equivalent levy and, as seen, this is on a very liberal scale The National Deposit Friendly Society admitting female members also may be taken as a fair sample for average club statistics No scheme will ever be perfect and so this society has not commanded universal favour, but when compared with the payment of an annual dole ranging from 2*s* 6*d* in some districts to 6*s* in others and given in the spirit of "make anything out of that you can," surely it is preferable.

The difficulty clinging round the solution of wage limit is largely due to the fact that no friendly society can debar a candidate from membership on the ground of wealth alone. When once enrolled he can insist upon all the benefits, privileges and rights which are extended to other members. Under the scale of the Eastbourne Provident Medical Association single members with a wage limit of 20*s* contribute 2*d* per week, or 8*s* 8*d* per annum, and the lowest premium received in family membership is 1*d*, or 4*s* 4*d* By comparison the advantage to the member would be much in favour of the "separate service" system. If the individual contribution were raised to, say, 5*s* —and that surely would not entail any hardship—it would provide a liberal advance on the scale of the National Deposit Friendly Society and no single service should command less than 2*s* 6*d* Compared with existing conditions the advantages should be obvious—independence, equity, efficiency, and general acceptance.

In the foregoing main principles only have been suggested, details have purposely been omitted, being considered secondary and liable, if stated, to obscure the main issues. Written with a suggestive object, in treatment this subject does not lay claim to originality in any part of the compilation, but it embodies a few generally accepted principles of ethics and economics The irony of fate mocks every genuine effort in professional reform. True, money is at the root of this as of all evil, but yet the motive which inspires the movement and the object kept in view—'tis not for money's sake nor greed of gain, but to remove the curse, the evil deed that's done contingent on that need. In time the remedy will be found, not in an exhibition of supercilious self unction, but in a generous application of unselfish deeds, each in his little sphere acting his humble part, with honest heart and ready hand, helping the other to lead the best professional life—the highest privilege of professional brotherhood.

THE NOBEL PRIZE FOR MEDICINE, 1902

As our readers are aware the Nobel Prize for Medicine in 1902 was awarded to Major Ronald Ross, C B, F R S, Lecturer on Tropical Medicine, University College, Liverpool An address was delivered by Professor Count Morner, Rector at the Caroline Institute, Stockholm, on the occasion of the award, of which the following is a translation —

Among the stipulations Alfred Nobel set forth in his will on which the Nobel foundation is based that concerning the international character of the prizes occupies an important place This proves not only his love of mankind and his wish induced thereby that we should regard one another as brethren but it also is a witness of his extensive and prescient views especially concerning medical science and its advancement

All the branches of medical science and their promoters in different countries have ultimately the same aim that of gaining the most thorough knowledge possible both about the human body and the processes in it as also about the noxious influences and the means for their prevention All medical workers unite their forces in pursuing that aim and in doing so feel members of one great fellowship Nevertheless the different fields of medical science lie at such distance one from another that the individual worker on many occasions must look afar in the attempt to get a thorough view of the progress of the work

With respect to diseases they are often of different kinds and importance in divers regions of the world For instance malaria is nowadays of little importance here in Sweden whereas it is a veritable scourge in other regions For elucidating this question by an instance from a European country it may be mentioned that in Italy of late the annual average deaths from malaria have been about 15 000 and the yearly number of the cases is calculated as about 2 000 000 Still more overwhelming are the numbers from India. Of the British army amounting to about 178 000 men close upon 76 000 men were admitted into hospital for malarial fever in the year 1897 In this single year the mortality from fever among the civil population in India amounted to a huge total it being a well known fact that malaria dominates so severely vast territories that it causes the very greatest difficulties for the cultivation of lands which but for malaria are specially favoured by nature.

The questions of the real nature of malaria, its origin its manner of entering the organism, and the consequent question of the possibility of preventing this disease are all of the greatest importance and have from remote ages occupied investigators for a long time without success, A very important discovery concerning malaria was made rather more than 20 years ago when Laveran, a French army surgeon ascertained that malaria is a parasitic disease caused by a very low form of animal life which he found in the blood of malarious patients. By this discovery the name of Laveran has for ever become renowned in the history of malaria. Research about malaria in the last two decades has chiefly been based on Laveran's discovery Science has thereby been enriched with many an important fact We have gained knowledge of the different forms of the malarial parasite in blood. We have found that it differs in the special forms of the disease We have learned the relations between the parasite and the red blood corpuscles in which it is chiefly to be found We have furthermore been able to survey the manner in which it multiplies in the blood the Italian investigator Golgi has in this respect revealed the remarkable fact that the periodicity of the malarial attacks depends on the appearance of new generations of the parasite in the blood. We have moreover found allied parasites in the blood of several mammals and birds.

The important question previously mentioned as to the possibility of the malarial parasite living outside the body and its way of obtaining entrance into the blood remained unanswered. For some reasons among others owing to various facts that were known concerning other parasites of an animal nature it was supposed that the malarial parasite in some way leaves the blood so as to exist in some form in nature probably as a parasite of another creature. As nothing indicated that the parasite was to be found in the secretions or excretions it was suggested that suctorial insects might assist in carrying the parasite to a place where it had to pass the aforementioned part of its life-cycle. Attention was therefore directed to the mosquito, which was thus supposed to spread the malarious infection. The importance of the mosquito in this respect has now been proved In this case, as in several others tradition anticipated science it is even said that negroes in East Africa use the same name for the mosquito and for malaria.

The mosquito theory of malaria was introduced to science by King no less than 18 years ago The theory, however remained a conjecture founded only on some suggestions given by epidemiological observations. The attempts made in Italy in the early nineties with the aim of experimentally examining the theory and eventually proving it to be true gave results that seemed to be anything but encouraging and more likely to prevent the investigation from following this line

A person whom we must deem of great merit concerning the solution of the problem is the English investigator Patrick Manson. It was a change in the appearance of the parasite which was sometimes observed to occur as the blood is shed, that Manson especially regarded as the first stage of its life outside the body This phenomenon has afterwards been shown by the American pathologist MacCallum to imply an act of fecundation of the parasite Manson was moreover guided by his experience regarding another parasite of the blood, a little worm (filaria) the transference of which from one part of its life-cycle to another he had found effected by the mosquito and more particularly by certain species of the mosquito By the views set forth on malaria and by exciting expectation that the solution of the malaria problem was to be found in the direction he indicated, Manson gave impulse to the further testing of the mosquito theory and at last to its being established Manson who lived in England had no opportunity of taking up the experimental work of the problem. The solution came from India

It was an English army surgeon in India, Ronald Ross, who impressed by Manson's induction, undertook the experimental testing of the matter Critically arranging his experiments he caused mosquitoes that were hatched from larvæ in the laboratory to bite malarious patients and endeavoured to follow the parasite in the body of the mosquitoes. The results of the first two years labour although assiduous and scrupulous gave little promise of success. But in August 1897 all at once he made vast progress towards his aim. While experimenting with another less common species of mosquito in the wall of its stomach he found bodies that very probably were an evolutionary stage of the human malarial parasite Ross being prevented by circumstances from pursuing his plan of studying the malarial parasite of man, continued his work with an allied malarial parasite of birds. The result was that he could not only confirm his discovery concerning human malaria as he found corresponding facts for the avian malaria, but he also in a short time succeeded in revealing the further development of the avian malarial parasite in the body of the mosquito This development is briefly as follows. In the stomach of the mosquito at first a process of fecundation takes place The form of the parasite thereby produced penetrates the stomach wall, imbedded in which it grows to bodies projecting like buttons from the outer surface of the stomach In these bodies a large number of elongated organisms sporozoites, are formed On the consequent bursting of the said bodies the sporozoites escape into the general body cavity of the mosquito and accumulate in the salivary or poison glands, which are in connexion with the proboscis with which the bites of the insect are inflicted A bite of the mosquito at that time inoculates the parasite and if the individual is susceptible to the parasite this develops in the usual manner

Ross's discoveries about malaria were immediately followed by a series of important works Thus, the Italian investigator Grassi, in association with his colleagues Bignami and Bastianelli proved that the human malarial parasite not only in its early stage, already detected by Ross but also in its further development undergoes the same evolution that Ross described for the growth of the avian malarial parasite in the body of the mosquito Grassi also has precisely defined the species of mosquito that are of import for the malaria of man Many a valuable work besides these have been issued by Ross by the Italian investigators by Robert Koch and by many others—works by which not only has our knowledge of the malarial parasite been enlarged, but this knowledge has been made useful in combating and preventing malarial disease

The eminent scientific value of Ross's work its importance as a basis for the success of the recent investigations into malaria, its rich contents as regards the art of medical practice, and especially hygiene will be obvious from the above

It is owing to these merits that the professional staff of the Caroline Medico-Chirurgical Institute have decided to allot the medical Nobel prize of this year to Ronald Ross

ROYAL ARMY MEDICAL CORPS FUND

THE second meeting of the committee of the Army Medical Services Fund for Perpetuating the Memory of Distinguished Officers (henceforward to be known as the "Royal Army Medical Corps Fund") was held at 68, Victoria street, London, S W, on Dec. 16th, when a permanent committee was elected, it being decided that the process of filling the places of those retiring should be automatic, the Director General of the Army Medical Service being always the chairman. With regard to retired officers it was agreed that the present representatives—Surgeon General J B C Reade, C B, K H S, Surgeon General H Skey Muir, C B, and Lieutenant-Colonel J F Beattie—should retain their seats and that when vacancies occurred they should be filled by the votes of retired officers subscribing to the Fund It was announced that Surgeon-General

Sir James A. Hanbury, K.C B A.M S had retired from the committee on account of his health As regards officers on the active list it was agreed that the holders for the time being of the following appointments should be *ex-officio* members of the committee the Deputy Director-General of the Army Medical Service (vice-chairman), the Deputy Assistant Director General of the Army Medical Service, the principal medical officer of the First Army Corps, the principal medical officer of the Home District, the commandant of the Medical Staff College, the professor of hygiene, Medical Staff College, the quartermaster, Medical Store Depôt Woolwich, and one junior captain of the Royal Army Medical Corps (not necessarily a member of their mess) to be elected by the officers of the Royal Army Medical Corps mess at Aldershot

The question of a concise name for the Fund was then discussed. 43 designations had been proposed by subscribers, many of them of a lengthy character The title, "Royal Army Medical Corps Fund," gained the largest number of supporters and it was resolved that the Fund should be called by that name.

The votes of subscribers to fix the amount of the annual subscription of officers on the active list were then taken. Out of a total of 339 votes 195 were in favour of £1 per annum and 144 in favour of one day's pay of each rank. The question of a reduction of subscriptions for lieutenants was negatived by the votes of officers of that rank.

A proposal by Colonel R. EXHAM, C B, R.A.M.C, that a fund should be started to meet cases of distress among widows and children of deceased officers of the Corps was negatived, it being felt that the Royal Army Medical Corps Fund was not yet in a position to undertake such large financial matters as were involved in the proposal, but a proposition by Colonel J J MACNAMARA, R A.M.C, that the Fund should take up the question of a compassionate fund for warrant officers, non commissioned officers, and men of the Corps, and their wives and families on or off the strength, was agreed to in principle by the committee The following sub-committee was appointed fully to consider and to report to the committee upon the subject and to deal in its report with such funds relating to the matter as already exist—Surgeon General Muir C B, the principal medical officer of the First Army Corps, the commandant of the Medical Staff College, Lieutenant-Colonel Beattie, and the deputy assistant director general of the Army Medical Service The same sub-committee was also requested to draw up a report containing a scheme for the due administration of each of the objects embraced by the Fund, having regard to the existing conditions of certain funds and to the fact that retired officers have in many cases limited their subscriptions to certain objects.

In recognition of the efforts of the late Surgeon General J B Hamilton, A.M.S. in behalf of the interests of the Royal Army Medical Corps, it was resolved that a brass memorial tablet to the memory of that officer should be erected at a cost not exceeding £20

MEDICINE AND THE LAW

The Medical Officer of the Ballachulish Slate Quarries

REFERENCE has already been made in THE LANCET to the dispute between the directors of the Ballachulish Slate Quarries, Limited, and Dr Lachlan Grant, of West Laroch, Ballachulish. Judgment has now been given by Lord Kyllachy, after hearing argument, upon the points at issue between the parties in the Outer House of the Court of Session In contracting with the directors to act as medical officer to their quarrymen in return for a fixed salary Dr Grant further agreed to accept a month's notice to terminate his services and also bound himself upon such termination to give up any local appointments and other practice in the immediate neighbourhood of Ballachulish. Notice of dismissal was given to Dr. Grant, but he has consistently contended that it was given arbitrarily and for no good cause and has consequently refused to carry out the agreement not to practise medicine any more in the locality Several points were raised before Lord Kyllachy involving the right of the directors to sue (owing to changed relations between them and their men which have arisen in consequence of the dispute with Dr Grant) and also as to the reasonableness of the restriction imposed. Lord Kyllachy, after considering his decision, gave judgment on Jan 2nd against Dr Grant, holding that he was bound by the agreement which he had made and ordered him to pay the expenses of the pursuers in the action

Unsatisfactory Inquests.

We have before us accounts of two inquests taken from the *Bradford Daily Observer* of Dec. 16th and the *Keighley News* of Dec. 27th. These seem to show that whereas the London County Council and the coroner for South west London are dissatisfied with the provisions of the law for the obtaining of medical evidence and the making of post-mortem examinations on the ground that they are insufficient, other coroners may regard post-mortem examinations and medical evidence generally as altogether unnecessary superfluities. In the one case a woman named Stirk was found dead in her husband's house. A medical man gave evidence that there were marks on her throat which might have been caused by fingernails, also a lump on the back, and another on the top of the head, and stated that these injuries or some of them might have been the cause of death and they might not We do not wonder that the jury found that the evidence was insufficient to enable them to say whether the injuries caused were responsible for the death or whether the woman died from natural causes, but it will be remembered that without the coroner's instruction the medical man had no right to make a post-mortem examination. In the other case investigated at an inquest at Keighley police-station a man was found dying in the street, but as his body was not identified we cannot give his name. A witness who stated that he knew a man answering to his description was not taken to see the body and there was no medical evidence whatever The *Bradford Daily Observer* thus concludes its account of these remarkable proceedings "The coroner proceeded to read a verdict to the effect that the man died from natural causes and not from violence. This was agreed to by the jury as their verdict. The coroner at the conclusion of the inquiry said he hoped the press would not give undue prominence to the fact that there was no direct evidence of identification." The publication of this naïve request seems to be the best method of commenting upon the matter, but we would remind juries that it is for them, if they are dissatisfied with the medical evidence or the lack of it, to express their view and to insist upon the coroner obtaining the witness suggested by them.

METROPOLITAN HOSPITAL SUNDAY FUND—At the Mansion House on Jan. 6th a meeting of the council of the Metropolitan Hospital Sunday Fund was held under the presidency of the Lord Mayor Among those present were Sir William S Church, Bart., K C B, President of the Royal College of Physicians of London, Sir William Broadbent, Bart., K.C V O, Sir E. Durning-Lawrence, M.P, Mr C E Tritton, M.P, Canon McCormick, Canon Rhodes Bristow, the Rev Dr Rigg, Mr Wakley, and Mr. Thomas Bryant. Mr J Hampton Hale was elected to fill a vacancy on the general purposes committee, the members of other committees were re-elected and the honorary secretaries, the honorary solicitor, and the honorary auditors were re-appointed Sir Edmund Hay Currie, the secretary to the Fund, referring to the distribution of surgical appliance orders and hospital letters, said that he should be glad if more members of the council would attend the special committee meeting in order that they might see the work that was being done In his reply to a vote of thanks, the Lord Mayor said that a meeting would be held at the Mansion House on June 8th for the purpose of calling wider attention to the objects of the Metropolitan Hospital Sunday Fund when he hoped to induce some speakers of great eloquence to address the meeting which would be reported and the proceedings published all over the country 25 per cent. of the patients who attended the large hospitals in London and no less than 60 per cent. of the patients who attended the smaller hospitals came from districts outside London which contributed nothing whatever to the Fund. Of the 104 000 in patients of the London hospitals last year 25,000 came from districts outside the 12-mile radius. The cost of treatment and maintenance of these patients was £150,000 Some 700 letters had been written to the country clergy on the matter but so far the replies had not been at all satisfactory

THE LANCET RELIEF FUND.

Almoners

THIS Fund, which came into operation on the 1st of February, 1889, has for its Almoners the President of the Royal College of Physicians of London (Sir WILLIAM SELBY CHURCH, Bart, K.C B, M D Oxon., F R C P Lond.), the President of the Royal College of Surgeons of England (Sir HENRY GREENWAY HOWSE, M B Lond F R C S Eng), the President of the General Medical Council (Sir WILLIAM TURNER, K.C B., M B Lond., F R C S Eng and Edin., F R S), Mr THOMAS WAKLEY F R C S Eng, and Mr THOMAS WAKLEY, jun, L R C P Lond, with Sir HENRY PITMAN, M D Cantab, F R C P Lond, as Honorary Auditor

Scope of the Fund

FOR the guidance of those seeking assistance and of those desirous of recommending deserving cases, it may be useful to record that THE LANCET Relief Fund is sustained solely by the Proprietors of THE LANCET, who provide every January the sum of at least £300, which is administered free of cost, with the object of affording immediate pecuniary assistance to registered medical practitioners or to their widows and orphans, in cases of distress and emergency, by the grant of money by way of loans free of interest, or gifts, as the circumstances of the various cases may require. In the case of widows and orphans, in order to come within the scope of the Fund, the death of the Husband or Father must have been of recent occurrence.

Chronic Cases ineligible

WHEN the Fund was inaugurated considerable misapprehension existed as to the precise objects for which it had been established, and as a result the majority of the earlier applications, being cases of *chronic* distress and not coming therefore under the designation of *emergency*, could not be entertained. As the Almoners still receive applications for assistance for cases which are obviously of a *chronic* character, it is thought advisable to append a statement concerning cases of this nature which appeared in THE LANCET of Feb 16th, 1889 —

> We are requested by the Almoners to state that *from the character of a number of the applications received both personally and by letter* for relief it is evident that in many cases the object for which this Fund has been established is not quite clearly understood, and if relief had been afforded in the cases of those who suffer from chronic distress the Fund would have been completely exhausted within the first few days of its existence They would therefore be greatly obliged if those readers of THE LANCET who may be asked to endorse applications would carefully peruse the Application Form and explain the precise object of the Fund to those applicants whose cases do not seem to come within the scope of the purpose for which the Fund has been established which is to afford prompt aid to registered medical practitioners or to the widows or orphans of members of the profession who in consequence of the supervention of some unexpected emergency which is not likely to recur have pressing need of immediate and temporary pecuniary relief"—

And who, it may be again pointed out, are likely to be permanently benefited thereby

FOURTEENTH ANNUAL REPORT of the ALMONERS

For the year ending December 31, 1902

IN presenting their Fourteenth Annual Report, the Almoners have to record that the balance in hand on Dec 31st, 1901 was £269 7*s* 4*d*, to which on Jan 1st, 1902 the Proprietors of THE LANCET added the sum of £300, making, with £42 repaid on loans, a total sum of £611 7*s* 4*d* available for grants during the year 1902.

The number of applications for assistance received by the Almoners during the year was 73—a falling off of nine as compared with those received in the previous year—of which 27 were so obviously outside the scope of the Fund that they were rejected by the Secretary by virtue of the discretionary power conferred upon him by the Almoners at their meeting on Jan 1st 1890, 11 were rejected by the Almoners after due consideration, in 11 cases Forms were sent but were not returned—probably the applicants recognised that their cases were outside the scope of the Fund, and 24 applicants were relieved by gifts of money ranging from £5 to £30 No loans were granted during the year The relief of the 24 cases, a detailed list of which is given in the accompanying Statement of Accounts involved the expenditure of the sum of £318—a sum just above the normal income of the year, omitting balances brought forward and possible receipts from loans.

Letters continue to be received by the Almoners from some of those whom they have helped, expressing their gratitude for the relief which has enabled them to mitigate, and in not a few cases to overcome, their difficulties, and thus testifying to a gratifying feature in the administration of the Fund As an instance of this, and one typical of many, may be cited a communication received from Case No 560, in which the recipient of relief says "The gift will be such a help to me in my terrible trouble. What I should have done without it I dare not pause to think

The promptness of the relief afforded to applicants is also a feature to which the Almoners continue to give their particular attention, and in this connexion it may not be uninteresting to record the fact that on several occasions the Almoners have been able to consider cases and to grant relief on the actual day on which the application was received. Case No 536 wrote "It was doubly welcome, because so prompt"

In their Report last year the Almoners referred to the gradually decreasing number of loans advanced from the Fund, pointing out that they were becoming more and more averse to affording assistance by this means, as their experience was that in but very few cases were loans ever repaid Consequently, no relief by means of loans was afforded last year, but the Almoners record with satisfaction that during the period under review loans to the amount of £42 were repaid The repayment of one loan (Case No 336 granted in 1896) was accompanied by a note stating that "I must thank the Almoners again for their great kindness in the past, I am very anxious to send it back to-night because I am ill." The Almoners have also received a communication from the West Indies from the widow of a medical man, announcing his death, and expressing her desire to repay a loan which her husband had from the Fund in 1893.

There are still far too many applications received for assistance for what are obviously "chronic" cases, a large proportion of the 27 cases rejected by the Secretary coming under this heading It cannot be too emphatically reiterated that THE LANCET Relief Fund exists to meet cases of *sudden emergency*, where timely help will tide the practitioner over his unforeseen (and too often unprovided for) difficulties, or afford his widow and orphans (alas, again too often unprovided for) a few weeks' respite from the more pressing financial cares of their unhappy position.

In conclusion, the Almoners desire to state that they will at all times be glad to have their attention called to any cases of genuine distress coming within the scope of the Fund, but they trust that those recommending cases or giving testimonials will first take steps to satisfy themselves of the *bona fides* of such cases before endorsing them. In the administration of such a Fund as this the Almoners are of necessity largely guided in their decisions by the testimonials accompanying the applications

(Signed)

W S CHURCH (Chairman)	H. G HOWSE
	THOMAS WAKLEY
WM TURNER	THOMAS WAKLEY Jun

THE LANCET RELIEF FUND.

STATEMENT OF ACCOUNTS FOR THE YEAR ENDING DEC 31st, 1902

DR.	£	s	d	CR.	£	s	d	£	s	d
				By Gifts —						
To Balance at the London and Westminster Bank, Limited (Westminster Branch), Jan 1st, 1902	269	7	4	Case No 533	8	0	0			
				,, 535	20	0	0			
				,, 536	5	0	0			
,, Proprietors of THE LANCET Jan 1st, 1902	300	0	0	,, 538	10	0	0			
,, Repayment of Loans —				539	20	0	0			
Case No 336 £12 0 0				,, 540	10	0	0			
,, 513 30 0 0				541	10	0	0			
	42	0	0	542	10	0	0			
,, Case No 565 Cheque unpresented	10	0	0	,, 543	5	0	0			
				,, 544	5	0	0			
				,, 545	10	0	0			
				546	15	0	0			
				549	20	0	0			
				551	10	0	0			
				552	10	0	0			
				553	15	0	0			
				555	15	0	0			
				,, 556	30	0	0			
				557	20	0	0			
				560	20	0	0			
				,, 561	10	0	0			
				562	20	0	0			
				,, 563	10	0	0			
				,, 565	10	0	0			
								318	0	0
				By Bank Charges —Cheque Book, 4*s* 2*d*, Commission on Scotch Cheque (Case No 336, repayment of loan), 3*d*				0	4	5
				Balance at Bank, Dec 31, 1902				303	2	11
	£621	7	4					£621	7	4

I find by the Bankers Book that the actual Balance on Jan 1st, 1902, to the credit of the Fund was £269 7*s* 4*d*, to which the sum of £300 was added by the Proprietors of THE LANCET on Jan. 1st 1902.

The balance at the Bank on Dec 31st, 1902, was the sum of £303 2*s* 11*d* I have also checked the receipts for disbursements and find the above account strictly accurate.

January 2nd, 1903.

HENRY A. PITMAN Hon. Auditor

THE MEDICAL MAN, THE CORONER, AND THE PATHOLOGIST

THE South West London Medical Society convened a special meeting to consider the questions that have arisen in consequence of the action of Mr John Troutbeck, coroner for the City of Westminster and the South-Western District, and this was held on Jan 2nd in the drill hall of the 4th Volunteer Battalion East Surrey Regiment, Clapham Junction. The President of the society, Surgeon Major M. Robinson, I M.S , took the chair The proceedings were followed with marked interest by an audience of 83 medical men from the surrounding districts

The PRESIDENT commenced by observing that the novel proceedings of the new coroner in that district called for consideration. The action of Mr Troutbeck in relation to post-mortem examinations had been before the council of the South West London Medical Society and it had been thought advisable to obtain the opinion of counsel concerning Section 21 of the Coroners Act. The London County Council had thought fit to nominate a medical man as pathologist to assist coroners in special cases Mr Troutbeck was the only coroner who, as far as he knew, had to any great extent availed himself of this assistance, but instead of calling in the pathologist appointed by the London County Council in exceptional cases only Mr Troutbeck had made it the rule to utilise the services of the pathologist in question—viz , Dr L Freyberger If a coroner wished to have medical evidence it seemed, according to the Coroners Act, that he should call in the medical attendant on the case and if that gentleman was not available the Act seemed to direct that the coroner should call in some medical practitioner in the neighbourhood. It did not appear that Dr Freyberger had been appointed by the London County Council by advertisement or by competition. No one objected to receive the aid of a pathologist in certain special cases but if a pathologist was called in the medical man in attendance on the case should also be present at the post-mortem examination

The honorary secretary of the society, Dr M MACKINTOSH, then said that in consequence of communications received by him from members of the society, a special meeting of the council was held on Dec. 2nd. Correspondence explaining the matter was laid before the council and in consequence it was deemed necessary to obtain counsel's opinion on Section 21 of the Coroners Act and its subsections For this purpose Mr Hempson, solicitor to the Medical Defence Union, was instructed to obtain the opinion of counsel on the case. This was done and at an adjourned meeting held on Dec. 17th the case as submitted by Mr Hempson and the opinion of Mr M Muir Mackenzie thereon were read to the meeting Counsel was requested to advise (1) as to whether the practice adopted by Mr Troutbeck is in conformity with or in breach of his legal duties as His Majesty's coroner—and if counsel should be of opinion that he is acting in breach of his legal duties, (2) by whom and by what means can he be restrained from continuing thus to act, , (3) generally in the circumstances.

The following is the opinion of Mr Muir Mackenzie —

1 The 21st section of the Coroners Act 1887 confers powers and imposes duties on a coroner If the deceased was attended in his last illness by a medical practitioner the coroner has power to summon the practitioner If the deceased was not attended by a medical practitioner the coroner has power to summon as a witness any legally qualified practitioner who is at the time in actual practice in or near the place where the death happened The coroner further has power by Subsection (2) of the section to direct such " medical witness—that is to say the practitioner who attended the deceased or a practitioner in practice in or near the place where the death happened—to make a post-mortem examination. Then the jury in the events specified in the third subsection have power to require the coroner to summon as a witness some other specified legally qualified practitioner and it is the duty of the coroner to comply with the requisition. Besides having the power to summon the medical witness specified in the enactment it is the duty of the coroner to do so when it is made to appear to him that the circumstances specified in the enactments exist. The words of subsection (1) are may summon," while the words in subsection (3) are shall comply But although the word may in a statute *primâ facie* gives a discretion if the statute in which it occurs is one which relates to public justice and is of general interest and concern the word may" is imperative and imposes a duty See the judgments in Julius *v* Oxford, 5 App Cases and see especially on page 240 and cases there cited My opinion is therefore that the practice adopted by Mr Troutbeck as detailed in the case is not in conformity with the statutory duties imposed on him

2. The enactment does not in my opinion give to any medical practitioner whom the coroner ought to have summoned a right either to bring an action for damages or for an injunction against the coroner to restrain him from summoning Dr Freyberger in future, or a right to apply for a second inquest and mandamus to the coroner to summon him as a witness at a second inquest. If owing to the coroner failing to summon the medical witnesses prescribed in the Act there were to be a miscarriage of justice the court would have power on application to it to quash the verdict and to order a new inquest to be held. See *Re* Mitchelstown 22 L. R. Ireland, 279 Reg *v* Carter" 45 L I 2 B 711 The question in each case whether the court would exercise the power would depend on the circumstances (see R. *v* Coulson " 55/I P 262) The Coroners Act 1887 contains powers for the removal of a coroner by the Lord Chancellor for inability or misbehaviour Further if he is guilty of misbehaviour a coroner may be indicted for a misdemeanour and on conviction be removed See Sections 8 and 35 of the Act. There is also a general power in the High Court to remove a coroner for misbehaviour or misconduct See Jervis on Coroners p 94 and Section 35 of the Act, which preserves the old powers of the court I cannot advise that the conduct of the coroner amounts to misbehaviour which would justify either an indictment of him or an application to the court to remove him If the medical practitioners who in my opinion justly and reasonably complain of the course which the coroner has adopted, desire to proceed in the matter my advice to them is in the first instance to represent the facts to the Lord Chancellor by an influentially signed memorial addressed to him.

Dr MACKINTOSH also read the following letter from Dr S H. Snell —

Glenshee Lodge Wandsworth Common S W ,
Dec. 29th, 1902.

DEAR SIR —I regret that a previous engagement prevents me from being present at the meeting on Friday next About three weeks ago I was called out of bed by the police to a man whom I found to be dead in the shelter near here I of course, carefully noted the circumstances with a view to an inquest I was somewhat surprised to read an account of this inquest later where medical evidence of the cause of death &c. was given by a medical man in no way connected with the case.

Supposing that the coroner prefers his own man to do the post mortem surely the first evidence—namely the circumstances and surroundings &c. should be given by the medical man called in.

If this case bears on the object of the meeting I shall be pleased if you will quote it Yours faithfully

M Mackintosh Esq SIDNEY H. SNELL.

The PRESIDENT said that there were several courses open for them to follow There was the advice of counsel to approach the Lord Chancellor in regard to the conduct of the coroner They could go to the London County Council and do what they could to induce that body to arrange matters with the coroner They could also approach one of the medical protection societies and ask it to take the matter up His view, however, was that in the first instance they had better go to the London County Council

Mr T ARTHUR I. HOWELL (Vice-President of the society) then proposed the following motion —

That this meeting of medical men summoned by the South-West London Medical Society on Jan 2nd 1903 while appreciating the great steps that the London County Council have taken in the interest of public health view with great regret the action taken by the coroner of this district in practically giving all the post-mortem cases to a pathologist selected by the London County Council in direct opposition to the resolution of the Council which declares it is desirable that post-mortem examination in inquest cases of a *special* nature should be intrusted to a specially skilled pathologist."

That this meeting further declares that it would welcome the assistance of a skilled pathologist in suitable cases but protests strongly against the way that this resolution has been interpreted in this district as it has practically superseded the medical attendant in ordinary cases and this meeting respectfully asks the London County Council to give the matter their serious consideration.

He said that the opinion of counsel which had been read practically gave all the facts of the case. The wisest course in a matter of that kind was to go to work in a diplomatic manner and to approach in the first instance the London County Council with the request that it would take steps to see that its recommendation was carried out in the way that it intended and not as the coroner had thought fit to interpret it. From a statement made by Sir William Collins, the chairman of the Public Control Committee, at the meeting of the London County Council on Dec 16th, it appeared that the recommendation approved by the Council was as follows —

That all coroners be informed that in the opinion of the Council it is desirable that post-mortem examinations in inquest cases of a special nature should be intrusted to a specially skilled pathologist

No medical man would fail to avail himself of such assistance because it was not only in the interest of the medical profession but it was also in the public interest that such a course should be followed He contended that that very reasonable recommendation had been carried out in a manner that practically resulted in direct opposition to it. Within the last few months, out of 23 inquest cases in attersea, Dr Freyberger had been called in for 16 cases hey all knew that there could not have been 16 inquest ses of a special nature out of 23. If it were so then attersea must be a most extraordinary place Sir William ollins had also said that "the Public Control Committee did ot contemplate that the medical attendant on the deceased ould be superseded in ordinary cases." Mr Howell, ontinuing, said that he thought the experience in Battersea howed that the ordinary medical attendant had been superseded. His opinion was that they should go first to the ondon County Council with the courteous motion that e had proposed and he was sure they would receive a ympathetic reception They could show the London ounty Council that its recommendation had not been nterpreted in the way that any reasonable man would read t, and then if the Council would not help them they must onsider some other means of dealing with the matter

Dr. L S **McMANUS** said that the coroner, Mr Troutbeck, ad not followed the ordinary ethics of decent society in his lealings with the medical men in that district The attersea borough council had written to the London County ouncil concerning Dr Freyberger and had received an nswer stating that Dr Freyberger had not been appointed athologist to the Council and it was incorrect so to describe im. He concluded by seconding Mr Howell s motion.

Mr W H P **HILL** said that 41, Regent's Park road (the esidence of Dr Freyberger) could not possibly be included n the district of Battersea unless the whole of London was o be absorbed into Battersea. In his opinion the proper man to call in was a medical man from the neighbourhood. Why, he asked, should they have imposed upon them a gentleman who had practically never been heard of before?

Dr. J **MYLES** said that the practitioners had deserved the treatment they had received because they were apathetic and indifferent to their rights.

Mr **LENANE** said that Mr, Troutbeck was the only coroner who had adopted the system complained of. In his opinion the average general practitioner was quite capable of carrying out post-mortem examination in an ordinary case.

Dr **HUGH WOODS** said that the subject had been brought before the council of the London and Counties Medical Protection Society which was of the unanimous opinion that the conduct of Mr Troutbeck was wrong, and the council was ready to take up the rights of the medical practitioners concerned If a medical man was called to a case which afterwards became an inquest case he might find if he were not at the inquest that his character had been damaged. The medical man should be present at the post-mortem examination or duly represented there, otherwise he might be landed in a position disastrous to his practice. He had a right to be present at the post-mortem examination and at the inquest

Mr. E W **ST V RYAN** pointed out that the practice of the coroner accepting mere theories of causes of death framed by a pathologist who had not the advantage of knowing the facts of the case in the same way as an ordinary medical attendant had would sooner or later end in a miscarriage of justice.

Mr J B **HOWELL** suggested that the best course would be to approach the Lord Chancellor.

Mr M. I. **FINUCANE** agreed with the last speaker and pointed out that the coroner was merely a judicial officer under the Lord Chancellor He considered that it was folly to have procured counsel s opinion and then not to act on it.

Mr **JOHN GAY** urged the meeting to accept the motion proposed by Mr Howell because in that way they would get what they wanted by applying to the authority which had issued the instructions to which they objected. The best way was to try the simplest method first.

Dr **BEDFORD FENWICK** advised the meeting to come to some definite conclusion as to who was to be intrusted with the carrying out of the motion if it was passed.

Dr W G **DICKINSON** said that whoever was intrusted with the matter must have definite instructions.

Dr M. G **BIGGS** pointed out that if they were unsuccessful with the London County Council they could then go to the Lord Chancellor

Mr P M. **YEARSLEY** supported the last speaker

The motion was then put to the meeting and duly carried.

On the suggestion of Mr **GAY** it was agreed that the council of the South West London Medical Society should be intrusted with the duty of approaching the London County Council with the resolution and should be empowered to attend with a deputation to explain the circumstances of the case.

The proceedings terminated by the appointment of Mr James B Howell as honorary treasurer for a special fund to be devoted to defraying the expenses incurred in this matter It was hoped that by an appeal in the medical journals the profession generally would help

The meeting ended with a cordial vote of thanks to the President.

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

DURING the week ending Dec. 27th, 1902, 6057 births and 4826 deaths were registered in 76 of the largest English towns. The annual rate of mortality in these towns, which had been 19 6 per 1000 in each of the two preceding weeks, declined to 16 9 per 1000 In London the rate of mortality was 16 6 per 1000, while it averaged 17 1 per 1000 in the 75 other large towns. The lowest death rates in these towns were 4 8 in Hornsey, 7 2 in Walthamstow, 8 7 in Hastings, 9 4 in Willesden and in Handsworth, 10 7 in Barrow in Furness, 10 9 in Coventry, and 11 3 in Burton-on Trent, the highest rates were 21 8 in Liverpool and in Rhondda, 22 5 in Hull, 22 9 in West Bromwich, 23 2 in Stockton-on Tees, 23 3 in Reading, 23 4 in Hanley, 24 4 in Bootle, and 26 6 in Merthyr Tydfil The 4826 deaths in these towns included 493 which were referred to the principal infectious diseases, against 563, 593, and 620 in the three preceding weeks, of these 493 deaths 159 resulted from measles, 91 from whooping-cough, 76 from diphtheria, 63 from scarlet fever, 62 from diarrhœa, 31 from "fever" (principally enteric), and 11 from small pox. No death from any of these diseases was registered in Willesden, Hornsey, Bournemouth, Coventry, Warrington, Rochdale, Barrow in-Furness, Huddersfield, Rotherham, Gateshead, or Swansea, while the highest death-rates from these infectious diseases were recorded in Hanley, Burton-on-Trent, West Bromwich, Smethwick, Oldham, Hull, and Newport (Mon.) The greatest proportional mortality from measles occurred in Hastings, West Bromwich, Smethwick, Bolton, Salford, Hull, Tynemouth, and Newport (Mon.), from scarlet fever in Birkenhead, from diphtheria in Hanley, Smethwick, and West Hartlepool, from whooping-cough in Croydon, Tottenham, Northampton, Hanley, Oldham and Cardiff, from 'fever" in Wallasey, and from diarrhœa in Wolverhampton. Of the 11 fatal cases of small pox registered in these towns two belonged to Stockport, two to Bootle, two to Burnley, and one each to Liverpool, Bury, Oldham, Leeds, and Merthyr Tydfil. The number of small pox patients under treatment in the Metropolitan Asylums hospitals which had been 17, 17, and 21 at the end of the three preceding weeks, declined again to 17, no new case was admitted during the week, the numbers admitted during the three preceding weeks having been six, one, and five respectively The number of scarlet fever cases in these hospitals and in the London Fever Hospital, on Saturday, Dec. 27th, was 2528, against numbers declining from 2900 to 2487 on the seven preceding Saturdays, 205 new cases were admitted during the week, against 265, 250, and 279 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 370, 399, and 409 in the three preceding weeks, declined again to 343, and were 165 below the corrected average number *Influenza* was stated as the primary cause of 28 deaths in London, the numbers in the three preceding weeks having been 13, 21, and 37. The causes of 73, or 1 5 per cent., of the deaths registered in the 76 large towns were not certified, either by a registered medical practitioner or by a coroner All the causes of death were duly certified in West Ham, Bristol, Salford, Bradford, Leeds and in 40 other smaller towns, the largest proportions of uncertified deaths were registered in Smethwick, Liverpool, St. Helens, Warrington, Preston, Middlesbrough, and South Shields.

In 76 of the largest English towns 9407 births and 5705 deaths were registered during the week ending Jan. 3rd. The annual rate of mortality in these towns, which had been 19 6, 19 6, and 16 9 per 1000 in the three preceding weeks rose again last week to 20 0 per 1000 In London the death-rate was 20 9 per 1000, while it averaged 19 6 in the 75 other large towns. The lowest death rates in these towns were 8 3 in Hornsey 10 3 in Handsworth, 11 6 in Derby, 12 0 in King s Norton, 12 6 in Leyton, 12 9 in Northampton, 13 6 in West Hartlepool, and 14 0 in Middlesbrough, the highest rates were 25 3 in Bootle, 25 5 in Hull, 26 1 in *West Bromwich*, 26 8 *in Oldham*, 27 1 *in Stockport*, in Wigan and in Tynemouth, and 39 4 in Newport (Mon) The 5705 deaths in these towns last week included 603 which were referred to the principal infectious diseases, against 593, 620, and 493 in the three preceding weeks, of these 603 deaths 174 resulted from measles, 123 from whooping cough, 98 from diphtheria, 84 from diarrhœa, 57 from scarlet fever, 55 from "fever" (principally enteric) and 12 from small pox. No death from any of these diseases was registered last week in Hornsey, Wallasey, Halifax, or Stockton on Tees, in the other towns they caused the lowest death rates in Plymouth, Northampton, Nottingham, St. Helens, Gateshead and Newcastle on Tyne, and the highest rates in Hanley, West Bromwich, Stockport, Wigan, Hull, Middlesbrough, and Newport (Mon) The greatest proportional mortality from measles occurred in Hastings, West Bromwich, Salford, Blackburn, Hull, and Newport (Mon), from scarlet fever in Walsall, West Bromwich, and Wigan, from diphtheria in Reading, Hanley, Bury, Oldham and Preston, from whooping cough in *in Willesden and Grimsby*, *from* "*fever*" in *Portsmouth*, and from diarrhœa in Hanley, West Bromwich, and Coventry Four fatal cases of small pox were registered in Stockport, three in Liverpool, and one each in Hanley, Bolton, Huddersfield York, and Merthyr Tydfil, but not one in any other of the 76 large towns The number of small pox cases under treatment in the Metropolitan Asylums hospitals, which had been 17, 21, and 17 at the end of the three preceding weeks, had further declined to 14 at the end of last week, one new case was admitted during the week, against one, five, and none in the three preceding weeks The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday the 3rd inst., was 2378, against 2565, 2487, and 2528 on three preceding Saturdays, 214 new cases were admitted during the week, against 250, 279, and 205 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London which had been 399, 409, and 343 in the three preceding weeks, rose again last week to 415, but were 93 below the corrected average number Influenza was stated to be the primary cause of 37 deaths in London last week, against 21 37, and 28 in the three preceding weeks The causes of 76, or 1 3 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner The causes of all the deaths were certified in Leicester, Nottingham, Salford, Bradford, Leeds, and 44 other smaller towns, the largest proportions of uncertified deaths were registered in Liverpool, Warrington, Blackburn, Halifax, Sheffield, Sunderland, South Shields, and Gateshead

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns the annual rate of mortality, which had been 18 5 19 9 and 21 1 per 1000 in the three preceding weeks, further rose to 21 3 per 1000 during the week ending Saturday, Dec 27th, 1902, and was 4 4 per 1000 above the mean rate during the same period in the 76 large English towns. The death rates in these towns ranged from 17·5 in Aberdeen and 18 3 in Dundee to 23 0 in Glasgow and 23 7 in Paisley The 688 deaths in these towns included 20 from whooping cough, 18 to diarrhœa, six from measles, six from diphtheria, six from "fever," and three from scarlet fever In all, 59 deaths were referred to these principal infectious diseases, against 64, 72, and 68 in the three preceding weeks. These 59 deaths were equal to an annual rate of 1 9 per 1000, which was 0 2 per 1000 above the mean rate from the same diseases in the 76 large English towns. The fatal cases of whooping cough, which had been 16 31, and 32 in the three preceding weeks declined again to 20, of which 16 occurred in Glasgow and two in Dundee The deaths from diarrhœa, which had been 20 and 15 in the two preceding weeks, rose again to 18, and included 11 in Glasgow, three in Aberdeen and two in Edinburgh. The fatal cases of measles, which had been seven and five in the two preceding weeks, rose again to six, of which two occurred in Glasgow, two in Edinburgh, and two in Aberdeen The deaths from diphtheria, which had been nine, nine and four in the three preceding weeks, rose again to six, and included three in Glasgow, where five of the six fatal cases of "fever" also were registered The deaths referred to diseases of the respiratory organs in these towns, *which had* been 133, 141, and 170 in the three preceding weeks, further increased to 193, and were 27 in excess of the number in the corresponding period of last year. The causes of 33, or nearly 5 per cent., of the deaths registered in these eight towns were not certified.

The annual rate of mortality in eight of the principal Scotch towns, which had risen from 18 5 to 21 3 per 1000 in the four preceding weeks, further increased to 21 6 per 1000 during the week ending Jan. 3rd, and was 1 6 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 17 0 in Perth and 18 1 in Aberdeen to 23 3 in Glasgow and 27 8 in Greenock The 707 deaths in these towns included 33 which were referred to whooping cough, 14 to diarrhœa, 13 to diphtheria, 10 to measles, four to "fever," and three to scarlet fever, but not one small pox. In all 77 deaths resulted from these principal infectious diseases last week, against 72, 68 and 59 in the three preceding weeks. These 77 deaths were equal to an annual rate of 2 4 per 1000, which was 0 3 per 1000 above the mean *rate last week from the same diseases in the 76 large English* towns The fatal cases of whooping cough, which had been 31, 32, and 20 in the three preceding weeks, rose again last week to 33, of which 26 occurred in Glasgow, four in Edinburgh and two in Dundee The deaths from diarrhœa, which had been 15 and 18 in the two preceding weeks, declined again to 14 last week, and included seven in Glasgow, two in Edinburgh, two in Paisley and two in Leith The fatal cases of diphtheria, which had been four and six in the two preceding weeks, further increased last week to 13, of which four were registered in Glasgow, fou in Edinburgh, two in Dundee, and two in Perth The death from measles, which had been seven, five, and six in th three preceding weeks, further rose to 10 last week and included eight in Aberdeen The fatal cases of "fever," which had been six in each of the two preceding weeks declined last week to four, of which two occurred i Greenock The three deaths from scarlet fever correspondec with the number in the preceding week and included two i Glasgow The deaths referred to diseases of the respirator *organs in these towns* which had been 141, 170, and 193 i the three preceding weeks, declined again last week to 15 and were 34 below the number in the corresponding period c last year The causes of 39, or nearly 6 per cent., of th deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN

The annual rate of mortality in Dublin during the wee ending Dec 27th, 1902, was 24 6 per 1000, against 25 9, 29 and 30 8 in the three preceding weeks. During the previo 13 weeks the death rate had averaged 27 5 per 1000, t rates during the same period being 17 4 in London a 17 1 in Edinburgh The 179 deaths of persons belongin to Dublin registered during the week under notice showe a decline of 45 upon the number in the preceding wee and included 21 which were referred to the princip infectious diseases, against 16, 22, and 20 in the thr preceding weeks, of these seven resulted from measle four from "fever" four from diarrhœa, three from dip theria, two from scarlet fever, and one from whooping coug These 21 deaths were equal to an annual rate of 2 9 p 1000 the death rate from the same diseases being 1 per 1000 both in London and in Edinburgh. The fatal cas of measles, which had been nine, 10, and nine in the thr preceding weeks, further declined to seven The deat referred to different forms of "fever," which had been thre five, and four in the three preceding weeks, rose again four The fatal cases of diarrhœa, which had been on five, and three in the three preceding weeks, rose aga to four The mortality from both scarlet fever ar diphtheria showed a slight increase upon that recorded recent weeks. The 179 deaths in Dublin includ 30 of children under one year of age and 38 of perso aged upwards of 60 years, the deaths both of infan and of elderly persons showed a a marked decline from t numbers in the preceding week. 12 inquest cases and ni deaths from violence were registered, and 77, or 43 p cent., of the deaths occurred, in public institutions Th ases of 11, or more than 6 per cent, of the deaths were t certified.

The death rate in Dublin, which had been 29 2, 30 8 and 6 per 1000 in the three preceding weeks, rose again to 4 per 1000 during the week ending Jan. 3rd During the st 14 weeks the death rate has averaged 27 6 per 1000 the tes during the same period being 17 7 in London and 17 2 Edinburgh. The 214 deaths of persons belonging to ublin registered during the week under notice showed an cess of 35 over the number in the preceding week, and cluded 23 which were referred to the principal infectious seases, against 22 20 and 21 in the three preceding eeks, of these, nine resulted from measles, four from arlet fever four from diphtheria, three from diarrhœa ro from "fever," and one from whooping cough. These deaths were equal to an annual rate of 3 2 per 1000, e death rates last week from these diseases being 1 in London and 1 8 in Edinburgh. The fatal cases of easles, which had been 10 nine, and seven in the three receding weeks, rose again to nine The deaths from arlet fever, which had been one and two in the two preceding weeks, further increased to four last week. The four tal cases of diphtheria showed a slight increase upon the umber in the preceding week. The deaths from "fever, nich had been five four and four in the three preceding eeks, further declined to two last week. The fatal cases of iarrhœa, which had been five, three, and four in the three receding weeks declined again last week to three The 14 deaths in Dublin last week included 37 of children nder one year of age and 57 of persons aged upwards of 60 ears, the deaths of infants showed a slight increase while hose of elderly persons were more than 50 per cent. in xcess of the number in the preceding week. Five inquest ases and 11 deaths from violence were registered, and 7/ r more than a third, of the deaths occurred in public nstitutions The causes of 17 or nearly 8 per cent. of the leaths in Dublin last week were not certified.

THE SERVICES

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel T B A. Tuckey retires on retired pay Dated Jan. 3rd, 1903. Lieutenant-Colonel Ulick J Bourke retires on retired pay Dated Jan 7th, 1903 Major R. G Thompson retires on retired pay Dated Jan 7th 1903

Captain T H. Goodwin, D S. O, has joined at Woolwich. Lieutenant J C Furness, R A. M C (Militia) assumes medical charge of the 1st Army Corps Staff, Army Pay Department, Fire Brigade, Military Police, Army Chaplains Department, &c Lieutenant-Colonel J Hickman proceeds to Gravesend for duty Captain K M. Cameron joins at Woolwich. Major G Bray has been ordered to join the Western District. Lieutenant F G Richards on arrival in India from South Africa, is posted to the Station Hospital, Poona, for duty Major C S Sparkes proceeds to Aldershot for duty Lieutenant-Colonel W L. Reade assumes medical charge at Weedon vice Major Sparkes.

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers) 2nd Middlesex Surgeon Lieutenant D J Duhig resigns his commission Dated Dec 22nd, 1902 1st Newcastle-on Tyne Surgeon Lieutenant G N Wilson resigns his commission. Dated Jan. 7th, 1903

Rifle 4th Volunteer Battalion the Royal Scots (Lothian Regiment) John Tarrat Titterton to be Surgeon Lieutenant Dated Jan 7th, 1903 2nd (Prince of Wales's) Volunteer Battalion the Devonshire Regiment The undermentioned officer resigns his commission —Surgeon-Captain A. R. Rendle. Dated Jan. 7th, 1903. 2nd Volunteer Battalion the East Yorkshire Regiment Surgeon Major A. F A. Fairweather retires under paragraph 111 Volunteer Regulations, with permission to retain his rank and to wear the uniform of the battalion on retirement. Dated Jan. 7th, 1903. 4th (Nottinghamshire) Volunteer Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiment) Surgeon Captain W T Crawford resigns his commission. Dated Jan. 7th, 1903. 6th Volunteer Battalion the Manchester Regiment Surgeon Major R T Sparrow to be Surgeon Lieutenant-Colonel. Dated Jan 7th, 1903. 2nd Volunteer Battalion the Highland Light Infantry The notification which appeared in the *London Gazette* of Dec 19th, 1902, appointing John Freeland Fergus Second Lieutenant, to be cancelled and the following substituted — John Freeland Fergus to be Surgeon Lieutenant. Dated Dec 20th, 1902.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS)

Edinburgh Company David Waterston to be Lieutenant. Dated Jan 7th 1903.

VOLUNTEER INFANTRY BRIGADE BEARER COMPANY

2nd London Surgeon Captain J N Brown from the 5th (West) Middlesex Volunteer Rifle Corps, to be Captain, and to command under paragraph 55A Volunteer Regulations (dated Dec. 23rd, 1902), Surgeon Lieutenant E C Montgomery Smith, from the 5th (West) Middlesex Volunteer Rifle Corps, to be Lieutenant (dated Dec. 23rd, 1902)

THE ARMY MEDICAL SYSTEM

We have received a copy of a little pamphlet on "The Army Medical System, what it is, is not, and ought to be, by One who Knows' It is published by Sands and Co, 12, Burleigh street, Strand, and its price is 1s As will be seen its author does not give his name As it consists of only 90 pages it is easily read through, but it must not be imagined on that account that the limited space given to their consideration affords any indication of the radical changes and reforms in the army medical system which are advocated, for these, if carried out, would altogether reconstruct the medical service. Within the compass of 90 pages the author manages to touch upon or to pass in review, a large number of subjects and he shows very plainly that he is opposed to the present system. He adversely criticises the practice of getting rid of the inefficient soldier as soon as possible by invaliding him. He would have hospitals divided or separate buildings provided for the reception of serious cases of sickness and convalescents and would conduct the former on the lines of a civil hospital officered by the more highly professionally skilled army surgeons He holds that a man cannot be a military man and discharge purely military duties and be at the same time an expert surgeon or physician. The key note of the pamphlet is, we take it, to develop and to exalt everything appertaining to the strictly medical and scientific side of a medical officer's duties and to pay much less heed to those of a purely military nature than as he alleges is now the case. "Until," he says it is realised that it is imperatively necessary to separate the true surgeon or physician from the military man, to separate the soldier nurse from the cook nurse or clerk nurse and to adopt measures to carry out the same no reform really worth having can ever be anything else than a downright failure He summarises his conclusions at the end of his pamphlet under nine heads and urges the taxpayer to study the subject for himself.

RECRUITING FOR THE ARMY

We have for many years past called attention to the defective arrangements existing at our army recruiting depots Some of these are little short of a disgrace So far from these depots being attractive and presenting inducements to young men to enter the service they are far more likely to be repelled by the position of these buildings in some back street or other and by the nature of the accommodation provided inside them. We have always contended that recruiting offices should occupy airy and prominent positions in some of the main streets and not in the slums of a city or town, and that their inside accommodation should be made as attractive, clean and comfortable as possible In fact, everything should be done to maintain, and to increase if possible, the self respect of the intending soldier and to exalt the position of the army in his eyes. It is time that something should be done and we are glad to learn that the subject is at last engaging the attention of the Secretary of State for War

CONCENTRATION CAMPS IN SOUTH AFRICA AND THE PHILIPPINES.

We learn on the authority of the *Army and Navy Gazette* that he concentration camps which have been established in certain provinces of the Philippines by General J F Bell U S. A. have been denounced as furiously as our own concentration camps were in South Africa. It has been proved however and is admitted by the native physicians, that the occupants of these camps have enjoyed a far larger measure of health, comfort, and safety than they would have done in their own homes. Our service contemporary also calls attention to the fact that Dr Lair of the Pasteur Institute of

Paris, as the result of his personal observations, states that these camps in South Africa were clean, comfortable, and well supplied with food and medicines and in some instances were more comfortable than the quarters of the British troops. The Boers themselves freely admitted that the so-called cruelties never had any existence. Dr Lair's report seems to have attracted a good deal of attention in the United States

British National Society for Aid to the Sick and Wounded in War.

The report by this society of its operations in connexion with the Transvaal war of 1899–1902 has just been issued from the offices of the society, 5, York buildings, Adelphi, London, W C It will be remembered that in addition to the work of supplying medical stores and other things necessary for the treatment of the sick and wounded this society sent to South Africa the *Princess of Wales* hospital ship and the *Princess Christian* hospital train. Accounts of both these auxiliaries to the treatment of the wounded are given in the society's report and there is much interesting matter relating to the general working of the society Referring to Dr C W J Chepmell's work in Natal the report says, ' the most notable incident was the able manner in which he organised a bullock transport to Ladysmith in anticipation of the raising of the siege of the place, by which the Red Cross stores were the first to be delivered, and almost immediately after the relief column had arrived in that town "

Retirements in the Army Medical Service in 1903.

Among the retirements which will take place in the Army Medical Service in the course of the present year we notice the names of Surgeon General W S M Price, Surgeon General Sir W D Wilson, K.C M G, Surgeon General G J H Evatt, and Surgeon General T O'Farrell, Colonel J L Notter, Colonel J P Rooney, Colonel J F Supple, C B, and Colonel W McWatters, and Lieutenant-Colonel S H Carter, Lieutenant-Colonel J A Gormley, and Lieutenant Colonel C H Swayne, D S O

Bravery of a Medical Officer.

Captain H C French, R.A.M C, has been awarded the Royal Humane Society's medal for gallantly jumping overboard from the transport *Wakool* in the Straits of Singapore on Nov 17th, 1902, in order to rescue a coloured stoker What made the bravery of the act more conspicuous was that the locality abounded with sharks and that the vessel was at the time going at considerable speed Both Captain French and the stoker were, we are glad to say, afterwards picked up by a lifeboat. Captain French is a son of General French. Another son, Major G A. French, A.S C, obtained the Royal Humane Society's medal by a signal act of heroism some years ago on the West Coast of Africa

Officers' Chargers and Outfits, Quarters and Messes

Special army orders have been issued in regard to provisions for the supply of chargers to officers of the army and the grant of outfit allowance, together with instructions in reference to the furnishing at public expense of officers' quarters and messes at home stations

The Prevention of the Spread of Typhoid Fever.

A report by Professor Koch on the means of combating typhoid fever has just been published by the medical department of the German War Office. Professor Koch, regarding the disease as essentially transferable, lays great stress, among other things, upon the complete isolation of the sick.

Correspondence.

"Audi alteram partem"

THE NEW SYDENHAM SOCIETY'S CLINICAL ATLAS

To the Editors of The Lancet

Sirs,—You have repeatedly accorded to the society which I represent the valuable privilege of addressing its members and others in your pages and I am emboldened by past favours to solicit another The council of the New Sydenham Society is desirous to place before the profession a statement as to what has been done and what is in progress in respect to its great undertaking to publish a Clinical Atlas of medicine, surgery, pathology, and 'all allied branches of professional knowledge The decision to undertake such an atlas was arrived at after much deliberation more than two years ago, and as the first year of its issue is about to be completed we are now in a position which enables us to report as to what is likely to be accomplished.

In the first place the council has had reason to congratulate itself in three several directions The number of subscribers, although much below what it is hoped may be attained, is yet adequate, the cost of the work proves to be much less than was expected, and the supply of material is abundant. In the next place, the council feels that it is due to the society's members to offer some explanation of what may appear like unpunctuality We are only just about to conclude the issue of the series for 1901 and to commence that for 1902 Thus it may be said that we are a twelvemonth behindhand No one, however, who will give the slightest thought to what the production of such a work as this is will feel any surprise at this. Our plates take a long time in passing through the artists' hands and to hurry is to spoil. Many months were consumed in inquiries as to whether the work would receive the support of the profession and it was, of course, impossible to make preparations before a decision was arrived at. We are engaged not in the reproduction of any existing work, but in the publication of an original work of very large dimensions and involving the collection of an immense amount of material, a large part of which now sees the light for the first time

The fact just alluded to must stand as the explanation not only of a certain amount of delay in issue but of some want of systematic arrangement which will become apparent Any attempt at finality in such arrangement would be to the injury of our work. New illustrations may be supplied late which it would be a great pity to exclude and unforeseen impediments may be encountered in the production of any one fasciculus. There is but little room for automatism in the compilation of such a work as ours, and as the foremost aim of those engaged on it will be to make it useful as a clinical record of all that is susceptible of pictorial illustration in reference to disease some latitude must be asked for in the matter of arrangement. We shall do our utmost to study the convenience of the reader but shall not sacrifice his real interests by a too rigid endeavour to adhere to a cut and dried programme. He may now and then encounter supplementary plates, or find a topic which he had thought concluded again referred to It must be remembered, also, in reference to the selection of subjects, that our atlas is an international one and is not intended exclusively for the home profession.

The issue of works for the year 1901 will be completed in a few days by the publication of a double fasciculus illustrating "Xanthelasma and Xanthoma as Symptoms of Functional or Organic Disease of the Liver" When our members for that year receive this fasciculus they will have had for the guinea subscription a printed volume (Von Limbeck's "Treatise on the Clinical Pathology of the Blood," translated by Dr Arthur Latham) and four fasciculi of the Atlas, which contain a total of 22 coloured plates and 21 uncoloured Thus considerably more than was promised has been accomplished, for the council's undertaking did not go beyond the issue of four fasciculi of eight plates each and the addition of a printed volume was only conditional on financial success What makes this result especially satisfactory is the fact that it has been attained on a comparatively small list of members. Now that our year's work is before the profession we may legitimately hope that our list will rapidly increase and if it does so we shall be able to afford much more. Without making any sort of promise I may say that I am sanguine that instead of four we may be able to afford eight fasciculi a year, or their equivalent in an increased number of plates in each If this can be done the Atlas will rapidly develop and will be likely to attract still further additions to our members' list However this may be, it is certain to become by far the largest and most comprehensive work of its class ever attempted

In order to attain the results just alluded to all that is necessary is that our members generally should bestir themselves They have their own interests in their own hands. In the hope of giving a fillip to zeal in this matter the council has decided to accord a small privilege in compensation for trouble taken It will issue to all who pay in one sum the subscriptions of five members for any one year six copies of the fasciculi issued for that year, with also any printed volume that may have been added. This privilege will be accorded not only to local secretaries, but to all members of the profession. As the stones from which the plates are printed will have to be cleaned off almost at once, and no new edition is in the least degree probable, it is desirable that those who wish to secure the work should apply early.

In conclusion, I have but to state that the issue of the Atlas (in its Clinical form) began with the year 1901 and that new subscribers should at once forward their subscriptions for that year and for 1902. If it is wished to save trouble the subscription for 1903 may be added. Our agent is Mr. Lewis, 136, Gower street, W.C.

I am, Sirs, yours faithfully,
JONATHAN HUTCHINSON,
General Secretary (Hon.) to the New Sydenham Society.
Cavendish-square, W.

THE IMPERIAL VACCINATION LEAGUE

To the Editors of THE LANCET

SIRS,—With the majority of my profession I am keenly interested in and have sympathy with the aims of this league, and therefore am concerned with its proceedings which must so intimately affect the social well being of this great nation. As a justice of the peace I have the privilege of seeing a large number of conscientious objectors and of signing the certificates enjoined by a clairvoyant Government that they conscientiously believe that vaccination will be prejudicial to their child's health. I have in consequence exercised much thought upon the question its disastrous results and its remedies. Some crudely and ignorantly dismiss the difficulty by the statement that conscientious objectors are either rogues or fools. This view resolves no part of the problem which has puzzled us all and I join issue with the statement. For although it is true that it is mainly the weak man who causes the trouble and who revels in the unreasoned thought that "he won't be *made*" to submit to the ordeal, still it is sometimes the thoughtful hard headed man, pondering the subject carefully who raises the objection. "If," he argues in effect, "I have my child vaccinated and *my* wife and *myself* revaccinated what do I gain for my trouble? Nothing but a blooming (he would doubtless prefix a still more expressive adjective) sore arm. But if I reject the vaccination what *do* I lose and what do I gain? 1. I *lose* nothing by refusing except a troublesome and possibly an inflamed sore arm. 2. But I *gain* (*a*) If I catch the small pox the benefit of my beneficent neighbours as represented by the urban and rural councils of all descriptions, immediately removing me to a hospital where I am most carefully nursed with every comfort which sickness requires until I am well, while my wife and children, although then compelled to submit to vaccination are well provided for during my enforced absence. (*b*) If on the other hand a member of my family sickens with small pox, the same routine is experienced at the hospital for their welfare, and I receive my wages for doing nothing except keeping out of the way of my neighbours and being vaccinated." The natural sporting instinct of the Englishman helps the reasoning.

How, then, can we be extricated from the dilemma into which our legislators have confined us? If I can appear before a bench of magistrates and express an objection to vaccination (I have never yet heard a case where there was a "conscience" in the matter) and thus obtain a certificate of exemption it is manifest that everyone can do the same, and if this be the case the notion of compulsion is a farce. Would it not, therefore, be honest to admit at once that compulsion in vaccination does not exist? If anyone doubts this let him bring the recalcitrant person before a petty sessions, obtain a conviction and then enforce the fine. I think that he will find the same experience as we underwent in Rugby. The fine was not paid, a "distress" warrant was issued, an auction was the consequence, which speedily degenerated into a storm of rotten eggs and bags of flour, with the auctioneer (obtained from our midland citadel for prudential reasons) leaving the rostrum in a hurry making peace by shaking hands with those nearest to him and the anti vaccination party triumphantly holding the field. Then what is the next step? The law breaker has the best of it, as nothing further can be done. He cannot be imprisoned while he has "goods" on which "distress" can be levied, and yet these cannot be sold to pay the fine while no one will buy. The whole farce requires a Dickens to describe the ignominy into which the law has been brought. It is not statesmanship to hold up the law to ridicule in this fashion when in reality no such thing exists as compulsory vaccination. This being the true position it is quite clear that the law has to be altered, for Englishmen are usually law abiding citizens. How, is the question that concerns us all, for it is imperative that the scourge of small pox should be abated. Without a shadow of a doubt the prevention of all illness is far better in its issue and infinitely less expensive than providing for its treatment.

I would therefore submit the following suggestions for consideration:—1. That the State should publicly abolish—if it can abolish what has already been implicitly abolished by the blind act of our legislators—compulsory vaccination. 2. That the various councils instead of offering a premium upon refusal to be vaccinated and revaccinated, should proceed on the opposite tack and reward those who comply with the annoyance of vaccination, for no one can deny the annoyance. 3. That the State should provide a sufficient supply of pure glycerinated calf lymph for all. 4. That the State should furnish free vaccination to all who desire it. 5. That the State should supply, directly or indirectly hospital accommodation—there would soon be no sufferers to require it—and full wages to all who are afflicted with small pox after efficient vaccination or revaccination (every 10 years if deemed advisable) and to whom a Government certificate should be furnished. But it would be necessary for the State to define what it regarded as efficient vaccination and revaccination. For instance, such a farce as medical men revaccinating in one spot only should be impossible—a case which sometimes occurs at Rugby, where every boy is required to be revaccinated before, or on entering the school. No case should receive the Government certificate under penalty unless four good pocks are manifest and four also from revaccination. 6. In respect of tramps and the "submerged tenth" the grant of a State gratuity to those who obtain the Government certificate would probably cover the difficulty. The cost would be insignificant in comparison with the provision of hospital treatment for sufferers from small pox. 7. Those who still refuse vaccination and revaccination might be left severely alone. This course might inflict some hardship for a time, but nothing like the hardship which at present exists when small pox supervenes. 8. The system of commending or of rewarding those good citizens who submit to vaccination and revaccination would be more efficacious than punishing recusants since the penalty is a dead letter.

It may be argued that the few who would still reject vaccination and who would by their refusal keep small pox alive, would expose the majority to the ravages of the disease. But if vaccination and revaccination be worth anything—and undoubtedly it is absolutely to be depended on when efficiently performed—not one of those who is protected by vaccination, and revaccination periodically conducted, could suffer in consequence. Failing some such scheme as that which I have attempted to outline the vaccination question in this country simply involves the aid of the police or of the military authorities.

I am, Sirs, yours faithfully,
CLEMENT DUKES, M.D., F.R.C.P. Lond.,
J.P. for the County of Warwick.
Rugby, Dec. 31st, 1902.

NOMENCLATURE OF MALARIA: A SUGGESTION

To the Editors of THE LANCET

SIRS,—It would seem that the time has arrived when the diagnosis of cases of malaria must aim at giving the name of the species or variety dealt with and not merely one of the general terms, intermittent or remittent fever as laid down in the last edition of the "Nomenclature of Diseases." Information is wanted as to the geographical distribution of the various kinds of malaria, and this can only be arrived at by recognising them in the new edition of the Nomenclature. The demonstration of the species of malarial parasite which is the infecting agent in a particular case will necessitate the use of the microscope. This routine microscopical examination of the blood will, it may be presumed, bring about a more correct diagnosis of fevers in malarious countries and assist rational treatment. Malta fever was treated until lately with large doses of quinine on the supposition that it was malarial in origin In the same way it is too often assumed that any fever occurring in a malarious locality is malarial in character and quinine is given in enteric fever tuberculosis liver abscess, &c, when a blood examination might have prevented the error The nomenclature I would suggest for the three well recognised species of malaria is the following —

Malarial fever —Synonyms ague intermittent and remittent fever
a Tertian —Synonyms: hæmamœba vivax simple or benign tertian
b Quartan —Synonym hæmamœba Golgii
c. Crescent tertian —Synonyms Laverania laverani æstivo-autumnal fever malignant tertian tropical tertian remittent fever

I have left out the commonly used terms "simple," "benign," "malignant," and "pernicious" as they are misleading The so-called 'simple tertian' may often be more severe than the so-called "malignant tertian.' "Æstivo autumnal" is a term which may apply appropriately enough to the fever as it occurs in Italy, but in other parts of the world is unsuitable The genius of Koch suggested the term ' tropical tertian" for the third variety and this is undoubtedly an excellent name, but as the fever is also found in temperate climates it is also misleading In regard to the scientific names I think Golgi, who discovered that the parasite of malaria consisted of more than one species, should be commemorated, and also Laveran whose epoch making discovery of the malarial parasite has it seems to me, never been sufficiently appreciated in this country In the present edition of the "Nomenclature of Diseases' the old term malarial cachexia has been left out I would propose that in the next edition the chronic form of malaria, when the parasites have disappeared from the blood but the anæmia, pigmentation enlarged spleen, &c, remain, be again given a place, and I would put forward the name Chronic malaria, synonym Malarial cachexia. This short note has been written in order that anyone who takes an interest in this question may have the opportunity of bringing forward other suggestions or criticisms I am, Sirs, yours faithfully,

DAVID BRUCE,
Dec. 20th 1902. Lieutenant Colonel R A M C

RIGHT-HANDEDNESS AND LEFT-BRAINEDNESS

To the Editors of THE LANCET

SIRS —Sir Samuel Wilks in his valuable letter[1] on the above subject shows, I think conclusively that certain practical advantages result from the employment of one hand and arm exclusively for certain movements I do not feel altogether convinced, however, that writing should be included among these. It is true that in writing 'forwards' with the left hand the movements do not correspond with those employed in writing similarly with the right hand, nevertheless, one can learn to write quite well with the left hand and it does not appear to me that any practical disadvantages attach to ambidexterity in the case of writing it is simply a question of learning to write with both hands, and I have known children to show a preference for using the left hand rather than the right for writing I am acquainted with a child who used to write all her home lessons with the left hand, only writing with the right hand when she was compelled to at school. Now through being constantly compelled to write with the right hand, she uses this one almost solely for writing though she can still write fairly well with the left. This child I may remark, is very fond of and not a little skilled in, drawing and she always employs the left hand for this purpose.

These remarks prepare the way for the chief object of my letter, which is to raise the question whether by employing the two hands equally in writing and thus (presumably) the two sides of the brain equally in "word processes' more can be achieved in the realm of language than when one hand only is used for writing If we can secure the development of the motor and sensory speech centres in both halves of the brain instead of one only if that is to say, we can enlarge the anatomical substratum of language, may we not hope to obtain in this way some increase in the capacity for language? This question is capable of being answered by experiment. All that is necessary is to teach a number of children to use both hands equally for writing and to compare their gift of language with that of others who write with the one hand only

I am, Sirs, yours faithfully,
Wimpole street W Dec. 28th 1902. HARRY CAMPBELL

To the Editors of THE LANCET

SIRS,—Sir William Gowers has promulgated in his letter in THE LANCET of Dec 13th a charming theory in the speculation as to the cause of right-handedness But his theory loses much of its weight by being applicable only to those of our ancestors who inhabited the northern hemisphere, suggesting by inference that those south of the equator should all have been left handed by choice Now we know that this is not so and must therefore look for some other reason to account for right-handedness and all that right-handedness involves and includes I would, as opposed to a celestial cause, propound the probability of a very mundane reason. When early man first learned the art of fighting with a weapon, however rude, it would gradually be borne on him that wounds of the right side of the chest were not so fatal as those of the left. Arguing thus he would construct a shield which should be carried on the left arm, leaving the right to wield his weapon and to strike his blow

I am, Sirs yours faithfully,
Kensington-court W, Jan 1st 1903 E A. BARTON

THE HOPELESSNESS OF THE BATTLE AGAINST CONSUMPTION SO LONG AS THE ELEMENTARY SCHOOLS ARE HYGIENICALLY UNREFORMED

To the Editors of THE LANCET

SIRS —A perusal of Mr Felix Clay's criticism in THE LANCET of Dec 20th (p 1722) of my letter of Dec. 6th shows that he has failed to grasp the far reaching effects of sanitary reforms of which hygienic elementary schools is one He points to the cost of the schools and the difficulty of finding a sufficient supply of teachers for so increased a number Moreover, he seems to take it for granted that these reforms can be thrust upon the nation at once in their entirety If this were the case it must be admitted that the difficulties he mentions might arise, but reforms of the nature suggested are a slow growth, and it would doubtless take some years for the beneficent effects of the reforms to become manifest and for the population who under the old *régime* would have died from phthisis to grow up into useful citizens Other difficulties besides that of obtaining teachers arise from the comparative sparseness of the population of the country which is making itself felt in various ways, such as the undermanning of the navy, the imminent conscription and the waning power of colonisation. Is this to be wondered at in a country which placidly allows 60,000 of its most promising, active, and intelligent population to die yearly from a preventable disease? To illustrate this point allow me to take it for granted that the various plans of hygienic reform are in active operation and as successful as their originators could wish and that consumption is eliminated as a common disease almost as completely as leprosy Then the 60 000 English men and women who now die annually in the British Isles from tuberculosis would be saved and added to the number of the wealth producing population In 20 years a number considerably above 1 200 000 which is the figure a multiplication of the former number gives, would be produced As a means however, of representing the increased population this number is unsatisfactory, while it fails completely as an estimate of the increased wealth and health of the country as it does not show the millions of ailing citizens freed from a life of chronic ill health and sickness and the increased healthfulness and energy of the remaining portion of the population Surely it is not unreasonable to suppose that the capital invested in the preservation of child life in the elementary schools and the closing of the various death traps which abound in the kingdom will be amply repaid by the general well being and prosperity of the community and that the cost must be a minor item in the general weal.

Opinions may differ as to the best method of treating a cancer such as tuberculosis affecting the commonwealth may be supposed to be whether the disease ought to be completely eradicated at once by the knife or trifled with by the application of feeble caustics and narcotics. Experience of the latter old wives' method of treatment has taught surgeons to be wary of it. With respect to the argument that the hygienic laws proposed will tend to curtail the liberties of Englishmen, it is quite possible that these changes will be opposed by a sentimental anti progress league which will ultimately, however be brought to its senses when there is a danger of the nation being left behind in the struggle for supremacy by communities more in sympathy with scientific progress and discovery

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[1] THE LANCET Dec 13th 1902 p 1658.

I am, Sirs, yours faithfully,

Lampeter Dec. 26th, 1902. E CLUNEGLAS DAVIES

REFLEXES THEIR RELATION TO DIAGNOSIS IN RHEUMATOID ARTHRITIS

To the Editors of THE LANCET

SIRS,—In Dr R. Llewelyn Jones's interesting paper on the Reflexes in Rheumatoid Arthritis in THE LANCET of Dec. 27th, p. 1746 I notice a reference to "jaw jerks." On his resignation as resident medical officer of the Royal Mineral Water Hospital Bath, Dr Jones kindly showed me this clinical phenomenon which I have carefully tested The mandibular joint being so frequently affected one found plenty of material to work with and it may be of interest to note my conclusions Invariably where the jaw has been recently affected one obtains a smart response to percussion and irritability is so marked that clonus is not a rare occurrence though a single acknowledgment to the tap is more often elicited In cases where the jaw has apparently been free from trouble for many months the jerk is still easily obtained, though in most of these apparently recovered joints grating or slight morning stiffness can be made out. Frequently, however, one meets with cases giving histories of former jaw attacks and where no evidence of any active arthritic mischief is present I have received a response, showing how persistent the irritability is. An interesting case recently in hospital gave no history beyond that of aching teeth and on examination though no dental caries was made out yet the jaw responded. The aching teeth, I take it, was a referred joint affection. In most cases, however, where jaw trouble has been complained of the molars and bicuspids were degenerate or absent, though the incisors seemed to be peculiarly resistant.

A passing reference to knee jerks is not out of place. We notice here in rheumatoid affections of the lower extremities where no joint contractures have occurred a more than slight increase in deep reflexes In fact digital percussion to the patellar ligament not infrequently throws the affected leg into an almost epileptiform condition of clonus, and this seemingly often out of proportion to the joint changes. As a rule, where such a state of affairs exists the other limb partakes in excitability though not necessarily to the same extent. In one case I am thinking of Dr Carter pointed out to me the markedly spastic gait of the man. Here Babinski's sign was absent.

The most marked condition of 'myotatic irritability I have seen was in a middle-aged woman who was greatly distressed one morning by an attack of clonic muscular spasms of all the extremities especially the left side. Her muscular convulsions shook the bed and on firmly holding the arm or leg muscles rapid twitchings were to be felt. Her pulse was 160 the respirations were 40 and the temperature was 99 6° F On her admission we noticed Stellwag's symptom occurring rhythmically in both eyes slight proptosis, and von Graefe's sign. There was no thyroid enlargement and her morning pulse was 80 Belladonna, bromide, and digitalis seemed to cut the attack short. Some might quote hysteria as the cause, but her general behaviour was against it and I believe that the arthritis was closely connected with the attack—probably of the same origin.

I am Sirs yours faithfully

J W MALIM B A. M.B B C Cantab

Resident Medical Officer Royal Mineral Water Hospital Bath

Bath Jan. 3rd, 1903.

To the Editors of THE LANCET

SIRS,—I have read Dr R. Llewelyn Jones's paper under the above title in THE LANCET of Dec. 27th p 1746 with a great amount of interest, but I should like to draw attention to a statement he makes which I cannot allow to pass as correctly representing my views as to the origin of the disease. On page 1748 he says "Dr Bannatyne ascribes the disease to a toxæmia affecting the anterior cornua of the cord.' Now this is not my idea of the origin of the disease. To put it shortly, I look on rheumatoid arthritis as due to specific bacteria having their nidus in the affected joints themselves and that the joint symptoms are the primary and essential symptoms of the disease. I look on the vaso-motor and other nerve symptoms as purely secondary, possibly caused by absorption of the bacterial products elaborated by the micro-organisms in the joints My principal point is that I look on the joint troubles as caused by the local action of the bacteria and not as the result of trophic changes due to a toxæmic poisoning —I am Sirs, yours faithfully,

GILBERT A. BANNATYNE, M D Glasg

Bath Dec. 28th 1902.

PERMANGANATE OF POTASSIUM IN SNAKE-BITE

To the Editors of THE LANCET

SIRS,—In regard to the annotation respecting the efficacy of the subcutaneous injection of solution of permanganate of potassium referred to in THE LANCET of Dec. 20th, p 1711, it was strikingly illustrated by experiments conducted by M Louis Peringuey and myself with the poison of the puff adder and described in the *Medical Press and Circular* for June 1886 Since then with great caution, I have employed the same remedy likewise subcutaneously injected, in a very extreme case of blood poisoning occurring in a man who in order to remove an obstruction in a drain pipe had pushed his arm into it thereby receiving a scratch, after which the whole arm gradually swelled up to an enormous size In this condition attended with severe constitutional symptoms threatening imminent death, he came to me. All hope seemed gone but he made a complete recovery A few notes of this case, which occurred in 1894, I recorded in the *British Medical Journal.*

In the snake-bitten dog although I used a strong solution and injected it freely into the tissues and also into the muscles there was only a small local reaction. The animal made an astonishing recovery and it was well bitten several times over by the very same snake which had caused the death of another dog within about six hours. There were scarcely any noticeable dangerous symptoms except a little listlessness and sleepiness. The remedy probably destroyed the virus. The injection of the solution did no harm and the dog scarcely suffered at all. The treatment should only be used in dangerous cases in human beings and always with much care and, as a rule, only in snake-poisoning should intra muscular injections be made.

I am, Sirs, yours faithfully,

Grimsby Dec. 24th 1902. GEORGE GRESSWELL.

THE STAFFING OF RECEPTION HOUSES

To the Editors of THE LANCET

SIRS —The London County Council with its habitual progressive spirit in lunacy matters having decided to establish reception houses for incipient mental disorders, it is very essential that these should be staffed from the outset in the most efficient manner The treatment of incipient mental disorder has occupied my attention for many years past and I trust therefore I may not be considered as presuming in venturing to express my views in this particular to which I have also given very considerable attention Many members of our own profession are in the habit of asserting that no special skill or experience is needed in the treatment of mental disorder This view, I consider is the strongest and most conclusive evidence that could be advanced that they know absolutely nothing of the subject.

An alienist physician of the present day must not only have a full and long experience of mental disease but he must be a specialist in neurology, gynæcology ophthalmology, and in fact in every specialism, to the extent of knowing when he needs the aid of one of these specialties The asylum physician, it must be remembered, has unequalled opportunities in the large institutions for the insane for observing not only mental disease, but every other form of disease over lengthened periods and under conditions of which he has absolute control No other physician has equal opportunities for observing and treating disease generally The profession at large has had little instruction in mental disease and consequently is too often prone to treat cases of ephemeral epi phenomenal mental disorder as if it were a grave mental attack and to imagine that all patients will recover without special treatment as easily as these Alienists, however could bear testimony, if it were needed, to the frequent unsatisfactory ending of such unskilled and too often unscientific treatment. Very much more might be said on this subject but it is a distasteful one to touch on

The scheme for staffing such an institution as that under discussion which I would suggest is a resident physician, who should have had considerable experience in mental diseases, either as superintendent or senior medical officer of an asylum, with junior residents, who should be qualifying for posts in asylums The experience of the junior posts would be the best possible introduction to alienist work and every alienist physician should if possible, begin with work in reception houses This would in time add materially to the value of the asylum staff and would reflect later on the reception house. The reception house physician should have power to call in specialists of every kind whenever necessary and he should have also the power of consultation not only in treatment of individual cases, but in matters of organisation &c., with an alienist physician. Such consultant physicians might well be retired asylum superintendents, many of whom although no longer equal to the duties of superintending a large asylum of 2000 beds would be quite equal to, and of the greatest value to the public in such work

In conclusion, I would repeat that although the bodily conditions are of great importance in the early stages of disorder the mental side is of still greater, and that unless both sides are attended to the favourable result of the reception house treatment may not only be impaired but destroyed

I am, Sirs, yours faithfully,
H RAYNER, M D Aberd

Queen Anne street W Jan 1st 1903

THE BRANCH MEDICAL COUNCIL FOR IRELAND

To the Editors of THE LANCET

SIRS,—Will you be so good as to permit me to state through the medium of THE LANCET that in conformity with the following resolution of the Branch Medical Council for Ireland passed on June 2nd 1902 I have terminated my connexion with the Irish Medical Registration Office —

> That in order to carry out the requirements as to economy in the management of the Irish Branch Council notice be given to the landlord of the premises that the office will be surrendered on 31st December next or as soon after as may be and that notice of the terminations of their appointments at the same date be given to the registrar of the branch and to his clerk

I am, Sirs, yours faithfully,
Dublin Jan 5th 1903 S WESLEY WILSON

THE MEDICAL MAN, THE CORONER, AND THE PATHOLOGIST

To the Editors of THE LANCET

SIRS,—From a legal point of view one may reasonably inquire whether Mr Coroner Troutbeck has the power to pass over a medical practitioner who has attended the deceased at death or in the last illness, and from the authorities I have consulted it would appear not. Further on reading the Coroners Act it seems that the intent thereof is that the attending medical man, or one called in at the death, should be summoned by the coroner and directed to perform any post-mortem examination, except by implication in the particular case provided for in the second part of Section 21 From all one knows of Mr Troutbeck s action of late he appears to ignore these sections of "the Act of Parliament" and to regulate his procedure on some "pious opinion ' of the Public Control Committee of the London County Council

It will be observed that even this "pious opinion" of the County Council only refers to inquests of a "special nature" and says nothing of its being adopted in the generally sweeping way which Mr Coroner Troutbeck has been doing The fact is that the present method of appointing coroners by county councils and exacting from candidates "agreements to give effect to fads and crotchets of county councillors ties the hands of coroners and converts their courts from what should be strictly legal tribunals, carrying great weight, into inquiries to which most people give little attention and the proceedings and records of which often cause great ridicule and corresponding contempt It is admitted that the Government has as yet made no alteration in the law of coroners and yet the County Council would override the Act of Parliament by exacting pledges from candidates to go outside the procedure laid down by such Act

It requires, in my opinion simply cohesion and determination on the part of medical men to bring both the County Council and coroners to a sense of the illegality and wrong done, both from a legal and medical point of view, by this new procedure

I am, Sirs, yours faithfully,
Dec 29th 1902 MIDDLE TEMPLE

BIRMINGHAM

(*FROM OUR OWN CORRESPONDENT*)

Family Clubs

CONSIDERABLE agitation has been aroused in Walsall by the combined decision of the medical practitioners there to give up this form of the club system on Feb 1st. This decision will affect also a large portion of the population in the Midland districts The particular evil complained of in this private club system is that of employing a collector who canvasses for members at the rate of 1*d* per week and exacts a large percentage, as much as 25 per cent , for his share of the work of introduction The responsibility is then left to the medical practitioner to deal with and to attend them. This pernicious and eminently commercial plan inevitably leads to touting in its worst form and is degrading to the character and dignity of the profession. The action of the medical profession is not only in accordance with right traditions but also with the progress of the age. This determination refers only to this form of club and does not affect the ordinary friendly societies whose business is conducted on legitimate and proper professional lines.

Christmas at the Hospitals

The decorations of the various hospitals of Birmingham this year and the entertainments given to the patients and visitors have been quite up to the usual high standard of excellence Infinite pains have been taken in the execution of the details of this work to make the institutions bright and cheerful for the inmates The General Hospital occupied two evenings with the performances given by the resident medical officers and the nursing staff Much enthusiasm and energy were also exhibited at the Queen's Hospital in the efforts to make the season as comfortable and happy as possible for the large number of inmates

Female Ambulance Corps

Attention has been called to the fact that, with all its reputation for progress Birmingham has no organised band of ambulance women Good work has been done individually by attendance at classes and qualifying for certificates in ambulance work. Last year, in various quarters of the town and neighbourhood as many as 284 women became proficient in first aid, but no coöperation exists nor is there any combination to utilise their services publicly A division of ambulance women would no doubt be of much importance for there are many cases of accident or illness where the help of women would be of the utmost advantage It is true that in some of the large factories there are women who have passed the necessary examinations and are well qualified to act, but the requirement for their services is limited to the works in which they are employed It is estimated that there are about 900 women in Birmingham able to give first aid and it has been considered that from among them a well equipped division might be formed. Their attendance at public gatherings in the parks recreation grounds, and at certain stations might often lead to their services being called for and to pain and suffering being avoided by their ready and intelligent help. The suggestion is a good one and if the plan were carried out efficiently and worked under systematic control it would serve an admirable purpose.

The Dangers of Acetylene

It may not generally be known how much danger may exist in the use of acetylene for even toy purposes owing no doubt, to the want of a proper understanding of its manipulation and use A lamentable accident occurred recently to a youth, aged 16 years, who essayed to light the lamp of his magic lantern with acetylene gas Having provided some calcium carbide he sought to use it in accordance with instructions gathered from sundry papers and journals In the course of these efforts there was a loud explosion and the boy was burnt so much that he died subsequently from the injuries received—which shows once more that a little learning is a dangerous thing, more especially in dealing with substances of such potency as those used by this unfortunate youth.

Hospital Sunday Fund

The total receipts this year amounted to £5014 13*s* 5*d* The expenses were slightly less than those of last year—viz , £288 7*s*. 5*d* The balance has been apportioned among various institutions interested.

Jan 6th

MANCHESTER

(FROM OUR OWN CORRESPONDENT)

The Infirmary Question.

AT the meeting of the Manchester Infirmary board held on Dec 29th a report was received from the medical board in which the following opinions were unanimously expressed ' That it is undesirable to have an out-patients' department away from the hospital , that an accident and urgency department should be established in the town , that such accident department should contain 20 beds , that it is advisable that the accident and urgency department be placed in a central and prominent position , that members of the honorary medical and surgical staff be appointed to superintend the working of the emergency department , that a mortuary provided by the town be attached to the buildings " The chairman Mr John Thomson said that the report was an answer to questions which they had asked the medical board and that they were not committed to it. A member stated that though agreeing with it as a whole the probabilities were that more than 20 beds were required. The report was not further discussed.

Joint Hospital Scheme

On Dec. 22nd a conference convened by the Local Government Board on the joint hospital question at Bury was concluded. Dr G S Buchanan, medical inspector to the Local Government Board, presided It was agreed that a new authority should be formed consisting of the borough of Bury Radcliffe Whitefield Ramsbottom, Tottington, and the Bury rural district to deal with small pox and other infectious diseases. The inspector recommended, and it was agreed that pending the issue of a provisional order mutual arrangements should be made forthwith at Ainsworth.

Diet for an Infant aged Two Years

A case which it may be worth while to notice as we are supposed to be on the eve of important developments of education both ' voluntary and "provided occurred the other day at Salford It is only one of thousands like it all over the country showing how useless in some directions at least, is the equipment for the needs and duties of life brought away from the elementary schools At an inquest on the body of a child two years old held on Dec 23rd the mother said that she fed him on bread, cheese, and beer because he asked for them. The wives of canal boatmen are not those from whom to expect advanced views as to infant feeding, but it is not creditable to our system of education—all-embracing as it is—that women should be found so grossly ignorant as this woman. The coroner said that he should report the case to the National Society for the Prevention of Cruelty to Children, but surely she is not the only one to be blamed. The diet will have prepared your readers for the verdict of the jury—"Death from convulsions caused by improper feeding "

Jan 5th

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT)

The Outbreak of Small pox in Liverpool

LIVERPOOL is being visited by a severe outbreak of small-pox, yet the public mind seems little perturbed A large seaport like Liverpool is always exposed to attack by zymotic disease, which may be imported on shipboard from any quarter of the globe. In the case of bubonic plague the ports of origin are easily determined, when effectual supervision can be exercised, but the case is otherwise with small pox. Until last year Liverpool had enjoyed a lengthened respite from the disease and the excellent sanitary arrangements of the city inspired the hope that cases would be few and far between Now the disease is rife in the city During the last week of 1902 there were 74 fresh cases, and on Dec 31st 26 additional cases were notified to the health authority, making upwards of 206 cases under treatment in hospital. The fact of 50 fresh cases having been reported within the past seven days calls for precautionary measures of an effective character Revaccination is being strongly urged by the medical officer of health. Unfortunately, people in the first stage of the disease are moving about the city, carrying the germs of the disease with them in offices, tramcars, shops &c. so that the energies of the health department will have to be exercised to their fullest extent One of the Local Government Board inspectors on his recent visit to the Liverpool Workhouse had suggested to the committee that, in view of the number of cases of small pox, greater precautions should be observed in the matter of visiting, which should be restricted to the narrowest possible limit. Within a fortnight four cases had been removed from the workhouse to the small pox hospital At the last meeting of the workhouse committee it was stated that on the previous day the Lancashire Asylums Board had paid a visit to the Whittingham Asylum and the medical superintendent there (Dr J F Gemmel) declared that he would accept no more insane cases from any area in Lancashire infected by small pox. This resolution was arrived at despite the protests of the Liverpool members of the asylum board. This decision would apply to Oldham and Burnley as well as to Liverpool. In this connexion it may serve a good purpose to draw the attention of the tramways committee of the city council to the disgraceful overcrowding of the electric cars. These cars are registered to seat 22 persons inside and it is no uncommon thing to find 10 or 12 persons over and above the recognised number crowding the inside of the car, thereby preventing the admission of fresh air The atmosphere is sometimes positively sickening, and at a time when small pox, measles and scarlet fever are rife in the city this practice ought not to be permitted. At certain hours of the day extra cars might be put on, which would materially assist in preventing overcrowding

The Liverpool School of Tropical Medicine The Discovery of the New Parasite in the Gambia &c

A report has been received by the honorary secretary of the School of Tropical Medicine from Dr J E Dutton and Dr Todd the members of the tenth expedition of the school which has been despatched to Gambia and French Senegal for the special purpose of studying the new parasite, which Dr Dutton only recently discovered in a patient under the care of Dr Ford, the colonial surgeon of the Gambia. Their report is very interesting and shows that they have found the parasite again in a European and in several natives. The parasite has some resemblance to the tsetse fly which causes such ravages among cattle in South Africa. Fortunately, it is not so fatal to man It produces a continuous feeling of illness, with occasional attacks of fever The researches of the expedition are of the greatest importance, as it is likely that many of the cases of West African fevers are really due to this new germ. The expedition at present on the Gold Coast is, among other matters, studying the tsetse fly

Dr Logan Taylor writes under date of Dec 11th that he has procured a horse suffering from the disease It appears that there are only two horses at present on the Gold Coast and it is to one of these that Dr Taylor refers He has been instructed to investigate on the Gold Coast the subject of the new parasite in man discovered in the Gambia.

St Helens Hospital Extension Generous Donation.

An anonymous donor, who simply calls himself "A Former Resident and Manufacturer in the Town," has sent a donation of £1000 to the St Helens Hospital extension fund.

Birkenhead Borough Hospital

Rather more than 12 months ago an additional ward was added to the Birkenhead Borough Hospital and a home for the accommodation of nurses is now in course of erection These additions and the ordinary cost of the maintenance of the hospital necessitated an increase in the annual income of the charity of £550 In response to appeals which have been made by the committee a little more than £300 has been subscribed by way of addition to the subscription list. The working men of Birkenhead recognised the benefits of the hospital by subscribing £1152 last year Mr E K Laird, the president of the hospital has issued a strong appeal to the Birkenhead public to emulate the praiseworthy efforts of the working men of the borough

Jan 6th

NORTHERN COUNTIES NOTES

(FROM OUR OWN CORRESPONDENT)

The Royal Victoria Infirmary Newcastle on Tyne

THE building of the Royal Victoria Infirmary is now being rapidly proceeded with There are about 350 workmen engaged and as most if not all of the foundations are already laid the progress is much more apparent than it has hitherto been. The nurses' home which occupies one corner of the ground, is already built to the third storey and will be completed first The nurses are domiciled at present in homes throughout the city which is found to be somewhat inconvenient, hence the reason for pushing on the building of this part of the infirmary so rapidly

New Lectureship on Ophthalmology at the College of Medicine Newcastle on Tyne

On account of the report of the representatives of the General Medical Council of their recent inspection of the final examinations it has been decided by the council of the College of Medicine to institute a lectureship in ophthalmology Hitherto these lectures have been most ably given by the professor of surgery, but as the representatives consider not only that they should be separate but that there should be a separate examination in ophthalmology for the B S degree, the council of the College of Medicine has decided to fall in with the recommendation

The Durham College of Medicine Gazette

This journal, the publication of which was commenced about two years ago under the lengthy title of *University of Durham College of Medicine Gazette, for Graduates and Undergraduates of the University of Durham College of Medicine* has proved a great success The profit for the two years' working shows a surplus of £147 The journal consists principally of a leading article on some popular medical or surgical subject two or three pages of "notes on current topics, a clinical lecture delivered at the Royal Infirmary, several minor articles, three or four pages on athletics and occasionally a poetical effusion Any graduate of Durham who is not a subscriber will be well repaid by sending 2*s* 6*d* the annual subscription, to the honorary treasurer *College of Medicine Gazette*, Royal Infirmary, Newcastle.

Northumberland and Newcastle Medical Association

Following the appointment of a judicial committee to adjudicate in cases of offences committed by practitioners against the objects of the Northumberland and Newcastle Medical Association and the County of Durham Medical Union new rules have had to be added to the present standing rules of the two societies to regulate the appointment of the judicial committee and to give them power whereby to act. Considerable benefit is already being felt from the appointment of this committee, because several miners associations already see how serious it would be if they were unable to secure the services of a proper consultant in cases where they desired one.

Newcastle-on Tyne Jan 5th

WALES AND WESTERN COUNTIES NOTES

(FROM OUR OWN CORRESPONDENTS.)

Small pox

SWANSEA has been free from small pox for several weeks. During the third quarter of 1902 there were 96 cases of the disease in the borough and 15 terminated fatally There were 706 "contacts" kept under observation and all over 10 years of age were offered vaccination or revaccination. Only 96 of these persons refused to be vaccinated and 16 of them were attacked with small pox. In the Newport (Mon.) Hospital there are six cases of small pox and a steward engaged on a Spanish ship, which arrived in Cardiff from Bilbao was admitted to the Cardiff Small pox Hospital on Dec. 27th

Rhymney Cottage Hospital

The medical service in connexion with the Rhymney collieries and ironworks is under the control of a committee by which a fixed salary is paid to the surgeons employed. This committee has now set about the establishment of a cottage hospital and the foundation stones of the institution were laid on Dec 27th The site together with a donation of £100 has been given by the Rhymney Iron Company, but nearly the whole of the remaining cost of the building estimated at £2285, together with the maintenance of the hospital, will be defrayed by the workmen The hospital will contain two wards, each having accommodation for four patients, a receiving room an operating room, a committee room, a matron s room, a nurses sitting room, kitchens, and three bedrooms

Measles at Newport

A very severe epidemic of measles is prevailing in Newport (Mon)—so severe, indeed that it has been deemed advisable to postpone the hospital balls and the new year's dinner and treat to poor children. The Sunday schools are closed and the day schools will not reopen after the holidays for a few weeks

South Devon and East Cornwall Hospital

As a result of the recent Hospital Saturday collections in Plymouth the sum of £550 has been forwarded to the treasurer of the South Devon and East Cornwall Hospital Plymouth. The total sum received by the hospital from the Hospital Sunday collections on Oct. 26th last is £794

Memorial to a Medical Man

A memorial fountain has been erected in Beechwood Park, Newport (Mon), to the memory of Dr John F L. Mullin who died on Feb 17th, 1902, aged 52 years The inscription on the fountain contains the words "The Poor Man's Friend "

Jan 6th

IRELAND

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Physicians of Ireland

IT is announced that the seventh award of the triennial Reuben Harvey memorial prize will be made on July 1st, 1903 The prize may be competed for by all students of the various schools of medicine in Dublin and also by graduates or licentiates of these bodies of not more than three years' standing at the time of the award The prize, value £25, will be awarded to the writer of the best essay on Animal Physiology and Pathology The essays, bearing fictitious signatures, are to be lodged with the registrar of the Royal College of Physicians of Ireland Kildare street, Dublin, on or before June 1st, 1903

Epidemic Disease in Dublin.

While the council of the Dublin Corporation has been quarrelling about the site of the proposed isolation hospital what everyone anticipated has occurred. About three weeks ago an epidemic of typhoid fever appeared in Church street and six patients were transferred from there to Cork street Fever Hospital. When, on Dec. 24th a second case of small-pox was discovered in Dublin the authorities at the Cork-street Hospital were unable to find accommodation for it and it was accordingly transferred to the Hardwicke Hospital and, after much difficulty, admitted there. Sir Charles Cameron wrote to the Lord Mayor to remind him that the latter hospital is situated in a congested district of the city and in the immediate vicinity of several large public institutions A meeting of the corporation was held on Jan. 5th in the Council Chamber, Cork hill, when Sir Thomas Pile speaking on behalf of the public health committee, said that they should now throw the whole responsibility in this matter on the corporation The condition of things is most serious on account of the fact that there are at present 236 cases of small pox in Liverpool—100 cases having appeared during the last ten days—while the proximity of Liverpool to Dublin and the number of persons coming backward and forward renders it very probable that an epidemic of that disease would soon break out in this city Sir Thomas Pile said that he was authorised by the medical staff to say that in their opinion it was almost impossible to prevent an outbreak in Dublin during the present year Sir Thomas Pile then moved—' without going into the vexed question as to the site —that the public health committee should be directed to secure an isolation hospital immediately, the cost not to exceed £3000 After some discussion this motion was carried, the question of the site being left to the committee

The Belfast Maternity Hospital

The annual sale of work for this charity was held just before Christmas, when Mr H. H. McNeile, D L., occupied the chair and the bazaar was opened by Mrs Theodore Richardson

Christmas at the Belfast Hospitals

At the various hospitals in Belfast Christmas was spent in the usual happy way an effort being made on all sides to render it bright and cheery for the sufferers This was particularly the case at the two children s hospitals, where there were beautiful trees laden for the little patients

Queen s College, Belfast

The numerous old pupils of Professor Meissner Ph.D , who since 1865 has held the chair of Modern Languages, will regret to hear of his retirement under the Treasury age rules. He is a profound scholar and as librarian of the college has proved himself a cyclopædia of knowledge.

Health of Belfast

During the period embraced between Nov 16th and Dec 13th 275 cases of zymotic disease have been notified—viz., 85 cases of typhoid fever, 54 cases of scarlet fever 60 cases of erysipelas 44 cases of simple continued fever 34 cases of diphtheria five cases of puerperal fever, and three cases of membranous croup The death-rate was 26 7, being 5 4 from zymotic diseases and 8 8 from chest affections. Although the number of cases of zymotic disease notified are fewer than in the last report presented by the officer of health to the corporation, yet the deaths are more numerous, a fact accounted for by the great increase in the number of deaths from measles, which disease seems to be epidemic in some districts of the city Typhoid fever and scarlet fever appear to be decreasing

The Belfast Medical School

Lectures at Queen's College and clinics at the Royal Victoria Hospital began again, after the Christmas recess on Jan. 6th

Jan. 6th.

PARIS

(FROM OUR OWN CORRESPONDENT.)

An Information Bureau for Medical Men

DR. R BLONDEL the general secretary of the Medical Press Association has managed to inaugurate a scheme which will prove of great service to foreign medical men and medical students. It takes the form of a bureau where information may be obtained as to Paris medical life and such matters as hygiene water supply and the like I shall give your readers full details of the scheme next week.

The Re organisation of the Hospitals

The Municipal Council has already ear marked the sum of 40,000,000 francs, which sum has been handed over as a loan for the relief of the pressing necessities of the Assistance Publique The total sum really required was 120 000 000 francs, so that it has been found necessary to revise the original estimates The sum allotted for rebuilding the Pitié Hospital, a portion of which is in ruins, is 6 000,000 francs and the new hospital will be built on some land belonging to the Salpêtrière. It will contain between 700 and 800 beds The hospital for contagious disease, which has up to the present consisted of temporary buildings at Aubervilliers, will be rebuilt at Ivry It is to cost 3,500,000 francs will have 500 beds, and will be built in 14 separate blocks, completely isolated one from the other The new Beaujon Hospital is to be built on the right bank of the Seine on land which has been cleared by the demolition of some fortifications. It will contain 1000 beds and will also be built on the separate system One block will be reserved for tuberculous cases This hospital will serve as an infirmary for senile and chronic cases and is estimated to cost 3,000,000 francs The Broussais Hospital will be rebuilt on its present site. It will contain 500 beds and is estimated to cost 4,000,000 francs. On the left bank of the Seine will be erected a large hospital containing 1000 beds which will take the place of the present Laennec and the Charité hospitals The Saint Antoine Hospital will have an addition of a new block to contain 500 beds The land which lies between the Cochin and the Ricord Hospitals will be bought and on the combined sites will be built a large hospital containing 1000 beds. The asylums for the aged—namely, those of La Rochefoucauld and of Brévannes—will be increased, the one by 200 beds and the other by 700 beds. A sum of 1 500,000 francs is apportioned for bedding and linen of which the Assistance Publique stands in sore need The result of these works will be an addition to the resources of the Assistance of 1916 hospital beds and of 900 infirmary beds These will necessitate an annual sum of 2,000 000 francs for upkeep M. Ambroise Rendu, the municipal councillor in charge of the report on the condition of the Assistance Publique, expresses a hope that both the Government and the departmental treasuries will make grants in aid of the Paris hospitals, for more than half the patients treated in the Paris hospitals come from the provinces The director of the Assistance Publique has issued a statistical paper showing the absolute necessity for a further supply of beds. The total number at present at the disposal of the Assistance is 7497 and in times of stress extra beds have to be put up in the wards, the number varying from 1704 at the end of February last to 504 at the end of June last.

New Laboratories at the Hospitals for X ray Work.

Up to last year there were only three laboratories for x ray work in all the Paris hospitals. At the end of the year, however, the council of the Assistance Publique issued a recommendation that x ray laboratories should be started in 20 of the hospitals which are under the Assistance. The Director General therefore nominated a committee to report on the matter but this committee unfortunately was unable to come to a decision. This was a misfortune, for the x ray service as it used to be was quite insufficient. For instance, supposing that the surgeon to the Hôtel Dieu saw a patient who had been admitted during the night and who was too ill to be moved If the surgeon wished to examine the patient by the x rays he had to send a requisition to the x ray laboratory at the Salpêtrière Hospital. The director of this laboratory then had to take all the necessary apparatus to the Hôtel Dieu and to make the examination Then he had to go back to the Salpêtrière Hospital to develop his plate and to print proofs and send them to the surgeon All this time the patient was kept waiting The Society of Hospital Medical Officers was much disturbed by this state of matters and at its meeting on Dec. 19th the following resolutions were unanimously carried —

1 Every hospital should be provided with an x ray department 2. This department should include a room fitted with photographic accessories more especially a dark room for development 3 The management of the x ray department should be, subject to the control of the physicians and surgeons in charge of a young medical

man possessing expert knowledge as well as medical and surgical experience The post should preferably be given to an *interne* or to a former *interne* and should be thrown open to competition He should have one or more nurses as assistants and to these nurses should be given the duty of keeping the apparatus in order and of looking after what may be called the photographic *cuisine* 4 With a view to keep down expenses as far as possible radioscopy should be used in preference to radiography in every case in which it seems that a diagnosis can be made without the use of the latter and only the really poor should be allowed an x ray photograph for nothing

It is much to be hoped that the Municipal Council will fall in with these recommendations

Jan. 6th

BERLIN

(FROM OUR OWN CORRESPONDENT)

Syphilitic New Growth of the Stomach.

PROFESSOR EINHORN of New York has published in the *Münchener Medicinische Wochenschrift* an account of a syphilitic growth of the stomach occurring in a man, 42 years of age The patient had contracted syphilis 12 years ago and had complained of gastric troubles for seven years, but his weight had decreased by only eight pounds during that time A growth having a nodular surface and measuring about five centimetres in length and two centimetres in breadth could be felt in the epigastric region The stomach lay immediately under the growth and reached below the umbilicus. Chemical examination of the contents of the stomach showed the presence of free hydrochloric acid one hour after a test breakfast and there was no residual chyme left in the stomach from the previous day The case at first appeared to be cancer, but owing to the circumstances that the disease had been in progress for seven years, that the patient's loss of weight had been relatively small and that free hydrochloric acid was present, the diagnosis of cancer became rather uncertain. Under anti syphilitic treatment, consisting in mercurial inunctions and the administration of potassium iodide, the growth disappeared in less than six weeks. The patient's weight once more increased and within three months he was free from gastric troubles Professor Einhorn says that the differential diagnosis between cancer and syphilis in such cases is not easy and that the nature of the lesion is proved only by the success of anti syphilitic treatment

Death of Professor Schede

Dr Max Schede ordinary professor of surgery at the University of Bonn and director of the University surgical clinic, died at Bonn on Dec 31st. His decease deprives Germany of one of her prominent surgeons and the German Surgical Association of one of its most active members Professor Schede was born in 1844 at Arnsberg in Westphalia. From 1862 to 1866 he studied medicine at the Universities of Halle Heidelberg and Zürich and in 1866 he became qualified and took the degree of M D at Halle After having served in the wars of 1866 and 1871 as a volunteer surgeon he became assistant to the late Professor Volkmann the celebrated surgeon of Halle University, and remained there till 1875 being also recognised as *privat docent* In 1875 he severed his University connexions on receiving the appointment of chief surgeon to the municipal hospital of Friedrichshain in Berlin He lived in Berlin till 1880 when he was appointed chief surgeon to the Hamburg General Hospital The beautiful hospital of the city of Hamburg one of the largest in the world, situated at Eppendorf and opened in 1888 was in some particulars constructed in accordance with his recommendations Although his position at Hamburg was an excellent one owing to his being the most esteemed surgeon of that wealthy city, he nevertheless left Hamburg in order to return to a university career and in 1895 became ordinary professor of surgery at Bonn where he remained till his unexpected death Professor Schede s early publications were chiefly concerned with the treatment of diseases of the joints and especially with the use of drainage. He subsequently published memoirs on the surgery of the nerves, the spinal cord and the pleura. He also contributed the chapter on the Surgery of the Kidneys to the Handbook of Surgery edited by Professor von Bergmann Professor von Bruns, and Professor Mikulicz.

Statistics of the Medical Profession in Germany

Dr Wehmer s Medical Directory, quoted in the *Vossische Zeitung* states that there are now 28,127 medical men in Germany, as compared with 27,039 in the previous year 26 479 in 1900 26,049 in 1899, 25 178 in 1898, and 24,393 in 1897 The increase of 1088 in the number of medical men from the year 1901 to the year 1902 is an increase of 4 per cent. and is greater than in any previous year During the last five years the numerical increase of the medical profession was 3734 or 15 2 per cent., while the increase of the general population was 9 3 per cent As regards distribution throughout the various states it is found that 17,126 medical men reside in Prussia, 2790 in Bavaria, 2148 in Saxony, 1147 in Baden, 937 in Würtemberg, 814 in Alsace-Lorraine, and the remainder in the smaller states of the empire. There are 2366 medical men in Berlin, 583 in Munich, 573 in Hamburg 548 in Breslau 433 in Dresden, 431 in Leipsic, 344 in Cologne 354 in Charlottenburg, 338 in Frankfort, and 304 in Konigsberg

Prophylactic Use of Anti diphtheritic Serum

The Imperial Health Office is at present making arrangements for the holding of a collective investigation on the use of anti diphtheritic serum as a prophylactic, and with this object blank forms to be filled up have been sent to all the medical men in Germany They are, in the first place, asked to state whether this serum has ever been used by them as a prophylactic and if so they are requested to give particulars of the number of cases the age of the patients, the number of units injected in individual instances and the occurrence if any, of undesirable complications due to the injections. The replies will also specify the number (1) of those who contracted diphtheria after having received prophylactic injections and (2) of those who escaped it. Finally, the Health Office asks 'Are you persuaded by your personal experience that prophylactic injections are useful ?" The results of the collective investigation will be communicated to the International Congress on Hygiene to be held in Brussels.

Jan 5th

EGYPT

(FROM OUR OWN CORRESPONDENT)

The Medical Congress

THE Congress is now over and I have the authority of the foreign professors and other visitors for stating that it was a great success and that most of them were surprised to find how much scientific work is being done in Cairo Those of us who live here had the advantage of hearing interesting papers from Europe and America on such subjects as tuberculosis, malaria and its complications typhoid fever, dengue, and yellow fever, while we found highly interested audiences in the discussions on ankylostomiasis, bilharziosis, dysentery hepatitis, abscess of the liver, bilious typhoid fever, pellagra leprosy, insanity due to hasheesh, cholera, plague, and other diseases more peculiar to Egypt. The secretary general at the closing general meeting, in the name of the committee, drew special attention to the success of the medical section which was graced by the presence of Professor Bouchard Professor Nothnagel Professor Maragliano, Professor Chantemesse, Professor Lortet, Professor Teissier, Professor Mariani, Professor Pasquale, and many others Dr Looss contributed two interesting papers, the first proving that the skin of man and dog will allow the entrance of the larvæ of the ankylostomum worm and the second giving the life history of distoma hæmatobium and suggesting that it also may sometimes enter the skin and account for some of the mysterious ravages that are grouped together under the term 'bilharzia.' Kasr el Ainy Hospital was inspected by many interested visitors who saw there several cases of clinical interest and some special demonstrations given by Dr F M Sandwith on pellagra leprosy, and ankylostomiasis were well attended. The surgical section, though less popular than the medical, did some very good work and Mr Reginald Harrison s papers on prostatectomy and calculus were very well received. The ophthalmic section devoted most of its sittings to the consideration of granular ophthalmia and how to prevent its spread in Egypt. The pathological museum of the medical school elicited the highest praise. The specimens are prepared with great care by Dr W St. C Symmers by the formol method and are preserved in glycerine so as to show their original colours. As might be expected in Egypt there is a unique series of bilharzia lesions of the bladder, ureters, kidneys, urethra vulva, uterus, broad ligament rectum colon, liver &c, kidneys affected by ankylostoma, specimens of the red and black variety of Madura foot, dysenteric ulcerations, and specimens of elephantiasis. But what pleased our visitors most was the unique collection in the anatomical museum, arranged by Dr G Elliott Smith of specimens taken from various cemeteries in Upper Egypt, which showed human remains dating from prehistoric times at least 7000 years ago up to the present day

Fêtes and Receptions.

On Sunday the sections only met in the morning, for at 2 P M all the members of the Congress and their wives were invited by the Khedive to proceed in four of his steamers down the Nile to see the barrage which now, under English management, has for many years done for Lower Egypt what the new granite dam at Assouan will accomplish for Upper Egypt On the next evening an Arab *fête* was given by the President and secretary general of the Congress where about 800 guests had an opportunity of becoming acquainted with Egyptian singing, dancing, and conjuring tricks On the following day the Ministers received the members of the Congress after their sixth and final section meeting at the new Museum of Antiquities where M Maspero and his staff conducted eager crowds to see the famous collection of Egyptological remains. On the same evening the Khedive had invited the Congress to a ball at Abdeen Palace, but owing to the death of a princess this became impossible and therefore, to mitigate the disappointment of the visitors, he changed his invitation into an afternoon reception where he personally received all his guests. The final meeting of the Congress was, at the Khedive s command presided over by the Minister of Public Instruction, and complimentary speeches were made by all the foreign delegates after which Professor Nothnagel delivered a most interesting address in German on Prophylaxis, followed by Professor Maragliano with a paper in French on Nephritis It is needless to say that there were the usual number of private parties of hospitality including a dinner given by the School of Medicine to some of the prominent visitors a French banquet in honour of Professor Bouchard to which four English medical men were courteously invited and some popular dances given by the hotels The next Egyptian medical congress is to take place in Cairo in December 1907

Cairo Dec. 2.th 192.

Obituary.

PAUL QUICK KARKEEK, M R C S ENG , L S.A.

MR. PAUL QUICK KARKEEK died at his residence, ' Isca, Torquay on Dec .7th, in his sixtieth year On Dec. 2nd he had an attack of cerebral hæmorrhage whilst sitting in his drawing room, preparing a lecture which he was to deliver a few days later During the following three and a half weeks he was in an unconscious state, and although there were occasional slight signs of returning consciousness but little hope was ever entertained of his recovery Mr Karkeek was born in Truro and belonged to an old Cornish family He was educated at Probus Grammar School and then went to St. Bartholomew s Hospital, qualifying as M.R.C.S Eng and L.S.A. in 1865 He was then appointed house surgeon to Chester Infirmary Later he was elected assistant surgeon to the Seamen s Hospital Greenwich. On relinquishing that post he studied medicine at Heidelberg Berlin Vienna, and Paris In 1870 he returned to England married and purchased a practice at Torquay In 1878 he was elected medical officer of health of that town, which appointment he held until the time of his death Mr Karkeek was a most energetic medical officer and it was largely owing to his efforts that Torquay has such an efficient water supply He also instituted an excellent system of dairy registration in the town. Mr Karkeek was an active member of the Torquay Natural History Society and it was during his presidency in 1894 that the society commemorated its jubilee, having been founded by Mr Pengelly in 1844 by adding the Pengelly Memorial Hall to the museum buildings. The members made a handsome presentation to Mr Karkeek in appreciation of his services in connexion with the event. Mr Karkeek was highly esteemed in Torquay and much sympathy is felt there for his widow

DEATHS OF EMINENT FOREIGN MEDICAL MEN —The deaths of the following eminent foreign medical men are announced —Dr Isidor Herrnheiser the editor of the *Prager Medicinische Wochenschrift* has died from an apoplectic attack.—Dr Salomon Ehrenhaus of Berlin one of the instructors of pediatry in the vacation courses. He translated Espine and Picot s Manual of Children s Diseases" into German.—Professor Krafft-Ebing of Gratz. the well-known authority on criminal lunacy and on all forms of neuro-pathology He was 62 years of age and had been ill for a considerable period.—Dr. Michael Umnoff, formerly Professor of Comparative Anatomy in the University of Kazan at the age of 75 years.—Dr Zaayer Professor of Anatomy in the University of Amsterdam suddenly, in his sixty fifth year He had published papers on the Structure of the Osseous System, on the Condition of Bodies which have died from Arsenical Poisoning, &c.—Dr Rapin, Professor of Midwifery in the University of Lausanne, at the age of 56 years —Dr Nicoladoni, Professor of Clinical Surgery in the University of Gratz.—Dr Erlitzky a St. Petersburg alienist.—Dr A. Hénocque, vice-president of the Paris Biological Society —Dr Laroyenne, Professor of Gynæcology and Director of the Gynæcological Clinic in Lyons.

Medical News.

UNIVERSITY OF LONDON —At examinations held recently the following candidates were successful —

M.B EXAMINATION (HONOURS)

Medicine.—First Class Alexander Cameron (gold medal) Middlesex Hospital James Alane Coupland Yorkshire College and General Infirmary Leeds *Charles Seymour Parker University College and Robert Pugh Rowlands (scholarship and gold medal) Guy s Hospital. Second Class Ernest Rock Carling Westminster Hospital, Lucian A. E De Zilwa, B.Sc. University College and École de Médecine Paris Charles Ernest Lakin Middlesex Hospital Wilfred George Mumford, Guy's Hospital and Christopher Thackray Owens College. Third Class Hanway Richard Beale, St Thomas s Hospital Henry Tregelles Gillett St Bartholomew s Hospital Andrew Ferguson Horn University College Gerald Stephen Hughes Middlesex Hospital Mabel Halden Naylor London (Royal Free Hospital) School of Medicine for Women Cecil William Rowntree Middlesex Hospital and Ernest Wethered St Bartholomew s Hospital

Obstetric Medicine.—First Class Ernest Rock Carling (scholarship and gold medal) Westminster Hospital Lucian A. E. De Zilwa, B Sc. (gold medal) University College and École de Médecine. Paris Reginald Cheyne Elmslie St Bartholomew's Hospital and Charles Seymour Parker University College. Second Class Michael Abdy Collins Guy s Hospital Friedrich Gröne, St. Bartholomew's Hospital and Harold Edward Ridewood London Hospital. Third Class Ethel Florence Iredell B.A. London (Royal Free Hospital) School of Medicine for Women Charles Ernest Lakin Middlesex Hospital and Winifred Thorp London (Royal Free Hospital) School of Medicine for Women

* Obtained the number of marks qualifying for the gold medal

M.D EXAMINATION

Medicine.—William Fielding Addey B.S University College William Blair Bell, King s College Arthur Bevan St Thomas's Hospital Albert Henry Bygott St. Mary s Hospital and Birmingham University Arthur Ernest Clarke, Guy's Hospital David Leighton Davies B.S University College Adèle Isabella De Steiger London (Royal Free Hospital) School of Medicine for Women Thomas Henry Bourne Dobson Guy s Hospital, Arthur Eastwood St Bartholomew s Hospital Henry Percival Ferraby Guy s Hospital *Edward Alfred Gates St Thomas s Hospital Dudley George Greenfield Guy s Hospital Harold Hartley Owens College, Manchester Royal Infirmary and North Staffordshire Infirmary and Eye Hospital William Liversidge University College George Norman Meachen, B S., and William Tayler Milton, M.S Guy s Hospital Adeline Mary Roberts B S London (Royal Free Hospital) School of Medicine for Women William Trethowan Rowe. B S (gold medal) and Percy William Rowland St. Bartholomew s Hospital Alfred Bertram Soltau London Hospital Cuthbert Allan Sprawson B.S., King s College James Ernest Stratton, University College and General Hospital, Wolverhampton Hackworth Stuart University College Lewis Augustus Walker St. Bartholomew s Hospital Ralph Paul Williams B.S., King s College and William Henry Wynn, B Sc. Birmingham University and Queen s Hospital.

State Medicine.—William Willoughby Kennedy Glasgow University and St. Bartholomew s Hospital Thomas Henry Craig Stevenson, B S., University and Yorkshire Colleges , and Wilfred Watkins-Pitchford, St Thomas s Hospital.

* Obtained the number of marks qualifying for the gold medal.

B.S EXAMINATION

First Division.—Walter Fedde Fedden St. George s Hospital Mary Hannah Frances Ivens London (Royal Free Hospital) School of

Medicine for Women Lawrence Jones St. George's Hospital Cyril Alfred R Nitch St Thomas's Hospital and Sydney Richard Scott St Bartholomew's Hospital

Second Division.—Edward Walter Bain London Hospital Ernest Gilbert Bark and Frank Barnes Birmingham University, William Henry Bowen Guy's Hospital Sidney Herbert Bown University College Harold Burrows St Bartholomew's Hospital Percy William Leopold Camps, Guy's Hospital Olive Claydon London (Royal Free Hospital) School of Medicine for Women Michael Abdy Collins Guy's Hospital Harold Collinson Leeds General Infirmary David Ellis London Hospital Reginald Chevne Elmslie St Bartholomew's Hospital Harold Arthur Thomas Fairbank Charing Cross Hospital John Grimshaw M D London Hospital Stanley Hodgson University College and Guy's Hospital Andrew Ferguson Horn Alfred Ernest Jones and Thomas Lister Llewellyn University College Herbert W Lyle M D King's College Edward Lister Martin St Bartholomew's Hospital Mabel Halden Naylor London (Royal Free Hospital) School of Medicine for Women William Paynter Noall Owens College and Manchester Royal Infirmary Alfred Golsthorpe Osborn Guy's Hospital Herbert Dean Pollard London Hospital Robert Pugh Rowlands Guy's Hospital Charles Cecil Connock Shaw St Mary's Hospital Christopher Thackray Owens College Winifred Thorp London (Royal Free Hospital) School of Medicine for Women William Howard Unwin Charing Cross Hospital Frederick Edward Walker Guy's Hospital and Charles Wynn Wirgman University College

Honours—First Class: Lawrence Jones St George's Hospital Cyril Alfred R Nitch (scholarship and gold medal) St. Thomas's Hospital and Sydney Richard Scott (gold medal) St. Bartholomew's Hospital Second Class Walter Fedde Fedden, St George's Hospital and Mary Hannah Frances Ivens London (Royal Free Hospital) School of Medicine for Women

M S Examination

Felix Bolton Carter M D University College Herbert Sherwell Clogg (gold medal) Charing Cross Hospital and Herbert Lightfoot Eason M D and Russell Henry Jocelyn Swan Guy's Hospital

N.B —The last three foregoing lists published for the convenience of candidates are provisional only and are not final until the reports of the examiners shall have been confirmed by the Senate

Foreign University Intelligence—*Berlin* Dr Pagel, *privat docent* of the History of Medicine, Dr A. Wassermann, assistant to Professor Koch in the Infectious Diseases Institute, and Dr Koblanck, *privat docent* of Gynæcology, have been promoted to extraordinary professorships, as have Dr L Katz, *privat docent* of Otology, and Dr Georg Joachimsthal, *privat docent* of Orthopædic Surgery, to titular professorships. Dr Erich Lexer, *privat-docent* of Surgery, has been promoted to an extraordinary professorship Dr Oskar de la Camp, physician to the Charité has been recognised as *privat docent* of Medicine —*Berne* Dr Gurwitsch has been recognised as *privat docent* of Anatomy, Dr Arnd and Dr Wildbolz as *privat docenten* of Surgery, Dr Hegg as *privat-docent* of Ophthalmology, and Dr A. Schönemann as *privat docent* of Otology and Laryngology —*Breslau* Dr Tietze, *privat-docent* of Surgery, has been promoted to a titular professorship, and Dr Bonhoeffer, *privat docent* of Mental Diseases, and Dr Kausch, *privat-docent* of Surgery, have been similarly promoted to titular professorhips.

The late Mr John Elliot, M R C S Eng—Mr Elliot died at his residence, Beresford, Kingsbridge, Devon, on Dec 18th aged 68 years. The deceased was the eldest son of the late Mr J Elliot, of Tresillian, and belonged to an old and honoured family which can be traced back for 300 years. Mr Elliot had been in practice in Kingsbridge for about 30 years, at first in partnership with his father and later was joined by his youngest brother Mr E A S Elliot. The deceased was formerly medical officer to the workhouse and to the local friendly societies. Mr Elliot was a widower By his death Kingsbridge has lost an old and highly esteemed townsman and one who for many years entered into all the philanthropic and charitable movements in the town.

Royal Albert Hospital, Devonport—The annual meeting of the subscribers to this institution was held on Dec. 18th under the presidency of Viscount Clifden. The medical report stated that during the past 12 months 599 in patients had been treated, against 532 in the previous year, the daily average number of occupied beds being 43 15 In the lock wards 154 women were treated. 165 patients were sent to the Pearn Convalescent Home. 1515 members are on the books of the provident branch of the hospital, compared with 1697 on the same date the previous year The financial statement showed that during the past year the income amounted to £4034 and the expenditure to £5900 leaving an unfavourable balance of £1866 It was stated that a special committee had examined the accounts very minutely and could not find any item in the expenditure which it considered ought not to have been incurred A long discussion followed the reading of the report in reference to the financial position of the hospital and it was decided to use every effort to enlist the support of the community at large. It is to be hoped that the public meetings which are to be held in Devonport and Stonehouse to arouse greater interest in the institution will result in a large and permanent increase of revenue for this excellent charity

Dr F Sidney Grimshaw, of Stillington, Yorks, has been awarded a fee of £5 by the Easingwold board of guardians, as extra remuneration for the successful performance of a surgical operation not included in the schedule

The late Mr George Evans, M R C S Eng, L S A.—The funeral of Mr Evans in Seaton parish churchyard on Dec 13th was very largely attended, amongst those present being Sir John Kennaway, M P, and Sir E de la Pole. The deceased, who was 76 years of age, was highly respected in Seaton He was formerly district medical officer of the Axminster and Honiton unions and medical officer of health of the Axminster rural district council. Mr Evan leaves seven sons, two of whom are members of the medical profession

Presentations to Medical Practitioners—Mr James Elias, M R C S Eng, L S A., who has been medical officer of health during the past six years of the borough of Neath, has recently been presented with a silver salver upon the occasion of his leaving Neath—Mr J C Heaven, M.R C S Eng, L.R C P Lond, has recently been presented with some pieces of silver plate by the members of the West of England and South Wales Branch of the Incorporated Society of Medical Officers of Health upon his resigning the secretaryship of the branch, a position which he has held since its establishment seven years ago.—Mr. W Ffennell MacCarthy, M D, B Ch T C Dub., has recently been presented by the members of the Worcester ambulance class with a gold mounted umbrella

Donations and Bequests—Under the will of Mr Eli Parkinson Ackroyd of Shipley Bradford, the Bradford Royal Infirmary and Dispensary and the Bradford Children's Hospital will each receive £4000—Mr John Heneage of Richmond, has bequeathed, subject to certain bequests, his residuary estate in equal shares to the Royal Hospital at Richmond, to the Royal Free Hospital, to the Middlesex Hospital, and to the Home for Incurables at Putney—The governors of the North West London Hospital have received from the executors of the late Francis Thomas Freeman a donation of £750 out of the sum for distribution amongst charities at their discretion—Mr Thomas Cole of Sheffield by his will bequeathed £1000 to the Sheffield Royal Hospital, £1000 to the General Infirmary Sheffield, and £1000 to the Jessop Hospital for Women.—Mrs. E Dash of Bristol has bequeathed £1500 to the Bristol General Hospital, £500 to the Bristol Royal Infirmary, £500 to the Children's Hospital, Bristol, £500 to the Bristol Eye Hospital, and £500 to the Bristol Lock Hospital.

Public Health in Hong-Kong—In his report on the health and sanitary condition of Hong-Kong for the year 1901 Dr J M Atkinson, the principal civil medical officer of the colony, states that the estimated population for 1901 was 300,660 and that during the year there were 1088 births and 7082 deaths The birth rate was therefore 3 6 per 1000 and the death rate was 23 5 per 1000, for Chinese the death rate was 23 7 per 1000, while for non Chinese it was 20 5 per 1000 Plague existed in the colony during the whole of 1901, this being the fourth successive year in which it has appeared in an epidemic form As in 1900, so in 1901, the period from April to July has been the season of greatest prevalence. The numbers notified during each of these months in 1901 were as follows —April, 160, May 701, June, 551, and July, 109, making a total of 1521 notifications for these four months, with only 130 notifications for the other eight months of the year Of the 7082 total deaths 1562 were due to plague. When a death from plague has taken place in a Chinese house it is not unusual for the body to be carried out and left either in the street or in a boat in the harbour, 308 such cases occurred in 1901 and they to a great extent account for the annual recurrence of the disease, as of necessity the houses from which the bodies come are not disinfected. During the first six months of 1901 48,000 rats were destroyed. With a view to diminish the number of mosquitoes and thereby to reduce the amount of malarial fever much work has been done in removing undergrowth and draining stagnant pools of water, some benefit appears to have resulted only 541 deaths amongst the Chinese from malarial fever being returned in 1901, as compared with 887 in 1900

BOOKS, ETC , RECEIVED

John Bale, Sons and Danielsson Limited 83-89 Great Titchfield-street Oxford street W

The Diseases of Warm Countries. A Handbook for Medical Men. By Dr B. Scheube State Physician and Sanitary Adviser Greiz late Professor at the Medical School in Kioto (Japan) Translated from the German by Pauline Falcke With Addenda on Yellow Fever by James Cantlie M.B F.R.C S and on Malaria by C W Daniels M.B M.R C S Edited by James Cantlie, M.A. M.B. F.R.C.S D.P H Lecturer at the London School of Tropical Medicine With Maps Charts &c. from *The Journal of Tropical Medicine*. Second revised edition. Price 30s net

King P S and Son Orchard House, 2 & 4 Great Smith street Westminster S W

Report of the Proceedings of the Third International Congress for the Welfare and Protection of Children held in London 15th-18th July 1902 under the patronage of His Majesty King Edward VII President, the Earl Beauchamp K.C.M.G Edited for the Executive Committee of the Congress by Sir William Chance, Bart Honorary Treasurer Price 2s 6d. net

Knowledge " Office, 326, High Holborn W C

" Knowledge " Diary and Scientific Handbook for 1903. Price 3s net

Lewis H. K. 136 Gower street W C

Transactions of the Dermatological Society of Great Britain and Ireland Edited by Arthur Shillitoe, F R.C S and Wilfrid B Warde M.D 1901-1902. Vol. viii. Price not stated.

Lewis James 13 High street Selkirk.

A Doctor s Thoughts By Clement B Gunn M.D Author of Lays of St Andrews and Memories of a Modern Monk." Price not stated

Mark lane Express " Office, 1 Essex-street Strand, W C

The Agricultural Annual and Mark lane Express " Almanack 1903 (Guide to Farming Stock keeping &c.) Price 6*d.* by post 9*d.*

Olsen O C and Co Copenhagen

Contributions from the University Laboratory for Medical Bacteriology to Celebrate the Inauguration of the State Serum Institute. Edited by Carl Jul. Salomonsen Price not stated

Publishing Offices 64 Finsbury-pavement E C

The South African Year-book, 1902-1903 (First year of issue) Price 10s 6*d* net

Rousset J., 36 Rue Serpente Paris

Hygiene et Traitement de l Herpetisme. Herpetisme des Organes Genito-urinaires. Par le Dr Edmond Braye, Lauréat des Hôpitaux, Redacteur à la Gazette des Hôpitaux et à la Presse Medicale. Price 3 francs

Rudall, Carte, and Co 23 Berners-street W

The Professional Pocket Book, or Daily and Hourly Engagement Diary for 1903 Specially adapted for Professional Engagements Price not stated

Saunders W B and Co Philadelphia and London

Atlas and Epitome of Traumatic Fractures and Dislocations By Prof Dr H. Helferich Professor of Surgery at the Royal University Griefswald Prussia. Authorised translation from the German edited by Joseph C Bloodgood M.D Associate in Surgery Johns Hopkins University Baltimore Md Fifth edition revised and enlarged Price 12s net.

A Text book of Obstetrics for Practitioners and Students. By James C Cameron M.D Edward P Davis M D Robert L. Dickinson, M.D Henry J Garrigues M.D Barton Cooke Hirst M.D Charles Jewett M.D Howard A. Kelly M.D Richard C Norris M D Chauncey D Palmer M D George A Piersol M D Edward Reynolds M.D , Henry Schwarz M.D and J Clarence Webster M.D Richard C Norris, M.D editor Robert L. Dickinson M.D art editor Second edition, revised. In two Volumes Price 35s net.

Scientific Press Limited 28 and 29 Southampton street Strand W C

The Nursing Profession How and Where to Train. Edited by Sir Henry Burdett K.C.B Fourth year Price 2s net.

Sharland R. L. 33 Churchfield road Acton, London W

The Scientific Roll and Magazine of Systematised Notes. Conducted by Alexander Ramsay Bacteria. Vol. 1 No 6 Price 1s

Société d'Editions Scientifiques, 4 Rue Antoine Dubois Paris

Guide Pratique de l'Extraction des Dents Par le Doctor Bruneau, Dentiste des Hôpitaux. Price 3 fr

Nouveau Formulaire Magistral de Consultations Infantiles Par le Dr H. Dauchez, Ancien Chef de Clinique Adjoint de la Faculte. Price 3 fr

Guide Pratique des Exercices Physiques (Hygiene et Resultats) Par le Dr L. Roblot Deuxième edition. Price 2 fr 50

Tiskem Ceske Grafické Spolecnosti Unie," Prague.

Kystes Hydatiques Pendant Grossesse l Accouchement et les Suites de Couches (Avec Résume Français pag i-xxxvi.) By Dr Jaroslav Franta. Price not stated

University College, London

Descriptive Catalogue of the Specimens illustrating Surgical Pathology in the Museum of University College London New edition. By Raymond Johnson B S. F R C S Assistant Surgeon to University College Hospital and T W P Lawrence M.B F.R C S Curator of the Museum Part I Injuries and Diseases of Bones and Joints Part II Injuries and Diseases of the Neuro-Muscular Vascular Alimentary and Respiratory Systems and the Thyroid Gland Price not stated

Voss Leopold Hohe Bleichen 34 Hamburg

Die Chemisch physikalische Beschaffenheit der Heilquellen Vortrag gehalten auf der 74 Versammlung Deutscher Naturforscher und Aerzte zu Karlsbad Von Prof Dr W Meyerhoffer Price M 1

Walker, John and Co Limited Farringdon House Warwick lane E.C

Diaries for 1903 Desk," No 8·58 cloth 3s 6*d*. 4,64 paste grain 2s 6*d*. 7/77 American Russia, 3s Tablet." No 4 2s 1/31 (Waistcoat-pocket) 6*d*. Quarterly pocket " No 611 1s 3/53 cloth limp 9*d* 2/82, pigskin 2s 23/23 (plain black covers) 3/213 real seal, renewable 11s 6*d*. 4/184 Morocco 8s 6*d*. 17/217 Graphic," 1s

Whitaker, J and Sons Limited 12, Warwick lane Paternoster row E.C

An Almanack for the Year of our Lord, 1903 By Joseph Whitaker F S.A (Whitaker s Almanack.) Price 2s 6*d*. net

Whitaker s Peerage for the Year 1903 being a Directory of Titled Persons. Price 2s. 6*d*

Appointments.

Successful applicants for Vacancies Secretaries of Public Institutions and others possessing information suitable for this column are invited to forward it to THE LANCET *Office directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week, for publication in the next number*

Allin, Charles J L.D S R.C S Eng has been appointed Honorary Dental Surgeon to the Derbyshire Royal Infirmary

Bathe, Allan Arthur, M.A. M.B Oxon. has been appointed District Medical Officer for the South District of Paddington Parish.

Borland Hugh Howie, M.B C.M. D.P H. Camb has been appointed Vaccinator to the Glasgow Royal Infirmary vice Dr R Home Henderson resigned

Cameron S M.B Ch.B has been appointed Resident Medical Officer to the Chelsea Hospital for Women.

Deane, Charles Masley M D Edin M.R.C S has been appointed Port Health Officer and Medical Officer to Police Gaols and Paupers Strahan Tasmania, vice Mr P J Godfrey resigned

Flux, G B M D Brux. M.R.C S L.R.C.P Lond L.S.A. has been appointed Assistant Anæsthetist to King s College Hospital

Greaves F L A. F R.C S Eng has been appointed Honorary Surgeon to the Derbyshire Royal Infirmary vice Mr C H. Hough resigned.

Harrison George Alfred M.R C S L.R C.P Lond., has been appointed Public Vaccinator for the Eltham District of New Zealand.

Harrison W A. M B Ch M. Edin has been appointed District Medical Officer at York, Western Australia.

Hepper, E. C M.R.C S., L.R C.P I.M S has been appointed Clinical Assistant to the Chelsea Hospital for Women.

Holmes W S M B Ch B Vict. has been appointed Junior House Surgeon to the Oldham Infirmary

Howe John M.B Ch.B Vict has been appointed Medical Officer and Public Vaccinator to the District of Levenshulme and part of West Gorton (No 8) of the Chorlton Union Manchester

Hutchens H J D S O has been appointed Assistant Bacteriologist to the West Riding of Yorkshire County Council.

McCoy S H. M.B B.A. Toronto has been appointed Clinical Assistant to the Chelsea Hospital for Women

McNair Scott R F B A. M.B Ch.B., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

Morris J M. M.A. M.B C M Edin has been appointed Medical Officer of Health for the Borough of Neath, *vice* Mr James E. Elias resigned

Murphy J Montague, L.D S R.C S Eng has been appointed Honorary Dental Surgeon to the Derbyshire Royal Infirmary

Murray G S., M.B Ch.B. Edin has been appointed Senior House Surgeon to the Oldham Infirmary

Nicholls Alfred Robert L.R.C.P Lond M.R C.S has been re-appointed Medical Officer for the Langport (Somerset) Rural District Council.

Pernet George, M R C S Eng L.R C.P Lond has been appointed Assistant to the Skin Department of University College Hospital.

Perrott Charles J L.R.C P L.R.C.S Irel. has been re-appointed Medical Officer of Health by the Kingswood (Gloucestershire) Urban Council.

Porter, Charles M.D B Sc. Edin M.R.C.P Edin has been appointed Demonstrator in Bacteriology to the Public Health Hospital Leith

Rinder, A. W M.R C.P Edin has been appointed Surgeon to the Broad Arrow Hospital, Western Australia.

Savage W G M.D Lond. has been appointed Medical Officer of Health for the Borough of Colchester

Toswill, John Cecil, M.B M.S Edin has been appointed Public Vaccinator for the Hastings District of New Zealand

Willey Florence E., M.B B S B.Sc. Lond., has been appointed Surgical Registrar to the Royal Free Hospital.

Vacancies

For further information regarding each vacancy reference should be made to the advertisement (see Index)

Birkenhead Borough Hospital.—Senior Resident Male House Surgeon Salary £100 per annum with board

Birmingham Queen's Hospital.—Second Physician for out-patients Also Pathologist

Bradford Royal Infirmary—House Surgeon unmarried Salary £100 per annum with board and residence

City of London Hospital for Diseases of the Chest Victoria park E—Physician to Out patients. Also Second House Physician for six months Salary at rate of £50 per annum with board lodging and washing

Derbyshire Royal Infirmary—Two House Surgeons Also House Physician Salary in each instance £100 per annum with apartments board &c. Also Assistant House Surgeon for six months. Salary at rate of £60 per annum with apartments board &c

Gloucester General Infirmary and Gloucestershire Eye Institution—Senior House Surgeoncy Salary £100 per annum with board residence and washing

Great Northern Central Hospital, Holloway—Junior House Physician for six months Salary at rate of £30 per annum, with board and washing

Grosvenor Hospital for Women and Children Vincent square Westminster—Assistant Surgeon

Hospital for Sick Children Great Ormond street London W C—House Surgeon unmarried for six months Salary £20 with board and residence.

Lancashire County Asylum Whittingham Preston—Assistant Medical Officer unmarried Initial salary £150 with apartments board washing and attendance

Liverpool Hospital for Consumption—Medical Officer Salary £70 per annum

London Lock Hospital.—House Surgeon Salary £80 per annum with board lodging and washing

Manchester Royal Infirmary—Resident Medical Officer unmarried Salary £150 per annum with board and residence.

Metropolitan Asylums Board Asylum Darenth Dartford Kent.—Male Assistant Medical Officer unmarried £150 per annum rising to £170 with rations, lodging attendance and washing

New Hospital for Women Euston road, N W—Surgical Assistant (female) Also two Clinical Assistants

Rochester Saint Bartholomew's Hospital—Assistant House Surgeon Salary £100 per annum with board lodging washing firing and light

Royal Hants County Hospital, Winchester—House Physician unmarried Salary £65 per annum rising to £75 with board residence &c.

Royal Isle of Wight County Hospital, Ryde—Resident House Surgeon Salary £90

Salisbury General Infirmary—Assistant House Surgeon unmarried Salary at rate of £75 per annum with apartments board and lodging

Sheffield East End Branch of the Children's Hospital.—Lady House Surgeon Salary £70 per annum with board lodging and washing

Sheffield Royal Hospital—Junior Assistant House Surgeon unmarried Salary £50 per annum, with board washing and lodging

Wrexham Infirmary—Resident House Surgeon Salary £100 per annum with board lodging and washing

Births, Marriages, and Deaths.

BIRTHS

Chawner—On Jan 2nd at Clay Cross the wife of Alfred Chawner L R C P M R C S of a son

Davies—On Dec. 28th 1902 at West Park Eltham the wife of Lieutenant-Colonel A M Davies, R.A M C of a daughter

Gash—On Dec. 22nd 1902, at Auburn Snodland Kent the wife of Thomas Gash M B B Ch B A O R U I of a son

Sutherland—At 3 Osborne-place Dundee on the 4th inst the wife of L R Sutherland M B Professor of Pathology University of St. Andrews a daughter

Watson—On Dec. 31st 1902 at Hendre Overton Park Cheltenham the wife of Deputy Surgeon General George Alder Watson Bengal Army (retired) of a son

MARRIAGES

Baker—Row—On Dec. 31st 1902 at the Catholic Apostolic Church, Carlton hill Brighton Clement John Baker M R C S L R C P Lond to Jesse Caroline Mary, second daughter of the late Major General William Skene Row Bengal Staff Corps

DEATHS

Colman—On 2nd January 1903 at Nottingham place, London W Thomas John Colman of the City of Bristol M D aged 60

Vivian—On Jan 6th at 8 Hunter street London Margaret Cordelia Vivian, aged 4 years of pyæmia. R.I P

N.B—A fee of 5s is charged for the insertion of Notices of Births Marriages and Deaths

Notes, Short Comments, and Answers to Correspondents.

PRESCRIBING IN THE LAY PRESS

We are quite accustomed to see advice and prescriptions to patients whom the prescriber has never seen given by irregular practitioners in the columns of the *Echo* and various ladies journals but we must say that we never expected to see a fully-qualified medical man giving advice under his own name to correspondents of a newspaper And yet in a recent number of the *Burton Evening Gazette* is a column headed Health and Home by W Gordon Stables, M.D. R N Dr Stables discourses in a general fashion about convalescence and cheerfulness and the need for being careful not to catch cold in bed all of which advice is very fairly sound But at the bottom of the column come some answers to correspondents For instance E R P" is told Savours strongly of kidney trouble It would not be right to advise you in three lines what to do Consult the best man in your neighbourhood" This advice as regards its matter we have no quarrel with But further on we read Bleeding Piles (C. T R). The same ointment I frequently recommend—the compound gall, with double the quantity of powdered opium But the bowels must be kept open by confection of senna (compound) and everything of the nature of stimulants avoided" To Many (Skin Complaints Surgical Ailments and Baby Troubles) I cannot advise upon these without seeing This surely stands to reason" Exactly so then why does Dr Stables advise upon other complaints without seeing ? Can he be certain for instance that Bleeding Piles is not rectal cancer? We recommend Dr Stables to leave off prescribing in the press or anywhere else without seeing"

A PATHOLOGICAL EPITAPH.

To the Editors of THE LANCET

SIRS—Mr Ashton will find the inscription given in his letter in THE LANCET of Nov 29th 1902 p 1500 and referred to in your issue of Dec 20th p 1758 in Richard Mead's Medical Precepts and Cautions (1755) article Of the Dropsy" (p 167) It is accompanied by the following description of the case which was evidently attended by Mead himself:—

> A widow lady whose opulent estate served to render her virtues more conspicuous fell into an *ascites* in the fifty first year of her age For this she was tapped but as she soon filled up again the operation was repeated once a month for the first year and at each tapping one with another there were drawn off forty four pints of water The next year she was likewise tapped every month and the whole quantity being equally divided made twelve pints each week The third year the quantity of water began to diminish so that there was but twenty four pints for every month And in the fourth and fifth years and seven months of the sixth in which time she underwent thirty tappings, each tapping amounted only to sixteen pints. After the last time she began to grow weak and waste away and she was seized with almost a constant difficulty of breathing as we observe in a dropsy of the breast attended with frequent faintings whereas before through the whole course of the disease in the intervals of tapping she was cheerful in conversation used exercise and even diverted herself with dancing But now life began to sit heavy upon her and she died at length a very easy death Now it is very surprising that a human body in that space of time could furnish such a vast quantity of water—to wit 1920 pints and it is my opinion that this water was first collected in the ovaries In fine this good lady for the information of posterity ordered by her will that the following English inscription should be engraved on her monument [Here follows the inscription as given by Mr Ashton except that the date of death is given by Mead as March IV] And this monument is now to be seen in Bunhill Fields."

I am Sirs yours faithfully

Florence Dec. 23rd 1902. H LAING GORDON

THE CHOICE OF A PROFESSION: AN INSPIRING IDEAL

THE *Police Review and Parade Gossip* of Jan 2nd in its Children's Corner publishes a little prize essay on What I Should Like to Be written by a Welsh lad The chosen profession is that of medicine and the essay was inspired by the fact that a few years ago the competitor's sister was an inmate of an infirmary The chief reason for choosing the medical profession is the lad's desire to use his skill and to show his kindness to the poor little inmates of a children's ward" It is a sight never to be forgotten" says the writer to see a little child being parted from its mother for the first time and at a time when a mother's love and care is most needed During the eight months my little sister was away my constant prayer was May the doctors and nurses be kind to Ella. Another reason why I should like to be a doctor is so that I should be able to be good and kind to the suffering poor Oftentimes poor people are blamed because they have not called a doctor in sooner It is not for the want of sympathy and care that they don't seek advice each time that their friends are ailing It is because they are afraid of the doctor's heavy charges A single visit sometimes costs

; much as the head of a family gets in a whole week. Unfortunately it costs so much to qualify to be a doctor that a poor boy however clever he may be has very little chance to adopt that profession." he writer of the essay however hopes that by winning a valuable ntrance scholarship he may be able to enter the portals of the Temple f Æsculapius and we sincerely trust that his aspirations may be ulfilled. Such a lad ought to prove in later years an ornament to ır profession, even though, as is probable his ideal may be dimmed nd his good intentions blunted by contact with a cold and nsympathetic world.

BRITISH MEDICAL BENEVOLENT FUND

inadvertence the figures in the paragraph which appeared in our nnus Medicus relating to the above Fund referred to a month s ork only The following are the correct figures for the year 1902. a the grant department subscriptions and donations amounting to 1500 were received during the year This sum is nearly £300 less an the average for the last ten years and consequently several very istressing cases have had to be passed over A reserve of £200 was xpended. £1552 being voted to 153 recipients in grants varying from 5 to £18. In the annuity department the income available from ıvestments was £2,00 and 115 annuitants received £2290 Many of ıe cases still standing over are in great need of immediate help and ıoney is urgently required to enable the charity to meet the demands made upon it The committee appeals very earnestly for ıcreased support and especially asks the friends of the Fund to iterest others in its work. Subscriptions and donations will be ratefully received by the treasurer Dr Samuel West 15 Wimpole-tree W., or by Mr W E. Sargant St. Bartholomew's Hospital, .C (honorary secretary for cases)

THE EVANGELIST BROTHERHOOD

To the Editors of THE LANCET

IRS,—In replying to the somewhat uncharitable clipping from E LANCET in which your correspondent refers to me as the anadian quack," I take up the cudgels not for myself but for the ıusands of broad minded investigators scattered throughout this ıtinent who use the same means to promote the cure of disease as I whenever practicable. As an Englishman I claim the right of umed innocence until proven guilty this is my legal privilege and ral right, even in a Court of Law Your correspondent denies me n this

The fact remains that Mr Colvile has under God's blessing been tored to health by a simple system of treatment which sets up especial claim other than that of being in accordance with a Divine promise voiced in St Matt. xviii. xix. *This system has* thing to do with Christian Science so-called, as is often supposed by me, neither is it mystical, magical nor *specially miraculous. It is* ıinently scientific, being based upon certain laws in physics and ing the demonstration of certain *principles* in metaphysics both of ıich are phases of truth. Personally I *heal* no one by this method y aim is to *teach* certain *principles*, which if followed faithfully ʼng into being perfected results as a consequence of compliance th laws which constitute the agreement referred to in . Matt., xviii.-xix. Perhaps if your journal lent its pages to oad minded inquiry *instead* of hard words against those o like myself have given up everything they possess in e cause of truth it might assist those suffering millions wards gaining that freedom which only the truth appropriated similated and manifested can give As to my charge of £3 10s any people write to me and my time has a financial value. It has en my *privilege to see* drunkards reclaimed, so-called incurables" stored to robust health, the mentally afflicted relieved and numbers people of every age, disease and shade of opinion assisted by this ıem of healing which is in compliance with Nature's laws.

In conclusion, your journal is welcome to its opinions but owes a ıty to the public—viz. to honestly investigate that which once derstood so directly pertains and contributes to the public good. onclude by quoting the much worn passage There are more things heaven and earth Horatio [and on this continent] than are dreamt in your philosophy"

Yours in the cause of truth,

Winnipeg Man., Dec. 2nd 1902.

H. AYLMER HARDING

,* No correspondent has denied Professor" Aylmer Harding anything We have said what we think and his communication does not lead us to alter our opinion of his methods When a man, not being a medical man, claims in the same breath to be of those who have given up everything they possess in the cause of truth" and to be entitled to high fees from patients because "my time has a financial value" he is lucky if he is called nothing worse than a quack.—ED L.

ADVERTISEMENT

ʼE have received copies of a circular of the North Croydon Benefit Slate Club which is stated by a correspondent to have been distributed broadcast in the neighbourhood The circular which sets out the various advantages to be obtained by males and females between the ages of 16 and 53 years through joining the association states among these advantages that medical attendance and medicine will be obtained from Dr Addison We are informed that this circular has been delivered in one road from house to house, while two of the copies which have been sent to us were picked up lying in the street Dr Addison is advised to take immediate steps to stop the publication of a handbill bearing his name and using his professional position as a bait to attract members to the North Croydon Benefit Slate Club. These circulars have been left upon the patients of other medical men and the General Medical Council has expressed a very strong view as to the unseemliness of medical men serving any association or society which touts for members. We shall be glad to learn that Dr Addison has not only instructed the secretary immediately to suppress the offensive handbill but that its dissemination has been entirely without his knowledge

AN ATTACHMENT FOR SERVIETTE RINGS AND OTHER ARTICLES USED AT TABLE.

MR. H. B BUTTERWORTH of Newcastle, Staffordshire has sent us photographs of what appears to be a useful appliance. At hotels, hydropathic establishments and other places where considerable numbers sit at table together it sometimes happens that a guest who has sent a plate or cup to be replenished receives back not the one he had been using but a plate or cup belonging to someone else. To avoid this unpleasantness Mr Butterworth has devised and is about to obtain protection for a clip which may be fixed on the edge of the plate or cup and bears a number corresponding to that of the guest's place at table, or any other number serving for identification. The clip may also be attached to serviette rings and will answer the purpose of fixing a serviette to the coat or waistcoat

SPITTING AND THE SPREAD OF TUBERCULOSIS

THE Public Health Department of the Urban District Council of Acton has issued a notice requesting the public not to expectorate on the ground but into proper receptacles for it says Spitting is the main source of the spread of consumption" This notice has vexed the soul of a gentleman who lives at Acton and who incloses us the following announcement which we suppose is drawn up by himself —

CONSUMPTION,

PNEUMONIA THROAT CATARRH, &c

It is certain all expectorations should be religiously re-swallowed. We have found a simple sip of cold milk with the phlegm in the mouth, forms a perfect throat healer and this matter together being returned to the system arrests at once the gradual decay so distressing to witness, if spit away No Cod Liver Oil or Emulsion needed—no Lozenges to ease the throat. At first sight it may appear unclean, but it is our own impurity and dust we are and to dust we must return If the faculty really have decided that this present mode of spitting is a cause of contagion to tens of thousands, then for the welfare of the general public alone they should at once insist on this being done.

The swallowing of all expectoration would certainly prevent the dissemination of tuberculous matter by sputum, but there is such a thing as auto-infection. Other diseases such as typhoid fever are spread by excreta and we do not think that our correspondent would be prepared to carry out his advice to its logical end and consume the other waste products of his economy

INDUCEMENTS TO DRUNKENNESS

AN esteemed correspondent has sent us a copy of a circular issued by an institution called the Wine Club Limited of 46 Dover-street, a club which offers to its associates (who can become associates without election upon payment of one guinea per annum in advance) the advantages of buying wine cheap. It is not however with the constitution or purpose of the Wine Club that we have any fault to find but with the advertisement which is circulated of a cocktail, which we do not name, prepared and bottled by American merchants who shall also remain anonymous.

THE —— COCKTAILS.

FOR TIRED WOMEN

As a tonic, —— Cocktails should be in every home. They will put new life in one after a day's hard shopping Endless worry of household duties can be done away with, if the needed tonic is at hand. As a ladies drink, The —— Cocktails" has no equal.

FOR TIRED MEN

After a busy day see that you have at home a bottle of —— Cocktails. As an appetizer and general tonic for the business man they have no equal.

We have no hesitation in calling such advertisements wicked. They suggest the ingestion of stimulant in the most dangerous way on the most dangerous occasions

THE ANTI VACCINATIONIST

IN applying to Mr Mead at the North Western Police-court on Dec. 12th for an exemption certificate for his child under the Vaccination Act a working man propounded the following conundrum to the learned magistrate — If vaccination will keep small pox away why can't they vaccinate us to make us live for ever?" The application of this conscientious objector" was refused. In another case heard on the same day at the Thames Police-court a woman pleaded guilty to making a false statement to the registrar when registering the birth of her child. It was stated in evidence that the child was born at 164 St. George's-street where the parents still lived, but that the registrar had been informed that the birth had taken place at 65 St George's-street and that owing to the fact that a number of similar false statements had been made by persons desiring to avoid having their children vaccinated the Registrar General had ordered a prosecution in this instance The defendant frankly told the magistrate when questioned by him that her object in making the false statement was that she might if possible avoid having her child vaccinated The child had since been vaccinated and Mr Dickinson only inflicted a fine of 40*s* and 2*s* costs informing the defendant however that for the offence that she had committed a sentence of seven years penal servitude might be passed The accurate registration of births is of obvious importance not only with a view to vaccination in due course but also in order that the lives of infants may so far as is possible be protected

PRACTICE IN CALIFORNIA.

To the Editors of THE LANCET

SIRS —In answer to the inquiries of J D" in THE LANCET of Dec 20th 1902 p 1738 I beg to inform him that I practised in California for two years To enable any properly qualified British medical man to practise there he will have to send his diplomas up to the secretary of the University of Southern California at San Francisco and also two certificates from medical practitioners here stating that he is of good honourable repute and of good character in all ways at the same time applying for a licence to practise there which he will have to register wherever he commences practice

I am Sirs yours faithfully

Macclesfield Dec 22nd 1902. J WESTMORLAND

To the Editors of THE LANCET

SIRS —In reply to your correspondent J D who in THE LANCET of Dec. 20th 1902, p 1738 asks about practice in California—1 A medical man wishing to practise in the State of California must have a diploma recognised by the Board of Medical Examiners and this diploma must in nowise fall below the standard prescribed by the Association of American Colleges for that year 2. The applicant must produce this diploma along with an affidavit stating that he is the lawful possessor of the said diploma and that it was obtained in the regular course of instruction and examination 3 The applicant must furnish satisfactory testimonials of good moral character 4 In addition to the above he will be personally examined in the following subjects: anatomy physiology bacteriology pathology chemistry and toxicology surgery obstetrics materia medica and therapeutics theory and practice of medicine A general average of 75 per cent must be obtained The examination will be in whole or in part, in writing The fee is $20 which should accompany the application The secretary of the board is George G Gere M D I can certify from inquiries conducted through two channels that these formalities are incumbent on anyone intending to practise in the State of California and I have made a *précis* for your correspondent of the significant parts of the orders and regulations

I am Sirs yours faithfully

Dec 20th 1902 E

MOTOR CARS FOR MEDICAL MEN

To the Editors of THE LANCET

SIRS —For the information of your readers I wish to state that I have had a locomobile steam car for almost two years I have worked it in my ordinary rounds alternately with a horse in all kinds of weather I have had no unexpected stoppages on the road I have looked over my books and find that the cost of running for the whole period has been £56 7*s* 11*d* of which £26 was for petrol and the remainder was for repairs renewals and improvements The car looks as well as when I bought it and runs much better owing to the improvements I have had added I find it most useful for long country rounds it saves so much time

I am Sirs yours faithfully

Loughborough Dec. 10th, 1902. THOMAS CORCORAN

MEDICAL MISSIONARY WORK.

To the Editors of THE LANCET

SIRS —I should be glad if any of your correspondents could furnish me with particulars of medical missionary work abroad—as to the societies which send out medical missionaries and the requirements necessary to meet the demands of such societies

I am Sirs yours faithfully

Jan 6th 1903 E B

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

To the Editors of THE LANCET

SIRS —The annual report of the Royal College of Surgeons of Edinburgh affords much useful information and shows that the value of the Fellowship diploma—to judge by the number of admissions—is rapidly rising in the estimation of the profession and that this increase is not due to any greater leniency on the part of the examiners for 1902 as 36 per cent of the candidates as against 21 per cent. were rejected I think that the explanation lies in the fact that the Edinburgh College has for some years ceased the one-time common custom of admitting Fellows without any professional examination simply by ballot; during the past 10 years this privilege has only been granted six times I find that out of the 840 Fellows whose names appear on the roll Scotland can only claim 150 and of these 96 reside within the Edinburgh postal radius and of these 33 are examiners for the Fellowship while in England and Wales there are 420 Fellows Of these many are men holding high positions in our profession and I submit it is now time the non resident Fellows should take a more active interest in the affairs of the College Why should we not form an association of Fellows practising in England? Why should the examinership be confined to Edinburgh men? Would not the inclusion of new men still further advance the value of the diploma? Could not an organised attempt be made to found lectures as in the English College? Now that the College has extended its borders should not the majority take greater interest in its working and be better represented on its committees? I throw out the suggestion and remain

Yours faithfully

Jan 3rd 1903 F R C S EDIN

PLAGUE IN SAN FRANCISCO

THE seventeenth annual meeting of the State and Provincial Boards of Health of North America was held at New Haven Connecticut, on Oct. 28th and 29th 1902 In its report of the proceedings the December number of the *Yale Medical Journal* states that the following resolution was adopted expressing the opinion of the conference as to the conduct of the health authorities of San Francisco —

Whereas Bubonic plague has been present in California since March 1900 complete information as to the extent of the disease being withheld by the local authorities no effective measures of restriction having been put into operation and

Whereas Twenty five of these cases have occurred in the months of July August September and October 1902, no information as to their origin or exact location having been furnished, no effective steps having been taken to restrict the spread of the disease the City Board of Health of San Francisco being helpless, and the mala fides of the State Board of Health of California having been fully established by the foregoing history supported by documentary evidence in the possession of this conference therefore, be it

Resolved, That the Conference of State and Provincial Boards of Health of North America views with abhorrence the irretrievable disgrace of the present State Board of Health of California, and pronounces the plague situation in California a matter of grave national concern

◆

Inquirer has omitted to supply us with his name and address

Medical Diary for the ensuing Week.

OPERATIONS

METROPOLITAN HOSPITALS

MONDAY (12th)—London (2 P M) St Bartholomew's (1.30 P.M.), St. Thomas's (3 30 P M) St George's (2 P M) St Mary's (2.30 P.M.) Middlesex (1.30 P M) Westminster (2 P M) Chelsea (2 P.M.) Samaritan (Gynæcological by Physicians 2 P M) Soho-square (2 P M) Royal Orthopædic (2 P.M) City Orthopædic (4 P.M.) Gt Northern Central (2.30 P M) West London (2.30 P.M) London Throat (9 30 A M) Royal Free (2 P M) Guy's (1 30 P.M)

TUESDAY (13th)—London (2 P M) St Bartholomew's (1.30 P.M.), St Thomas's (3 30 P M) Guy's (1 30 P M), Middlesex (1.30 P M) Westminster (2 P M) West London (2.30 P M) University College (2 P M) St George's (1 P M) St Mary's (1 P M) St Mark's (2.30 P M) Cancer (2 P M) Metropolitan (2 30 P M) London Throat (9 30 A M) Royal Ear (3 P M) Samaritan (9 30 A M and 2.30 P.M.) Throat Golden square (9 30 A M) Soho-square (2 P M)

WEDNESDAY (14th)—St Bartholomew's (1 30 P M) University College (2 P M) Royal Free (2 P M) Middlesex (1 30 P M) Charing Cross (3 P M) St Thomas's (2 P M) London (2 P M) King's College (2 P M) St George's (Ophthalmic 1 P M) St Mary's (2 P.M.) National Orthopædic (10 A M) St Peter's (2 P M) Samaritan (9 30 A M and 2.30 P M) Gt Ormond street (9 30 A M) Gt. Northern Central (2.30 P M), Westminster (2 P M) Metropolitan (2.30 P.M.) London Throat (9.30 A M) Cancer (2 P.M) Throat Golden-square (9 30 A M) Guy's (1 30 P.M)

THURSDAY (15th)—St. Bartholomew's (1 30 P M) St. Thomas's (3 30 P M) University College (2 P M) Charing Cross (3 P.M.) St. George's (1 P M) London (2 P M) King's College (2 P M) Middlesex (1.30 P M) St Mary's (2 30 P M) Soho-square (2 P M) North-West London (2 P M) Chelsea (2 P M) Gt Northern Central (Gynæcological 2 30 P M) Metropolitan (2.30 P M) London Throat (9 30 A M) St. Mark's (2 P M) Samaritan (9 30 A M and 2.30 P.M.) Throat Golden square (9 30 A M) Guy's (1.30 P M)

FRIDAY (16th)—London (2 P M) St Bartholomew's (1 30 P M.) St. Thomas's (3 30 P M) Guy's (1.30 P M) Middlesex (1 30 P.M) Charing Cross (3 P M) St George's (1 P M) King's College (2 P M) St Mary's (2 P M) Ophthalmic (10 A M) Cancer (2 P M) Chelsea (2 P M) Gt. Northern Central (2.30 P M) West London (2.30 P.M) London Throat (9.30 A M) Samaritan (9 30 A M and 2.30 P.M) Throat Golden-square (9 30 A.M) City Orthopædic (2.30 P.M.) Soho-square (2 P M)

SATURDAY (17th)—Royal Free (9 A M) London (2 P M) Middlesex (1 30 P M) St Thomas's (2 P M) University College (9 15 A.M.) Charing Cross (2 P M) St. George's (1 P M) St Mary's (10 P.M.) Throat Golden square (9 30 A.M) Guy's (1 30 P M)

At the Royal Eye Hospital (2 P M) the Royal London Ophthalmic (10 A M) the Royal Westminster Ophthalmic (1 30 P.M) and the Central London Ophthalmic Hospitals operations are performed daily

SOCIETIES

MONDAY (12th)—MEDICAL SOCIETY OF LONDON (11 Chandos-street, Cavendish square W)—8.30 P.M. Papers:—Mr B Pitts: Suppression of Urine in a Case of Ovarian Tumour and Pregnancy Removal of Tumour and Uterus Recovery —Dr B J Collingwood The Etiology of Emphysema from the Physical Standpoint

ESDAY (13th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square W).—8.30 P.M Papers —Prof C. Allbutt: Rise of Blood pressure in Later Life.—Mr P R W De Santi A Report on Four Cases of Acute Septic Inflammation of the Throat with Bacteriological Examination of Each

EDNESDAY (14th).—HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E C) —8.30 P.M. Papers:—Dr R Andrews Some Notes on Obstetric Practice in Berlin and Vienna.—Dr W H. Kelson On Nasal Discharges.

DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street Cavendish-square W).—5.15 P M Demonstration of Cases of Interest.

SOUTH WEST LONDON MEDICAL SOCIETY (Bolingbroke Hospital Wandsworth Common)—8 45 P M Paper —Mr M. Yearsley The Indications for the Mastoid Operation

IDAY (16th).—SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN (11, Chandos-street Cavendish square W) —5.30 P.M. Specimens:—Mr T Walker: (1) Traumatic Cephalhydrocele (2) Punctured Fracture of the Skull —Dr C W Chapman Dilatation of the Stomach in a Child of Eight Years Paper —Dr G A. Sutherland and Mr T Walker A Case of Syphilitic Endarteritis and Nephritis in an Infant.

LECTURES, ADDRESSES, DEMONSTRATIONS, &C

ONDAY (12th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street W C.) —4 P.M Dr J F Payne Clinique. (Skin.) 5 15 P.M. Dr S Taylor Diseases of the Cardiac Valves

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W) —5 P.M Dr A. Saunders: Mental Affections in Childhood

UESDAY (13th) —MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22, Chenies street W C) —4 P.M Dr H. Campbell: Clinique. (Medical.) 5 15 P.M Dr S Taylor: Diseases of the Cardiac Valves

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen square, Bloomsbury) —3.30 P.M. Dr C E. Beevor: Cases of Functional Paralysis.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W) —5 P.M. Mr Paget: Whitlow Cellulitis

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street, W) —5 P M Prof A. Macfadyen: The Physiology of Digestion.

EDNESDAY (14th).—MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22, Chenies-street, W C) —4 P.M. Mr P J Freyer: Clinique. (Surgical.) 5 15 P M. Dr W S A. Griffith The Diagnosis of Pregnancy

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W) —5 P.M. Dr McAdams Eccles: Surgical Anatomy

HURSDAY (15th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W C.) —4 P M. Mr J Hutchinson jun: Clinique. (Surgical.) 5.15 P.M Dr H. Campbell: Cerebral Hæmorrhage.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W) —5 P.M. Mr Baldwin Treatment of Some Injuries and Emergencies.

NORTH EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N).—4 P.M. Clinical Lecture:—Dr G P Chappel: Broncho-Pneumonia in Children and its Treatment

CHARING CROSS HOSPITAL.—4 P.M Mr Boyd Demonstration of Surgical Cases. (Post-Graduate Course.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W C) —4 P.M. Dr Still Empyema.

FRIDAY (16th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W C) —4 P M. Dr D Grant: Clinique. (Ear) 5 15 P.M. Dr H. Tilley: Purulent Nasal Discharges.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W) —5 P.M Dr R Jones Mental Unsoundness amounting to Insanity

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle street W) —9 P.M. Prof Dewar Low Temperature Investigations

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EDITORIAL NOTICES

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* ' TO THE EDITORS and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession may be sent direct to this office

Lectures, original articles, and reports should be written on one side of the paper only AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners

Local papers containing reports or news paragraphs should be marked and addressed ' To the Sub Editor '.

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed ' To the Manager '*

We cannot undertake to return MSS. not used

MANAGER'S NOTICES

THE INDEX TO THE LANCET

THE Index to Vol II of 1902, which was completed with the issue of Dec 27th, and the Title page to the Volume, were given in THE LANCET of Jan 3rd.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1902 are now ready Bound in cloth, gilt lettered, price 18*s*, carriage extra.

Cases for binding the half-year's numbers are also ready Cloth, gilt lettered, price 2*s*, by post 2*s*. 3*d*

To be obtained on application to the Manager, accompanied by remittance.

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W C, are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

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SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions Any demand for increased rates on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues, and Agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND

METEOROLOGICAL READINGS

(*Taken daily at 8.30 a m. by Steward's Instruments*)

THE LANCET Office Jan. 8th, 1903

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb	Dry Bulb.	Remarks at 8.30 A.M.
Jan 2	29 44	S	0·06	55	53	34	45	46	Raining
3	29 44	S W	0 10	66	52	46	47	49	Cloudy
4	29 70	S W	0·03	60	52	49	49	52	Cloudy
5	29 63	S W	0 84	58	54	50	52	52	Raining
6	29 48	S.W	0 12	59	54	51	51	53	Cloudy
7	29 23	S.W	0·05	74	54	48	46	49	Cloudy
8	29·70	S W	...	46	46	40	39	41	Foggy

During the week marked copies of the following newspapers have been received —*The Observer and Chronicle (for Hants and Dorset) Warrington Guardian St Pancras Gazette, Yorkshire Post Sussex Daily News Colchester Gazette Belfast News Letter Birmingham Post Aberdeen Free Press (Weekly) Folkestone Telegraph Brighton Gazette Surrey Advertiser Bristol Mercury Dublin Express Bradford Observer Morning Post, Essex Herald, Hereford Mercury Daily Graphic, Sanitary Record Local Government Chronicle, Mining Journal Hertfordshire Mercury Burton Chronicle Dumfries and Galloway Courier and Herald Walsall Observer Halifax Evening Courier &c.*

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&c. These cases must be treated on the lines already indicated.

6. The last class of difficult and bad subjects comprises those who give trouble to the anæsthetist without any discoverable cause. As our clinical knowledge increases these cases become more and more exceptional and it is to be hoped that as time goes on the class will cease to exist altogether I have notes of a few of these interesting and exceptional cases and they certainly seem to my mind to warrant the retention of the term "idiosyncrasy" As an example I may mention that I have known certain peculiar and highly inconvenient nervous phenomena occurring in connexion with the use of nitrous oxide to be displayed by more than one member of a family Unfortunately the opportunities one has of investigating these peculiar cases are very limited, whilst the history obtainable from patients or their friends is often unreliable. I regret to say that the data at my disposal are not sufficient to enable me to give you any useful information concerning patients of this class.

In concluding these imperfect lectures in which I have attempted to direct your attention to an aspect of the subject of anæsthesia which has not perhaps attracted sufficient notice, let me say that I hope I have not given you the impression that every case with which you will have to deal will be a difficult one. Difficult and bad subjects are comparatively rare, but when considered in the aggregate they admit of some such classification as that which suggested itself to me. I can only add that if I have helped you to understand any exceptional cases that may already have come under your notice, or if I have succeeded in fixing within your memories mental pictures of those subjects who, when you leave your hospital and go into practice, are most likely to give you trouble, I shall feel that the time that has been so pleasantly spent in preparing and delivering these lectures has not been altogether wasted.

A Clinical Lecture

ON

THE INTRACRANIAL COMPLICATIONS OF SEPTIC EAR DISEASE

Delivered at the Medical Graduates College and Polyclinic on June 15th 1902,

BY FREDERIC EVE, F R C S ENG,

SURGEON TO THE LONDON HOSPITAL CONSULTING SURGEON TO THE EVELINA HOSPITAL AND MEMBER OF THE COURT OF EXAMINERS ROYAL COLLEGE OF SURGEONS OF ENGLAND

GENTLEMEN,—I propose to consider with you to-day the intracranial complications following suppurative or septic inflammations of the middle and internal ear and mastoid antrum. It is unnecessary to speak of the important relations which these structures have with the meninges, the lateral sinus, and the brain itself This being a clinical lecture I shall make no apology for illustrating my remarks as far as possible by reference to cases which have come under my care.

Pachymeningitis externa —The first and least important complication to mention is pachymeningitis externa—a thickening of with formation of villous granulations on, the external surface of the dura mater. It is most common over the sigmoid bend of the lateral sinus and is frequently associated with the formation of pus between the bone and dura mater I observed this change over the anterior surface of the temporal bone in a recent case of temporo-sphenoidal abscess It may be regarded as a danger signal. A similar change may exist on the inner surface of the dura mater and thus septic organisms may pass to the lymphatics of the pia mater and brain leading to meningitis or cerebral abscess.

Extradural abscess —The formation of pus between the skull and dura mater is much commoner over the sigmoid sinus but may exist over the roof of the tympanum or antrum or over the internal auditory meatus. When in suppurative mastoiditis the antrum is dilated it frequently happens that the thin partition between this cavity and the lateral sinus is absorbed, the sinus being then bathed in pus I have met with this condition many times and have been surprised at the slight character of the symptoms, probably because the pus is not shut up under considerable pressure. Last year I performed mastoidectomy on a lady the day after she had travelled from Gloucestershire. The mastoid antrum was greatly enlarged and filled with pus, and the lateral sinus exposed for from one to one and a quarter inches, yet her only symptoms were severe pain over the mastoid region and side of the head, moderate pyrexia, and somewhat profuse otorrhœa. She made a rapid recovery without further complication, and this is the usual sequence

The symptoms associated with suppuration around the sigmoid sinus when its bony walls are intact are somewhat more severe, yet not so marked as might be anticipated, seeing that pus is confined under pressure in immediate contact with one of the largest venous channels in the body Of five cases the notes of which I have before me in not one was a *rigor* observed. The usual symptoms are those of acute mastoiditis—local pain, hemicrania referred to the posterior half of the side of the cranium and sometimes located just below the parietal eminence, perhaps tenderness on percussion or local œdema behind the auricle, otorrhœa or history of recent otorrhœa, and finally moderate pyrexia. In addition there are sometimes severe constitutional disturbance with vomiting giddiness, and mental confusion. In one patient, a Post Office sorter, aged 23 years, who was under observations 12 days before the operation, the symptoms were of such a character as to suggest cerebral abscess. He had otorrhœa on the left side when a boy This stopped and recommenced a fortnight before he came under observation A week later he complained of giddiness and confusion in recognising addresses on letters, with occasional unsteadiness of gait Finally, vomiting came on with the usual symptoms of acute mastoiditis. On admission haziness of the discs was observed, but no actual neuritis The temperature was subnormal to 99° F and the pulse was from 64 to 67 He recovered completely after mastoidectomy and evacuation of a considerable amount of pus around the sinus

The presence of pus around the sigmoid sinus fortunately very frequently reveals itself after the mastoid antrum is exposed by the exudation of pus from a small channel opening on the posterior wall of the mastoid antrum It is probably a small venous channel and if followed up with the gouge or burr leads directly to the purulent collection. I have repeatedly been led to discover an extradural abscess by its means. An extradural collection of pus above the anterior surface of the petrous bone may reveal its presence on examination with the otoscope by the dripping of pus through an opening in the roof of the attic into the tympanum. This symptom may also be present in temporo-sphenoidal abscess.

Treatment.—In all these cases mastoidectomy is required. A collection of pus around the sigmoid sinus can be readily evacuated by enlarging the opening in the temporal bone backwards in the direction of the base line. If it be situated above the tegumen it can be opened by enlarging the osseous cavity upwards in the direction of the superior wall of the bony meatus.

Thrombosis of the lateral sinus.—The deposition of clot in the sigmoid sinus most frequently follows the formation of pus around it or the growth of septic granulations from the mastoid cells through the bony partition which separates them from the sinus Or it may result from the extension of a septic thrombus along small veins which pass from the tympanum and mastoid antrum directly into the lateral sinus Lastly it may rarely result from extension of a clot primarily originating in the superior petrosal sinus. The symptoms produced are general and local. The general symptoms are those resulting from breaking down and dissemination of septic clot and may be summed up as those of pyæmia superadded to those of acute mastoiditis—rigors pyrexia with marked fluctuations of temperature, vomiting, with in some instances symptoms of cerebral disturbance. In the majority of cases the prominent symptoms are referable to the occurrence of septic embolism in the lungs In others the septic intoxication manifests itself in profuse diarrhœa, meteorism, abdominal pain, extreme exhaustion and a general condition which has been mistaken for enteric fever Finally, the thrombosis may be complicated with meningitis the symptoms of which mask those of the sinus lesion.

rapidly takes place. In extreme cases of alcoholic indulgence nitrous oxide may be practically useless as an anæsthetic, at all events from the surgeon's point of view I have, in fact, in one or two instances been obliged to resort to ether in order to obtain sufficient anæsthesia for a simple dental operation. The worst cases are those in which the patient, apart from the question of alcoholism, is himself a difficult subject.

I have been very interested in the influence which the excessive use of tobacco undoubtedly has in disturbing and modifying the usual phenomena of anæsthesia. Great smokers may be quite as difficult to anæsthetise as great drinkers Repeated swallowing, hesitating and suspended breathing, the excessive secretion of mucus, inconvenient muscular rigidity, especially about the jaws and neck, obstructive stertor, dilated pupils, and exaggerated reflexes are common incidents in the anæsthetisation of these patients So much anæsthetic may be needed to produce a proper degree of anæsthesia in an excessive smoker that the toleration may be erroneously attributed to alcohol. In two cases of which I have notes—one that of a dark, muscular man 45 years of age who had smoked 30 cigars during the three days preceding the operation, and the other that of a man of about the same age who "always had a pipe in his mouth except at meal times"—I was obliged to push the anæsthetic to an almost dangerous degree before I could obtain anything like a good anæsthesia In both cases ether was taken so badly that I had to change to chloroform. In another case, that of an officer in the army who smoked to excess, I had somewhat similar difficulties coupled with asphyxial symptoms from jaw spasm. But as this patient had given so much trouble to another anæsthetist that he (the anæsthetist) had had to deprive him of nine teeth before he could get him to breathe, my task was a comparatively easy one One of the most difficult patients I have ever had to anæsthetise was a great smoker He was a middle aged man, a waterman, and an in patient of this hospital He had barely audible heart sounds and a slow pulse. He smoked "plug" tobacco Ether was very badly borne and chloroform, to which I changed, produced no better result. Intense jaw spasm, mucous rattling with expiration, cyanosis, and general rigidity combined to make the administration very difficult, and I am bound to confess that I was unable by any device to obtain an anæsthesia which satisfied me. Fortunately such cases are exceedingly rare The intensity of the jaw spasm in these smokers is interesting It seems to suggest that by the suction, puffing and other movements essential to the smoking of a pipe, cigar or cigarette some muscular hypertrophy takes place, the result being that during the stage of general muscular rigidity, which is usually marked in these subjects, considerable spasm of the muscles about the jaws and floor of the mouth occurs

5 From a careful study of the preceding classes of difficult and bad subjects it will, I think, be clear to you that if in any given patient we find associated the characteristics of one or more of these four classes our difficulties will be proportionately greater With the object of making my meaning clear I have up to this point endeavoured to present to you pictures of patients who are difficult or bad subjects by reason of their having a single distinguishing feature or peculiarity But in practice these pure types are not common Thus, some of our greatest athletes have nasal obstruction, and a combination of a highly developed muscular system, a blocked nasal air way, and good teeth may readily give trouble unless precautions are taken. Young officers in the army, of athletic build, may by the excessive use of tobacco prove to be very unsatisfactory subjects even for nitrous oxide. The combination of muscular development, nasal obstruction, and excessive smoking will still further embarrass the inexperienced anæsthetist. When we come to add what I may term the alcoholic element the combination becomes even more unwelcome. But in all cases such as I have just mentioned you will find that by providing for, and maintaining a free air way and by steadily administering large doses of ether till you attain the desired degree of anæsthesia you will overcome your difficulties. Powerfully built young men who have drunk very freely may require so much anæsthetic to abolish reflex movement that the spasmodic tongue retraction—which in certain subjects of this type takes place in deep anæsthesia—actually occludes the air way and the anæsthetist may find himself in a dilemma. In order to maintain a free air-way the tongue must be drawn forward, whilst chloroform, the only possible anæsthetic, is freely given. When the type of your patient changes, so to speak, from the young, thin, and muscular to the young and fat, or young, fat, and muscular, and when such complications as nasal obstruction, good teeth, a receding lower jaw, alcoholic indulgence, and excessive smoking are present, considerable difficulties will be liable to arise. It is in such cases as these that the use of the nitrous oxide ether sequence may be attended by trouble, more especially if no mouth prop has been inserted before commencing the administration and if the bore of the inhaler be narrow The best plan, as a rule, is to employ the C E -ether sequence or if the ether be badly borne the C E. ether chloroform sequence. If the C E mixture or chloroform be used throughout it is difficult or impossible to avoid struggling Should the anæsthetist especially wish to administer nitrous oxide and ether a mouth prop must be inserted and a wide bore inhaler used, in which circumstances a fairly good result may generally be relied upon Somewhat allied to patients of this type are middle-aged or elderly men who, from having eaten and drunk too freely and from having lived sedentary lives, have become corpulent and breathless on exertion Such patients are not, so far as my experience goes, quite so difficult to manage as are younger subjects. Speaking generally, the best line of treatment to be adopted is gradually to administer the C E mixture, to be most careful to provide for and to maintain an oral air-way throughout, repeatedly to withdraw the anæsthetic during the stage of rigidity and to substitute chloroform for the mixture should indications of ether irritation present themselves The most critical juncture with such subjects occurs during the stage of rigidity and it may be necessary at this stage to adopt one or other of the numerous little devices which are available for preventing an undesirable suspension of breathing in order to avert any risk of syncope. Finally, we come to the worst subjects of all—those who not only present difficulties by reason of their belonging, when in their usual state of health, to difficult types, but who present, in addition, difficulties dependent upon some recently acquired and grave constitutional disorder Thus when a stout breathless old man who has smoked and drunk to excess and has for years suffered from nasal polypi is seized with symptoms of acute intestinal obstruction, no worse subject can be imagined. The issue of such a case depends largely on the skill of the anæsthetist. One of the most important points in these anxious cases is the posture of the patient. The nearer he can be brought into the lateral position the better, for in this position the ejection of the contents of the stomach will be comparatively free from risk. It is often possible by placing pillows under one shoulder to obtain the advantage of the lateral posture without interfering with the position of the pelvis. The mouth should be kept open by a Mason's gag, mucous or other fluids within the fauces should be repeatedly sponged away, and a moderate anæsthesia obtained. Generally speaking, an ether and chloroform mixture, suitable to the particular case should be employed As another instance of an exceedingly bad subject I may mention the alcoholic man of corpulent or burly build, who, having been seized with pleuro pneumonia, requires an anæsthetic for an operation for empyema. In certain desperate cases of this class the administration of even a small quantity of chloroform may prove fatal, the patient dying, not from the toxic effect of the drug but from cardiac syncope dependent upon the slight additional embarrassment of breathing incidental to the excitement stage. Although apparently opposed to all recognised principles I hold that in such cases the safety of the patient is best consulted by employing the A.C E. or C E mixture for the first half minute, then substituting for it ether on a semi open inhaler, and subsequently keeping up merely a light anæsthesia. One of the worst subjects I ever had to anæsthetise was a youth 17 years of age who had been an imbecile from birth, and who had, prior to the operation at which I assisted, suffered from diphtheritic paralysis and mitral disease. He now had pyopneumothorax and was sitting up, with a very feeble pulse and in a state of much dyspnœa. I adopted the treatment to which I have just referred and free pleural drainage was successfully established As instances of similarly desperate cases I may mention patients who, being originally bad subjects, have become worse subjects by reason of such conditions as angina Ludovici, septic pharyngitis, tonsillitis, laryngitis,

the posterior surface of the pons at the situation of the nuclei of origin of these nerves. There was also a cheesy nodule in the middle lobe of the cerebellum. It is probable that the meningitis was recent and of septic origin, the tuberculous formation being a coincidence In another case in which my opinion was asked a child, suffering evidently with meningitis, had symptoms suggestive of temporo-sphenoidal abscess—i e., otorrhœa on one side and paresis of the face and upper extremity on the opposite side. A diagnosis of tuberculous meningitis was made and this proved to be correct, the paresis being due to a mass of tuberculous granulations in the lower part of the Sylvian fissure

Cerebral abscess—This occurs in two situations in ear disease the temporo-sphenoidal lobe and the cerebellum Certain general symptoms are common to abscesses in both situations vomiting having no relation to food, intense pain sometimes of a paroxysmal character, foul breath, rigors varying from slight chill to violent shivering, giddiness, and lethargy The latter is one of the most important symptoms The patient lies in a somnolent condition approaching that of coma, but can be roused, answers questions rationally, although the answer is delayed. There may be want of sustained attention The temperature is usually characteristic. From the septic type which accompanies mastoid inflammation it suddenly falls to normal, and during the late hours of the night and early morning is often slightly subnormal. The pulse and respirations are generally slow especially in large abscesses but in all the examples (with two exceptions) of cerebral abscess that I have met with the pulse has been rapid, about 120, although the temperature has usually conformed to the characteristic type. Optic neuritis is present in the majority of cases. The following case illustrates some of the special features of abscess of the temporo-sphenoidal lobe.

A woman, aged 24 years, was first seen by me at the London Hospital at midnight on Feb 20th of last year Her history was that at Christmas the ossicles were removed from the right ear and two weeks before admission a polypus was destroyed by a surgeon at her own home After the latter operation the temperature rose and she was supposed to have erysipelas. There were profuse discharge from the right ear and at times delirium, but neither vomiting nor rigors Her condition on admission was as follows. There were lethargy and inattention to questions which appeared to be mainly due to the deafness, extreme œdematous swelling on the *right* side of the head, face, and neck, purulent discharge from the *right* ear and slight right facial paresis. The pupils were equal and mobile, there was no optic neuritis. The knee-jerks were brisker on the left than on the right side. No paralysis of the limbs was observed. The pulse was 72 and the temperature was 101 6° F Operation—The mastoid antrum was opened in the usual way and a large accumulation of pus was let out from beneath the temporal aponeurosis and pericranium. There was no thrombosis of the lateral sinus, but pachymeningitis externa was observed on the dura mater covering the anterior surface of the petrous bone The next day she was quite bright and talked readily The improvement continued until the morning of the 23rd when the pulse fell from 96 to 56 and the temperature suddenly to 97 4° She had become extremely drowsy and I observed slight paresis on the left side of the face of the cortical type, the orbicularis oculi being unaffected. There was also marked weakness of the left upper extremity, the grasp of the left hand being five, while that of the right was 75 A temporo-sphenoidal abscess was diagnosed A second operation was performed. The incision previously made was prolonged vertically upwards above the external meatus and a considerable portion of the squamous bone was removed with Hoffmann's forceps in the same direction. The dura mater which bulged through the opening was incised, and a large abscess was at once found by inserting a trocar It was very freely opened irrigated to remove sloughs of brain tissue and a drainage tube was inserted I suspected that there might be another abscess cavity in the neighbourhood and therefore inserted my finger into that which was found and passed a trocar into the brain substance in the neighbourhood but did not open the second cavity The patient improved after the operation but on the 26th (three days later) symptoms of compression returned, the pulse remained slow and the temperature subnormal. Operation was performed a third time The opening in the skull was again prolonged upwards for another two inches so that its upper limit was about two and a half inches above the upper margin of the bony meatus. A second still larger abscess was opened. The cavity extended inwards for at least two inches and was about two and a half inches in diameter On the following day the mental torpor was much diminished the grasp of the left hand was much stronger the pulse was from 110 to 120, and the temperature was 99·2° On March 10th the patient had steadily improved, the grasp of the left hand was 30 and the right was 70, left facial paresis was still present but lessening The discharge from the abscess soon ceased and a hernia cerebri developed which sloughed for a time but ultimately became covered with healthy granulations The discs remained quite clear Her subsequent progress was only interrupted by the formation of a small collection of pus under the temporal fascia and she is now in good health

In another case of right temporo-sphenoidal abscess in a man, aged 21 years, the symptoms were precisely similar—i.e., there were paralysis of the left face and paresis of the left hand and arm also twitching of the right side of the face. Immediately before operation the pulse was 64 and the temperature ranged from 100° to 101° F There was no optic neuritis, although the right disc was blurred The subsequent progress of the case showed that septic inflammation had already extended to the lateral ventricle The temperature rose to 103° he became noisy and delirious with retraction of the head, and finally died three days after the operation. The right lateral ventricle contained purulent fluid and communicated with an abscess cavity in the posterior part of the temporo-sphenoidal lobe Extending from the abscess cavity downwards was a channel which opened on the under surface of the temporo-sphenoidal lobe above the tegmen.

Paresis of the face and upper extremity on the opposite side, so often present in temporo-sphenoidal suppuration, is due to the abscess extending upwards or upwards and inwards and pressing either upon the cortex of the ascending central convolution or upon the nerve fibres as they pass from it, so that the face will be first affected, then the arm while the leg escapes. Among other symptoms often present and not existing in the cases above related may be mentioned dilatation with immobility of the pupil on the same side and paralysis of the third nerve on the same side. Deafness on the opposite side from disturbance of the auditory centre has also been observed, and if the abscess be situated on the left side aphasia may exist from pressure upon the posterior end of the third frontal convolution The patient as a rule lies with the limbs flexed and the affected side undermost, a position just the reverse of that observed in cerebellar abscess

Cerebellar abscess—The following case illustrates nearly all the typical features of this lesion. In August, 1900, I saw in consultation with my colleague Mr Mark Hovell, an employé aged 43 years, in the telegraph service abroad who had been sent home on account of acute ear trouble. He had noticed discharge from the *left* ear at intervals since the age of 14 years About June 24th he began to suffer from cephalalgia and on August 7th he left his employment for London where he arrived in the following condition There was extreme lethargy with irritability when roused, the breath was offensive, he lay on his right side and immediately turned over to that side when placed on his back The pupils were of moderate size, sluggish, and there was distinct optic neuritis of both discs but most marked on the side opposite to the lesion. The grasp of the left hand (that on the same side as the lesion) was distinctly weakened but no alteration of the face or leg was observed and the knee-jerks were natural and the same on both sides The temperature was 96 4° F but the pulse was 120 Left cerebellar abscess was at once diagnosed. Operation was as follows The evacuation of the abscess being the most important point the ear itself was left for a future procedure The cerebellum and lateral sinus were exposed by applying a trephine one and a quarter inches behind the posterior margin of the meatus in the direction of the base line. There was a small collection of pus around the sigmoid sinus, the dura mater over the cerebellum was much bulged extremely tense, and without pulsation. On inserting a trocar in a direction forwards and inwards an abscess was found containing four or five ounces of pus The lateral sinus for some distance was thrombosed and its wall at one point was destroyed. The

Local signs —The only distinctive local signs are "cord like" induration along the course of the internal jugular vein due to extension downwards of the clot and peri phlebitis, and tenderness at the apex of the posterior triangle resulting from thrombosis or phlebitis of the posterior cervical veins which communicate with the lateral sinus Œdema of the integument over the mastoid process is also said to be often present, but it probably is mainly due to the co-existing ostitis It should be borne in mind that the discharge is prone to cease at the onset of thrombosis and if the case has only just come under observation, the surgeon may hold his hand in doubt if the case is really one of ear disease. Cases of otorrhœa and mastoiditis with intracranial complications are apt to be associated with quite insignificant local symptoms of inflammation, because many are instances of long standing otorrhœa which has resulted in sclerosis of the mastoid bone. Consequently the antrum is deeply placed, covered often by a layer of sclerosed bone from three quarters to one inch thick, it may be this circumstance which determines the extension of the septic process inwards instead of outwards It is evident that the *characteristic* symptoms of sinus thrombosis are only present in the majority of instances when the disease has reached a stage at which treatment is almost hopeless. Our aim should be to recognise the disease before the clot has commenced to disintegrate. In four cases which I have before me this was accomplished In all of them pus existed around the sigmoid sinus and was the cause of the thrombosis. Hence the symptoms may mainly be referred to it. In not one of the four cases was there a rigor In three vomiting was a prominent symptom In two there was drowsiness, in two there was incontinence of urine, and in two cases there was tenderness or pain along the course of the internal jugular vein In any case, therefore, in which pyrexia, with vomiting, drowsiness, or incontinence exists the lateral sinus should be exposed This can be done in the manner mentioned in describing the treatment of extradural abscess around the sinus A clot can be recognised readily by palpation Where doubt exists as to the presence of clot the sinus should not merely be punctured with a trocar but should be opened Free bleeding follows but is effectually stopped by a compress of gauze When a clot is clearly present the internal jugular vein should be ligatured first and subsequently the sinus should be incised and the clot removed. If it be breaking down it may be necessary to flush the jugular vein by injecting from the skull into the wound in the neck. The patients in all of the four cases above mentioned recovered excepting one who died from meningitis

Meningitis —Septic lepto meningitis is so common that I need not trouble you by detailing the symptoms It may, however, be of interest to quote cases of the rarer forms of meningitis sometimes associated with ear disease

Serous meningitis —The following is an example of serous meningitis with internal hydrocephalus The patient, a girl, aged two years, was admitted to the medical wards of the London Hospital on July 19th, 1895, with retraction of the head which had existed for two weeks, vomiting and sore-throat. The pupils and fundi were natural On August 1st an offensive discharge from the nose was observed. On the 5th I was asked to examine the eyes and found the left disc normal and the right somewhat blurred The child appeared better and the retraction of the head had disappeared On the 10th discharge from the right ear was first noticed, with slight tenderness over the mastoid. The head was more retracted and the temperature was normal On the 16th she was transferred to the surgical side, when the right mastoid was opened and pus was found The membranes and brain were then explored with a negative result. The child died on the 20th and at the necropsy the lateral ventricles were found to be enormously distended with clear fluid The choroid plexuses were thickened and flocculent. There was no evidence of purulent meningitis or tubercle. This case occurred seven years ago At the present time I should have completed the operation by tapping the lateral ventricle and on finding excess of fluid might have established a permanent drain between the ventricular cavity and the subdural space, after the manner suggested by Dr Leonard Hill s researches and carried out by Dr Sutherland and Mr Watson Cheyne.

Posterior basal meningitis —The prominent symptoms of this condition are headache vomiting rigidity or contraction of the muscles of the back of the neck, leading to retraction of the head, and convulsions. Although the disease often runs a very chronic course optic neuritis is absent in the majority of cases (Barlow and Lees) The lesion consists, as a rule, in a serous or sero-purulent exudation at the posterior part of the base of the brain, the inferior surface of the pons and cerebellum, and the fourth ventricle. Internal hydrocephalus often results from matting of the membranes over the floor of the fourth ventricle and may be indicated in infants by bulging of the anterior fontanelle. The clinical details of this affection are well illustrated by the following case

Purulent otitis media complicated with chronic basal meningitis —A boy, aged 12 years, was admitted under the care of my colleague, Dr A. E Sansom, on March 27th 1897, with a history of headache, vomiting, and diarrhœa for 14 days. The vomiting continued every day except when he lay quite still, but the pain in the head was the chief trouble. The child was extremely apathetic and drowsy and the temperature was only slightly raised. On March 29th slight purulent discharge from the right ear was noticed, and a history of previous otorrhœa on the same side was obtained The extreme drowsiness, headache, and vomiting, with absence of pyrexia, suggested abscess of the brain There was no definite optic neuritis but the discs were a little pink and their margins were slightly blurred Operation was performed on April 3rd. The right mastoid antrum contained no pus, but there were suppuration of the middle ear and a perforation of the tegmen tympani The lateral sinus, temporo sphenoidal lobe and cerebellum were explored with a negative result A dura mater separator was also passed along the anterior surface of the petrous bone but no pus was evacuated He did not vomit again until the fourth day after the operation and then only occasionally, but the general condition did not improve. Later, rigidity of the muscles of the back of the neck, with retraction of the head, developed and on April 27th, six weeks after the commencement of his illness, it was noted that the slight changes in the discs previously recorded had developed into distinct double optic neuritis The temperature remained low, with occasional irregular rises, until April 22nd, when it became persistently high, and he died on May 2nd, seven weeks from the beginning of his illness

The necropsy showed suppurative meningitis limited to the posterior part of the base of the brain There is little doubt that the meningitis existed before the operation and that it was secondary to the ear disease. It was, perhaps, first of the serous type, and the persistent high temperature latterly may indicate the onset of suppuration.

Time will not permit me to discuss the pathology of posterior basal meningitis. You will recall that Barlow and Lees have shown that the infection in the majority of cases reaches the brain by means of the ear They suggest that in all cases the membrana tympani should be tapped in the early stage of the disease. If purulent otorrhœa be present it is quite clear that a complete mastoidectomy should be performed Attempts, for the most part unsuccessful, have been made to relieve the internal hydrocephalus often present in this affection by exposing and draining the floor of the fourth ventricle When marked intracranial pressure exists relief has been obtained by tapping the lateral ventricle.

Epidemic cerebro-spinal meningitis may closely resemble posterior basal meningitis due to ear disease In the former Kernig's sign is present and in the latter absent except in those cases in which the meningitis has extended to the cervical portion of the cord. Lumbar puncture in cerebro-spinal meningitis yields a large quantity of fluid in which the bacillus intracellularis may be demonstrated It should also be borne in mind that tuberculous meningitis with accidentally concurrent otorrhœa may easily be mistaken for meningitis due to septic ear disease. The following case so aptly illustrates this point that I will briefly quote it.

An infant aged six months, was admitted to the Evelina Hospital with purulent discharge from the right ear, general convulsions blurred discs, and complete paralysis of the right facial and of the right sixth nerves Later there was some retraction of the head It appeared probable that the facial nerve was paralysed owing to the ear disease and the sixth nerve from some basal meningitis Mastoidectomy was therefore performed and pus was found The membranes of the brain were incised At the necropsy there was a little lymph at the base of the brain, a mass of soft yellowish lymph in the right Sylvian fissure, and the lateral ventricles were distended. The paralysis of the sixth and seventh nerves was, however, due to a small tuberculous tumour on from St. Thomas's Hospital and the Hospital for Sick Children, Great Ormond street, by Acland and Ballance 11 were temporo-sphenoidal and 24 cerebellar In the first set of statistics, therefore, cerebral abscesses are twice as frequent as the cerebellar, and in the second set the reverse existed. Further, Körner's statistics show that cerebellar abscesses are rare before the age of 10 years and relatively common in the second and third decades, especially the former, whereas the statistics of the Hospital for Sick Children show that in six cases occurring during the last 35 years four were cerebellar and all the patients 10 years of age or under Two only were temporo-sphenoidal, the ages of the patients being 10 and 11 years. The statement generally accepted that abscess from ear disease is twice as frequent in the cerebrum as in the cerebellum therefore requires investigation if not revision.

In dealing with the diagnosis of the group of diseases just described it is only possible to fix upon types The lesions are often combined as shown by the cases related. A sinus thrombosis may be complicated with meningitis or with cerebral abscess, or again abscess with meningitis. The more striking and critical symptoms of meningitis will then predominate. Unfortunately, in many cases the conditions existing can only be arrived at by systematic exploration of the sinus meninges, temporo-sphenoidal lobe, and cerebellum. This procedure is usually the sequel to mastoidectomy and may be carried out by prolonging the mastoid opening backwards in the direction of the base line for a distance of an inch to an inch and a quarter behind the posterior margin of the meatus and then removing bone with Hofmann's forceps in a direction upwards and forwards to expose the temporo-sphenoidal lobe and downwards and backwards to expose the cerebellum. The presence of abscess is usually indicated by bulging of the dura mater with absence or diminution of pulsation. If nothing be found and symptoms of intracranial pressure exist, the operation should be completed by tapping the lateral ventricle with a fine trocar In those cases of abscess where localising symptoms are present the lesion may be approached by trephining directly over the abscess. It is of great importance to open the abscess freely and to remove by flushing the sloughs of brain tissue which are commonly present. In flushing the cavity due precautions should be taken to allow free exit for the fluid injected. More than one abscess cavity may exist or a second may form later

Let us give all honour to the pioneers in this department of surgery whose insight and enterprise have enabled us to treat these formerly fatal affections with something approaching satisfactory results. It remains for us to study in detail the fields which they have opened up

In conclusion, gentlemen, permit me to thank your council for the honour which it has conferred upon me in requesting me to deliver this lecture and yourselves for the indulgent attention which you have accorded to me.

A Lecture

ON

CHRONIC OBSTRUCTION OF THE CÆCUM AND ASCENDING COLON

Delivered before the Sydenham Medical Society on Nov 20th 1902

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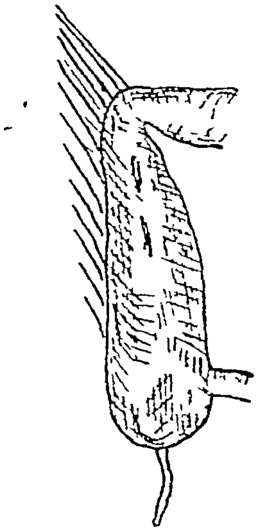
GENTLEMEN —In a paper published in the *Clinical Journal* of June 5th, 1901 entitled "Moveable Kidney" I drew attention for the first time to a condition of the cæcum and ascending colon which is not infrequently associated with moveable kidney and which results from chronic constipation. I make no apology for again calling attention to the matter since its recognition is of vital importance and the frequency of its occurrence is most striking Inflammation of the appendix is by no means an uncommon complication of the damming up of fæces in the cesspool of the intestinal tract produced either by fæcal matter being driven into the appendix or by obstruction to the free exit of its normal secretion which is probably formed in excess owing to its functions being exaggerated by the irritation or even inflammation of the cæcum and by swelling of its mucous membrane

The condition to which I wish to call attention is an interference with the free passage of the intestinal contents through the hepatic flexure. This practical obstruction is brought about by the development of a mesentery which is attached to the outer surface of the cæcum, ascending colon, and hepatic flexure Should the cæcum become at all distended its movement in an inward and upward direction brings about such a kink in the hepatic flexure as to render the passage of fæces through it exceedingly difficult and sometimes impossible, in which latter case it produces symptoms of acute intestinal obstruction It may occasionally happen that the cæcum passes sufficiently upwards and inwards to produce what is called a volvulus, rotation taking place around the general axis of the new mesentery and of the meso-cæcum and meso-colon. In order to render the description as clear as possible I have attempted to elucidate it by a diagram Fig 1 represents the cæcum, ascending colon, hepatic flexure, and commencement of the transverse colon The appendix and end of the ileum are seen The mesentery is indicated to the left of the cæcum by linear shading which represents the direction in which it exerts traction. The marks on the front of the ascending colon are bridles formed by the shortening up of the longitudinal fibres. These are so marked in some cases as to require to be partly divided in order to restore the colon and cæcum to their normal position and their capacity for performing their functions efficiently A little consideration of this state of affairs shows that the new mesentery is developed partly with the object of supporting the loaded cæcum in the erect posture of the trunk and partly to obviate its excessive inward displacement and the formation of a volvulus. The mesentery is strongest at its upper part where it is reflected from the surface of the posterior abdominal wall external to the kidney and from that organ as well. This relationship of the mesentery at its point of greatest traction to the kidney and the ilio-hypogastric, ilio-inguinal, and last dorsal nerves is one of considerable importance clinically Running in the mesentery are numbers of blood vessels some of which may be sufficiently large to require the application of a ligature before division. The examination of the connexion of the new mesentery with the large bowel explains how it is that in the recumbent position the obstruction produced by the kink is relatively small as compared to the mechanical disability which exists in the erect position and especially when the cæcum is loaded.

FIG 1



Represents the cæcum ascending colon hepatic flexure and commencement of the transverse colon

As one would expect the chronic obstruction of the flexure internal jugular vein was first tied and the clot was subsequently removed. The discharge ceased on the third day after the operation and his mental condition soon become normal but for a time the optic neuritis progressed. Flame shaped hæmorrhages, not present at the time of the operation, appeared in the right eye and later to a slight extent in the left. A fortnight after the operation (August 31st) the grasp of the left hand was still distinctly weaker than the right, showing that the paresis was not simply due to pressure downwards as Macewen suggests, but to encephalitis. When he had quite recovered from the first operation complete mastoidectomy was performed with success for the cure of his otorrhœa He returned to work and remained well for a time, but a year after the operation he was stated to be suffering from melancholia.

Macewen divides the phenomena accompanying abscess of the brain into three stages first, the initiatory stage, secondly, that of the fully formed abscess, and thirdly, the various terminations of the affection when uninterrupted by treatment. The above case was seen in the second period The first or initiatory period is rarely observed by the surgeon and therefore a reference to the following case which I watched throughout may be of interest.

On June 30th, 1898, I saw a girl, aged 14 years, with Dr Brodribb and Dr Christopherson Three weeks previously she went to the seaside suffering from tonsillitis which was followed by earache and otorrhœa on the right side. The temperature was at first of a septic type, but five or six days before I saw her it fell, varying between 97 5° and 100° F There was extreme pain on the right side of the head and for the last three days she had occasionally vomited, had also been drowsy, and on the 29th she became distinctly lethargic and only spoke when roused On the 30th the mastoid antrum was opened and was found to be much dilated and filled with pus. The sigmoid sinus was normal. On July 1st vomiting had ceased and there was distinctly less drowsiness She answered questions and conversed freely Her temperature was 100 5° On the 6th, as the discharge from the ear still continued to be profuse, the opening into the mastoid antrum was continued into the middle ear, the attic was exposed, and the ossicles were removed. On the 10th the patient's general condition was good, there was no headache or vomiting But on ophthalmoscopic examination the right disc was found to be distinctly swollen and striated. Slight blurring of the discs had previously been observed. On the 20th the temperature had been normal for the last five days. Her general condition was good and she got up On the 29th and 30th she was up and appeared to be quite recovered but on the 31st she was attacked with severe intermittent headache over the right occipital region and vomited several times Vomiting and paroxysmal exacerbations of severe pain continued and I saw her again on August 4th. There was neither paralysis nor alteration of sensation, the knee jerks were normal The optic neuritis had progressed and was marked on both sides She had also on one or two occasions had incontinence of urine and was wasting The temperature had been low since July 16th and the morning temperature was often 97 8°, but the pulse was 120 I operated again and found a large abscess in the right cerebellum From that time she rapidly recovered although, as in the former case, the optic neuritis progressed for a time but ultimately completely cleared up and in September of the same year I found that with suitable glasses her vision in each eye was $\frac{6}{6}$

In a third case, that of a girl aged 16 years with right otorrhœa, there were absolutely no localising signs The knee jerks were feeble and sensation was normal. It is remarkable that in this case the temperature varied from 101° to 103° F and just before the operation was 102° There was no vomiting, headache or lethargy, although she had one rigor the day before the operation The brain was explored owing to the existence of progressive optic neuritis, the patient being also evidently ill. A few drops of pus were let out from the right lateral lobe of the cerebellum This patient also recovered making four successive cases of cerebral abscess which terminated favourably

My first case of cerebellar abscess, however which occurred in 1896, died a month after the abscess was opened from the formation of another abscess in the neighbourhood of the first and meningitis. The relapse took place while I was away on my holiday and no attempt at further exploration of the brain was made. I am therefore able to record six cases of cerebral abscess, four of which recovered. One of the fatal cases was hopeless from the first owing to involvement of the lateral ventricle.

The typical symptoms of cerebellar abscess when localising signs exist are well illustrated by the first case related. The rotatory movements towards the opposite side were shown by the patient constantly turning in bed so that the side of the lesion was uppermost. The paresis of the upper extremity on the same side was also marked This is by no means a common symptom in cerebellar abscess, although in the past it may often have been overlooked. It was present in only one of my four cases Of 100 cases analysed by Acland and Ballance there was paralysis of the limbs on the same side five times and on the opposite side twice. In some instances there are muscular rigidity and convulsions on the same side. The upper extremity may be affected alone or together with the lower extremity, the latter being usually involved to a slighter degree. The knee-jerk is often exaggerated on the same side. Sensation is never affected.

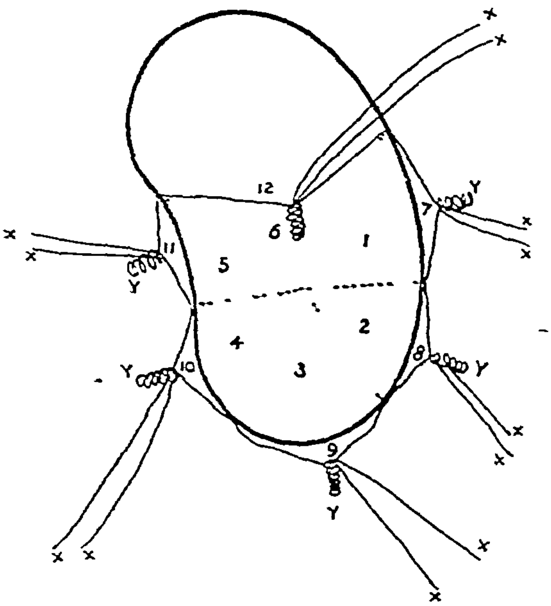
Some difference of opinion exists among experts as to the cause of the paresis The view generally entertained is that the cerebellum augments the power of movements originating in the cerebral hemisphere of the opposite side. This was suggested by Rolando and confirmed by Luciani, who terms the condition of the limbs parasthenia. After ablation of one half of the cerebellum, the prominent symptoms are weakness, tremor, and at first, spastic rigidity of the limbs on the same side, tremor of the muscles of the trunk and neck, and conjugate deviation of the eyes towards the opposite side. The animal falls towards the weakened side with the side of the lesion undermost. Further, the cerebellum is the organ which receives and reflexly acts on sensations derived by means of the "muscular sense," which supports the tonus and coördinates the innervation of the muscles of the skeleton It is the derangement of these functions which is mainly responsible for giddiness. Macewen, however, believes that the paralysis results from pressure exercised on the pyramidal tract after its decussation. He says "The normal cerebellum passes downwards beyond the foramen magnum, and, under pressure from the abscess, would probably extend further into the spinal canal so that the upper part of the cord may actually be pressed on" He also suggests that the paralysis occasionally observed on the side opposite to the lesion may be due to pressure by the abscess upon the pons on the same side.

Paralysis being rare in cerebellar abscess, it is therefore of great importance to watch for other indications. In the early stage vertigo and staggering may be noticed and the patient may fall to the side opposite to the lesion. Severe pain, often paroxysmal, is experienced over the corresponding occipital region Vomiting is intense and optic neuritis is usually present and well marked. There is often conjugate deviation of the eyes to the opposite side, it was noted in two of my cases In doubtful cases of abscess approaching the 'latent" variety the discs should be constantly watched and due weight must be given to emaciation and incontinence of urine These symptoms were of much value to us in deciding on an operation in the second case related.

It has been suggested by McBride that in cerebellar abscess septic organisms travel from the *internal* ear to the posterior surface of the petrous bone and thence to the cerebellum The labyrinth having been destroyed a tuning fork is not heard on the affected side, and this circumstance constitutes a diagnostic symptom of cerebellar abscess. There is, however, evidence to show that in some instances septic infection travels by means of the sigmoid sinus and thence to the cerebellum. In one of my four cases of cerebellar abscess there was suppuration around the sigmoid sinus and also thrombosis. Further in some cases recorded bone conduction was present. McBride's sign is therefore only of diagnostic value when bone conduction is absent. The presence of conduction does not exclude the cerebellum. Optic neuritis is more constant and marked in cerebellar than in temporo-sphenoidal abscess It is present in the former in 20 per cent of cases (Acland and Ballance) In neither of my cases of temporo sphenoidal abscess did any material change of the disc exist It has been stated that in cerebellar abscess the optic neuritis is more intense on the side of the abscess or is only present on that side. In two of my cases it was more intense on the same side and in a third on the opposite side.

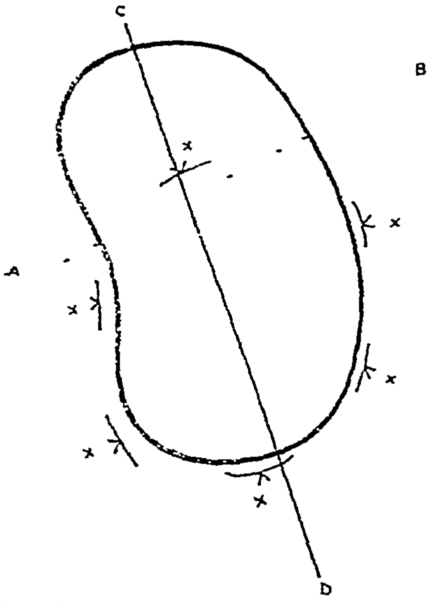
Statistics concerning the relative frequency of temporo-sphenoidal and cerebellar abscess are contradictory Of 91 cases collected by Körner 62 were cerebral and 29 cerebellar On the other hand, of 33 cases collected each is twisted up, when a piece of sterile silk twist is tied securely to it. The kidney is replaced within the abdomen in such a position that little more than half of it is exposed below the last rib Needles are placed on each silk thread and they are passed through the last intercostal space and through the abdominal muscles within an inch of their cut margins so as to bring the raw surface of kidney into apposition with the deep surface of the muscle wall freed from fat and fascia. When these sutures have been secured the resistance offered by the capsule is sufficient to require the expenditure of a considerable amount of force to displace the kidney from the position in which it is fixed. The incisions in the muscle wall and skin are then brought accurately together In this operation, as in every operative procedure requiring the burying of silk or other sutures, the surgeon should insure that no portion of ligature left in the wound be touched by the hand on any excuse whatever I have performed this operation a very large number of times and I have never known the kidney to move from its attachment to the wall. On two occasions I have subsequently had to expose such a kidney (*once to remove a stone*) and the kidney substance and muscle wall were observed to be most intimately united.

FIG 2



Represents the posterior surface of the kidney the dotted lines showing the triangular areas (1, 2, 3, 4 5 and 6) from which the segments of the capsule have been stripped (7 8, 9 10 11 and 12) These are shown with their bases continuous with the kidney and twisted—Y representing the twisted portions, a silk suture (X) being attached to each.

FIG 3.



Represents the conditions present after the incision through the muscular wall has been closed. The incision is indicated by the firm line C D crossing the kidney from above downwards and outwards. The dotted line A, B shows the margin of the thorax. The several sutures X, connecting the capsular segments to the muscle wall, are seen emerging from it and tied securely

When I have found any considerable hydro-nephrosis resulting from excessive mobility or from other cause I have employed a method which has been more successful than I ever ventured to expect. It has enabled me to save a number of kidneys which would in the ordinary course of events have been excised. I am strongly of opinion that the operation of excision of the hydro-nephrotic kidney has been undertaken much too frequently and often unnecessarily I do not think that we should resort to such a serious measure until we have tried every other means possible to save the organ, following the same general principles that guide us in operations elsewhere.

The procedure I adopt consists in exposing the hydronephrotic kidney with its pelvis and a considerable length of the ureter by a very long oblique lumbar incision, defining its mode of entry into the dilated pelvis. If any vessel is present in this situation over which the ureter is hitched it is ligatured and divided, but such as a real cause of obstruction is in my experience very rare. An incision is made along the outer margin of the kidney into the dilated pelvis and if possible a fine gum elastic catheter is introduced through it into the ureter along which it is passed beyond the brim of the true pelvis. In most cases I have found it impossible to introduce the catheter into the ureter in this way, so I have opened the ureter by a vertical incision and passed the catheter through it into the pelvis of the kidney and out through the incision in this organ. The end of the catheter being in the ureter it is forced down beyond the incision in its wall for a considerable distance, when the opening in the ureter is accurately closed by means of a fine silk suture. The incision in the kidney is sutured, a piece of drainage tube being left in the pelvis and this, with the catheter projects through the skin incision. The catheter is left in the ureter for six weeks or two months, during which time urotropin and sandal-wood oil are freely administered By the use of these drugs the urine remains normal and the catheter does not become incrusted with any deposits of salts on its surface, but is perfectly sweet and clean when removed at the end of this time. The drainage-tube is taken away a few days later and the wound is closed.

SOME OBSERVATIONS ON CYANOSIS[1]

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THE one constant factor in the production of cyanosis is diminution of oxygenation This may be the result of respiratory affections which hinder the access of air or diminish the area of the aerating surface, or it may, on the other hand, be due to circulatory disorders lessening the amount of the blood flowing to the lungs. These latter affections furnish the most conspicuous examples of cyanosis, and in them the symptom is entirely produced by hindrance to the blood flow Such is in reality the original conception advanced by Morgagni[2] and supported by numerous *observers. The other view* apparently suggested by Corvisart[3] that the condition is due to admixture of arterial and venous blood, is absolutely untenable, as *in the* vast majority of cases there is no possibility of such intermingling In general terms the blood in cyanosis may be said results in a progressive distension and hypertrophy of the cæcum. Because of the intimate fixation of the colon to the kidney and to the abdominal wall outside it and to the nerves in that situation the pain felt along the distribution of these nerves and the tenderness on pressure below the last rib may be more typically renal in character than they are in the case of stone in that organ Before I recognised this condition I, like many others had frequently cut down upon the right kidney, which had given all the symptoms of stone except blood in the urine, and had been disappointed to find nothing although the kidney had been effectually cleared and its interior and the ureter thoroughly examined. One was however, puzzled, and also not a little pleased to find that after this operation the patient usually lost all or most of the pain and that this more or less complete freedom from pain continued in some cases indefinitely In a number of instances it recurred after an interval of time From a careful study of these apparently renal cases it became obvious that the symptoms were due to obstruction of the colon by adhesions and not to any affection of the kidney and that the freeing of the kidney from its surroundings released the tense omentum from its posterior attachment and helped to relax the kink in the colon by displacing the peritoneal adhesions from the posterior abdominal wall Thus the operation unwittingly restored to the colon greater freedom to the passage of its contents Later, if constipation still continued the adhesions reformed and again drew upon the flexure and the pain and mechanical disability returned

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[1] Abstract of a paper read before the Royal Society of Edinburgh on Dec. 15th, 1902.

[2] De Sedibus et Causis Morborum, tome 1 p. 154 1762.

[3] Maladies du Cœur p. 231, 1806.

I am certain that in a large proportion of cases of so called appendicitis the primary factor in the production of inflammation of this structure is obstruction of the hepatic flexure producing the consequences which I have just now described and that the trouble in the appendix is merely a secondary manifestation and should be treated as such should operative measures be adopted. This explains the occurrence of appendicitis in cases of recurring or chronic constipation and the advantage that is very frequently gained from emptying the cæcum by free purgation on the first onset of trouble about the appendix It also shows the cause of the pain which so often remains after the mere removal of an appendix and the necessity not only of excising a diseased appendix but also of dividing freely the mesentery and liberating the hepatic flexure which in these cases is bound down into the upper and back part of the abdominal cavity It is, therefore quite evident that in removing the appendix the surgeon too often carries out only a portion of the necessary surgical procedure. In not a few cases the surgeon removes an appendix which is apparently quite normal and he satisfies himself as to the justifiability of the operation by believing that between attacks the appendix may be perfectly healthy I do not say that this may not uncommonly be the case, but when it is it indicates that the trouble is due chiefly to the obstruction at the hepatic flexure which should be treated medically or surgically, and that excision of the appendix itself is unnecessary and of the nature of a luxury I am convinced that a considerable proportion of cases in which the patient complains of pain and tenderness in the right iliac region are not appendical at all, but come under the category of those indicated by the title of this paper

The symptoms which result from obstruction at the hepatic flexure vary within very wide limits While in one extreme complete acute intestinal obstruction may result occasionally complicated by the twisting of the colon upon the new mesentery forming a volvulus, in the other extreme we have cases with pain or uncomfortable sensation along the last dorsal, ilio-hypogastric, and ilio-inguinal nerves with dragging in the loin and tenderness on pressure or on percussion immediately below the last rib posteriorly and variable tenderness on pressure over the cæcum which may be felt to be full and its walls to be thickened. Occasionally the patient complains of some disturbance of the bladder in the onset of an attack of pain. These symptoms all suggest some renal trouble In other cases the patient complains of much fulness and distension of the cæcal region often accompanied by a considerable amount of tenderness, rendering it impossible to bear pressure or to wear any tight garment in that situation. Or, again, the attacks of pain and tenderness may be so severe as to be associated with vomiting The assumption of the recumbent posture and free purgation generally relieve them The cæcum is left sore and tender for some time after the attack and this is associated with much disturbance of the gastro-intestinal tract. This condition may recur at intervals for many years and I have operated for it in patients of advanced years whose life had been made uncomfortable for a very long period of time and who obtained complete relief from the freeing of the anchored flexure. Some of them had been regarded as suffering from some appendical lesion and operation for the removal of this structure had been advised. Any of these conditions may be complicated by an attack of inflammation of the appendix. I have frequently had to operate upon patients in whom the appendix, either inflamed or not, had been removed without benefit to the sufferer, and I have found the hepatic flexure obstructed in the manner described and have divided the mesentery and freed the hepatic flexure and have permanently relieved the patient of the painful symptoms. Again, I have operated on cases and found this condition to exist where the symptoms were ascribed by competent observers to disease of the appendix which was perfectly healthy If what I have observed be true the habit that has recently cropped up of removing the appendix through a very small incision must be injudicious in the extreme.

Before leaving this subject I would call attention to the symptoms of moveable kidney which not infrequently exist in patients suffering from a practical obstruction of the hepatic flexure In such cases some difficulty may be experienced in determining whether the mobility of the kidney or the distension of the cæcum forms the chief source of the patient's symptoms since the kidney when it gets upon the front of the innominate bone produces symptoms of pain and tenderness in the iliac fossa with dragging in the loin and occasional attacks due to obstruction to the exit of urine from it, symptoms which sometimes closely resemble those due to obstruction of the hepatic flexure. When both conditions co exist it is sometimes hard to decide which should be treated first or whether both demand the attention of the surgeon. If the kidney is suffering materially in the performance of its functions from any surgical cause whatever there is associated with it a tenderness of the ureter which can be most readily observed where this duct crosses the brim of the pelvis This symptom I have found to be of the greatest possible service in helping one to determine whether the condition was primarily or chiefly renal or not It is such a marked characteristic that I have known cases in which surgeons have removed the appendix because the patient complained of a narrow tract of great tenderness when pressure was exerted on the abdominal wall in a line extending from the umbilicus to the anterior superior iliac spine, which is commonly called McBurney's line. I have known these patients to obtain no relief from their symptoms in consequence of this operation, their troubles returning during convalescence as soon as they ceased to assume the recumbent posture. In such cases I have sewn up the kidney which was moveable and given them permanent relief from their painful symptoms I believe that this tenderness of the ureter which is associated very commonly with moveable kidney is responsible for many appendical operations But I have never seen it called attention to before in this relationship and I would ask surgeons to consider the point more carefully in future before deciding to open an abdomen merely because the patient complains of great local tenderness when manipulation is made in this situation.

Since I first devised the operation for employing the capsule to fix the kidney immoveably to the posterior wall of the abdomen, which I described in the Transactions of the Clinical Society for 1892 in a paper entitled "A Case of Floating Kidney treated by a New Mode of Nephrorrhaphy," I have operated upon a very large number of cases of moveable kidney and in no single case have I known this organ to break away from its mooring Up to that time the operation which had been adopted was to fix the kidney by buried sutures passed through its substance and the results of such treatment were openly acknowledged by very experienced surgeons to be unsatisfactory and uncertain in the extreme. Previously it had been the custom to use temporary sutures. I had myself examined many cases in which this operation had been performed without its materially affecting the mobility of the organ

The method I described, and which I still employ, is the following The kidney is thoroughly exposed through a slightly oblique incision in the loin and freed from any fat that may be present. As it projects from the wound the capsule is stripped from its lower two thirds in the form of six triangles as shown in Fig 2, the bases of the triangles being left intact. In order to increase its resisting capacity the whole system can, for the future, be regarded as of scientific value

The final part of this preliminary inquiry has been devoted to an attempt to ascertain whether the inhalation of oxygen has any beneficial effect upon cyanotic conditions Up to the present time it must be confessed that no case which has been under my care has shown any effect upon the blood from the use of this method. Of the cases which have been so treated the following two may be taken as types of all the others.

CASE 3.—A miner, aged 39 years has recently been under my care on account of chronic bronchitis, emphysema, and pulmonary collapse, with great displacement of the heart to the right side He was deeply cyanosed and had clubbing of the fingers and arching of the nails. The heart was slightly enlarged and two thirds of its dulness lay to the right of the mid sternal line. A tricuspid systolic murmur was present The pulse was frequent, varying between 80 and 100 and was of low pressure. There were anasarca with great enlargement of the liver and considerable enlargement of the spleen, as well as albuminuria. On Oct. 20th, 1902, the hæmoglobin was 110 per cent., the red corpuscles numbered 6 400 000 and the white 12,500 per cubic millimetre. On the 26th the hæmoglobin was 112 per cent., the red corpuscles numbered 7,500,000 and the white 14,000 per cubic millimetre On this date the inhalation of oxygen was begun and on the 31st, five days later, the hæmoglobin was 100 per cent while the red and white corpuscles numbered respectively 8,000,000 and 9960 per cubic millimetre.

CASE 4 —A miner aged 33 years, came under my care on account of mitral obstruction and incompetence. He suffered much from palpitation. His heart was slightly enlarged There were presystolic and systolic mitral murmurs and the pulse was of very low pressure with considerable irregularity There were no changes in the respiratory system. The abdominal organs were unchanged and there was no albuminuria. The condition of the blood may be stated in tabular form as follows —

	Hæmoglobin. Per cent	Erythrocytes Per c.m.	Leucocytes Per c.m.
Oct. 20th	131	7,500 000	11 400
31st	120	7 000 000	9 680
Nov 17th	110	7,250 000	10 000
Dec. 3rd	110	6,500 000	11 000

On Dec. 3rd oxygen inhalation was begun.

Dec. 5th	115	7,400 000	9 800
8th	110	6,000 000	10 000

The results of these two observations seem to indicate that the inhalation of oxygen is barren of result. It is generally understood that the ordinary air of the atmosphere contains considerably more oxygen than can be absorbed in any circumstances, and the results of our observations, now fairly numerous, are strongly in favour of this conception.

It is a pleasure to express my warm thanks to my house physicians, Dr L O Peel Ritchie Dr H. H Bullmore, and Dr A. F R. Conder for their unwearied devotion in conducting the examinations of the blood of many patients in pursuance of these observations, and to acknowledge the assistance which we have received in our investigations from Dr. A. Goodall and Dr A. Dingwall Fordyce.

Edinburgh.

TWO CASES OF CÆSAREAN SECTION FOR OBSTRUCTION DUE TO FIBROID TUMOURS

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IN the majority of cases in which fibroid tumours complicate pregnancy no special treatment is required. The course of pregnancy is unaffected labour occurs naturally, and no unfavourable symptoms arise during the puerperium. In a certain relatively small proportion of cases however, the presence of a fibroid tumour or tumours in association with pregnancy constitutes a serious danger both to mother and child. Thus in the early months the patient may experience such severe pain that all expectation of allowing the pregnancy to continue has to be abandoned. In some cases the pain is due to the impaction of a pedunculated subperitoneal fibroid in the pelvis, and in some such cases it is possible without undue force to push up the fibroid with relief of the symptoms. In addition to the pain difficulty in micturition is very apt to occur, and this was, in fact, among the symptoms at the fourth month in Case 1 recorded below While undoubtedly pain may be so severe as to require the interruption of the pregnancy it is well not to accept this view of the matter hastily In both cases recorded in this paper pain was a marked symptom at about the fourth month, yet in both of them the pain did not long continue severe and it disappeared altogether in the course of a few weeks It should also be borne in mind that in many of these cases of fibroid tumour complicating pregnancy the patients are women pregnant for the first time and that, apart altogether from the presence of fibroids, many such patients have what appears to them to be severe pain, due no doubt to stretching of the various tissues, for instance, to stretching of the abdominal walls Thus some allowance has to be made for this Again, it is generally held that fibroids coexisting with pregnancy predispose the patient to miscarry I am inclined myself to believe that this is so, but probably much depends on the exact position of the tumour However this may be, in a recent case of the kind in my practice, where a miscarriage occurred at about the middle period of pregnancy, there was very severe post-partum hæmorrhage.

The effect of fibroid tumours on the process of labour is generally little or nothing unless the fibroid is so situated as to constitute a serious or even insuperable obstacle to the passage of the child After labour there is a considerable risk of septicæmia if the fibroid has been damaged during the process of delivery In both the cases here recorded the position and size of the fibroid were such as to render delivery of a living child by the natural passages out of the question. In both cases it happened that I saw the patients at about the same period of pregnancy—viz., about the fourth month—so that several alternative methods of treatment were possible.

1 Thus in the first place, the pregnancy might have been terminated either by the induction of a miscarriage or by abdominal hysterectomy In both cases though it would have been possible to induce a miscarriage, as the vaginal portion of the cervix was in each case even then displaced high up and to the left the necessary manipulations would have been none too easy If some portion of the placenta had been retained, as would not have been unlikely, it would have been an extremely difficult thing to remove it. By this treatment, too the child would of course have been sacrificed. For all these reasons I considered the induction of a miscarriage unsuitable for either case. Had it been really necessary to terminate the pregnancy either on account of pain or for any other reason I think that abdominal hysterectomy would have been the better treatment Mr Alban H. G Doran recently[1] published an interesting paper recording three cases of fibroids complicating pregnancy in which he performed abdominal hysterectomy in the middle period of pregnancy In neither of my cases, however, did there seem to be any sufficient reason for interfering, though when I first saw the patients they were suffering from a good deal of pain. This soon diminished and before long entirely disappeared. In each case the remainder of the pregnancy was quite normal.

2. An attempt might have been made to remove the tumour by myomectomy, leaving the uterus in the hope that the pregnancy would continue undisturbed. As regards the first case there was a large fixed tumour lying to the right of the cervix. It evidently lay in the broad ligament. In the second case the tumour sprang from the supra vaginal cervix and had grown down into the recto vaginal septum, displacing the vaginal portion of the cervix upwards and to the left. The mechanical difficulty of getting at a tumour so low down without removing the uterus would have been very great. In some cases of myomectomy during pregnancy, even when the 'bed" from which the tumour has been enucleated has been fairly accessible it has been found necessary to remove the uterus before the bleeding could be controlled This seemed still more likely to happen in my cases if myomectomy had been attempted, on account of the low position in the pelvis occupied by the tumour in each case. I therefore decided against myomectomy

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[1] THE LANCET Nov 29th 1902, p 1451

to be of high specific gravity—from 1070 to 1080 The amount of hæmoglobin rises considerably—often reaching above 100 per cent The erythrocytes increase in number so as frequently to exceed 7,500,000 per cubic millimetre, while the leucocytes, although not so commonly altered in number, often reach such a figure as 12,000 per cubic millimetre. The increase of these constituents of the blood was first observed by Toeniessen.[4] Malassez[5] showed that there are more red corpuscles in the blood of the superficial than of the deeper parts of the body Toeniessen and Penzoldt[6] suggested that this might be due to loss of fluid from the surface, while the interior receives a constant supply of fluid from the alimentary tract. Eight years ago, in describing some observations on the Cyanosis of Congenital Heart Disease in THE LANCET,[7] an explanation of the manner in which cyanosis is produced was advanced by me. From that paper it seems advisable to quote the hypothesis to which my observations led me —

> Starting with the conception that cyanosis is produced by obstruction to the circulation and venous stasis the question now arises why this condition should be associated with an increase in the number of the blood-corpuscles It is not only in the cyanosis of congenital lesions that the increase is found but in all cases where cyanosis is really present on account of failure of the circulation To this point Toeniessen and Schneider have particularly called attention and of the accuracy of the observation anyone can convince himself by investigation of the blood The work of Malassez seems to show that the blood in the superficial parts of the body contains a larger number of red corpuscles than that from the deeper layers and Penzoldt and Toeniessen believe that this increase is caused by the loss of fluid from the surface while the blood of the interior is constantly receiving fluid from the alimentary canal Even if this be correct it cannot be accepted as an explanation of the great increase in the number of the corpuscles found in cyanosis as it would involve the postulate that in some cases where the number of corpuscles is nearly doubled the quantity of the fluids of the blood must be reduced nearly to one-half Cohnheim's celebrated experiment of tying the crural vein of the frog which is followed by a considerable increase of the corpuscles in the vessels with the transudation of serum into the surrounding tissues may be regarded as an explanation of the moderate increase in the cases accompanied by anasarca but it has no special bearing upon cases of congenital cyanosis in which there is no drain of fluid into the tissues It may possibly be held that in such cases the lymph vessels are unusually active and that the fluid constituents of the blood are as rapidly absorbed as they transude Such an opinion can scarcely be seriously entertained The backward pressure on the venous system which causes the transudation must tell on both terminations of the absorbents It may be admitted freely that the increased pressure on the peripheral veins may tend to raise that impelling the fluids into the commencement of the lymphatics, but it must not be forgotten that an elevation of pressure in the great veins will hinder the return of the lymph by pressing upon the openings of the lymph vessels into the veins It is probable that the increase in the red corpuscles may be to some extent compensatory in cases of cyanosis To say this however is not enough it affords no rational explanation of the process by which the increase is brought about. Nature does not work by such direct methods as would require to be invoked if the increase of the corpuscles were regarded as a simple compensatory change balancing the diminished power of oxygenation Compensation in valvular lesions for example, is produced by the definite structural changes constituting hypertrophy caused by increase of work and compensation in cyanosis must have some reasonable explanation also It seems to me that such an explanation may be found in a consideration of the functions of the red corpuscles under changed conditions. In venous stasis the corpuscles are insufficiently oxygenated they cannot perform such an active part as oxygen carriers and they cannot yield so much oxygen to the tissues It must further be remembered that in cyanosis there is less metabolism in the tissues and therefore less waste produced In a word, the functions of the corpuscles being lessened the tear and wear which they undergo is reduced and the duration of their individual existence increased The number of the corpuscles must in this way be proportionately augmented and this must lead to the numerical increase, as well as to the high percentage of hæmoglobin until a balance is struck between the production and the destruction of the blood-corpuscles

In some subsequent remarks upon this subject[8] it was frankly stated that this explanation could only be seriously entertained if the increase in the blood elements was found to exist throughout the different divisions of the circulatory mechanism—arteries, capillaries, and veins—but that the observations of many workers on the state of the blood in high altitudes were strongly in support of it.

The object of the present communication is two-fold in the first place to show what relationship exists between the conditions of the blood in the different divisions of the circulatory apparatus, and, in the second place, to indicate the results which have been obtained by the use of oxygen in cases of cyanosis. The two following cases are of interest from the first point of view

CASE 1.—A tradesman, aged 48 years, was under treatment in my ward for arterio sclerosis with interstitial myocarditis. He was very cyanotic The heart was considerably enlarged and there was escape at both mitral and tricuspid orifices. The radial arteries, like those throughout the rest of the body, were rigid, but the pressure was not high There were œdema of the lungs and albuminuria, with great anasarca. The patient became maniacal and then passed into a comatose condition from which he was rescued by venesection. The opportunity was taken of obtaining two or three drops of arterial blood and the condition of matters was as follows Artery hæmoglobin, 125 per cent., erythrocytes 5 130,000, and leucocytes, 5980 per cubic millimetre Vein hæmoglobin 135 per cent, erythrocytes, 5 300,000, and leucocytes, 6250 per cubic millimetre On the following day another drop of arterial blood was obtained and compared with that from the subcutaneous capillaries The results were the following Artery hæmoglobin, 120 per cent., erythrocytes 5,268 000, and leucocytes, 6100 per cubic millimetre Capillary hæmoglobin, 130 per cent., erythrocytes, 6 830 000, and leucocytes, 11,620 per cubic millimetre. After this blood letting the patient, by means of various cardiac remedies rapidly recovered and went home in a few weeks with no symptoms of circulatory disorder and with blood practically normal.

CASE 2.—A pithead boy, aged 16 years, is at present under treatment in my ward for a group of symptoms which seem only explicable by the diagnosis of mediastinal pericarditis On admission in September, 1902, the boy was deeply cyanosed. His heart was but slightly enlarged and had no abnormal sounds The pulse was of low pressure and manifested in the most beautiful manner the features of the pulsus paradoxus The patient had enormous enlargement of the liver and considerable increase in the size of the spleen, along with hydrothorax, ascites, albuminuria, and anasarca The subcutaneous blood was frequently and regularly examined and showed an amount of hæmoglobin varying between 80 and 100 per cent while the number of red corpuscles fluctuated between 8,000,000 and 8,600,000 per cubic millimetre and the number of white corpuscles oscillated between 5000 and 8500 per cubic millimetre. On Oct. 20th a drop of blood was obtained from a small twig of the temporal artery and another from a small tributary of the temporal vein in order to compare with the blood in the capillaries, and the following results were obtained. Artery hæmoglobin, 93 per cent., erythrocytes, 7 000,000, and leucocytes, 6875 per cubic millimetre. Capillary hæmoglobin, 93 per cent., erythrocytes, 8 500,000, and leucocytes, 8500 per cubic millimetre Vein hæmoglobin, 115 per cent, erythrocytes 10,000,000, and leucocytes, 7400 per cubic millimetre Under treatment by means of hydriodic acid, cardiac tonics, and diuretics internally, along with inunction of diluted lead iodide of mercury ointment, the patient has improved very greatly and although the liver and spleen are still enlarged the other symptoms have almost entirely disappeared Along with the disappearance of the symptoms the condition of the blood has come back practically to normal

Now we learn from these observations that in cyanosis there is a general increase throughout the whole circulation in the amount of hæmoglobin and in the number of the erythrocytes, while the state of matters as regards the leucocytes is less constant. It seems to me that this universal, if not uniform, increase goes a long way in support of the explanation which I ventured to advance in the paper to which reference has already been made. The whole subject, however, requires experimental investigation and it was my intention to have entered upon a series of experiments—an intention which has been frustrated by lack of time. One of my friends has undertaken a research upon the subject and it is to be hoped that in the course of a few months definite information will be available It is probable that the universally recognised increase in the number of the hæmocytes in those who live in high altitudes may be found to furnish an available opportunity of working out the problem.

Another point arises from the consideration of these observations. It has been said that the increase in the hæmoglobin and erythrocytes is universal but not uniform, and in this interesting fact lies the exposure of a possible source of fallacy in attempting to estimate blood conditions. No method based upon the assumption that the condition of the blood obtained from one part of the body can be regarded as an expression of its exact conditions throughout fœtal heart sounds The breasts looked active but no fluid could be squeezed out of them. On vaginal examination a catheter was first passed and the bladder emptied. The vaginal portion of the cervix was felt high up behind the pubes. The finger only reached it with some difficulty The os was not, however, directed upwards. A firm hard, fixed mass was felt in the posterior fornix, extending from the highest point of the posterior fornix some two inches or more downwards under the posterior vaginal wall It had a considerable measurement transversely and so gave the impression that the mass was somewhat muffin shaped The examination suggested that the tumour had grown from the supra vaginal cervix and that it had extended downwards between the posterior vaginal wall and the rectum It will be seen that there was as yet no certain evidence of pregnancy but that the physical signs made one almost certain that the patient was really about four months pregnant. It was quite certain that if this were so the solid fixed mass in the pelvis would absolutely prevent delivery of a living child. I gave it as my opinion that the patient was probably pregnant and advised that she should come and see me again in two months' time to make quite certain on this point I also advised that if she were pregnant the best course would be to allow pregnancy to continue till within a few days of full term and that Cæsarean section should then be performed. After having given my opinion I heard for the first time that the patient had seen two other obstetric physicians, one of whom, Sir John Williams, had advised the patient to wait, and the other had advised the patient to have an immediate operation for the removal of the tumour As the patient had then two opinions in favour of waiting against one in favour of immediate operation both she and her husband decided to wait.

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[4] Ueber Blutkörperchenzählung bei Gesunden und Kranken Menschen S 29 1881

[5] Archives de Physiologie, ii Série tome 1 p 49 1874

[6] Berliner Klinische Wochenschrift S 45 1881

[7] THE LANCET Jan 5th 1895 p 24

[8] Diseases of the Heart and Aorta, p 211 1898

On August 1st I saw the patient again The pains of which she had previously complained about the lower part of the abdomen and back had disappeared She said that she had become much larger in the abdomen and was very well in herself, but said that she suffered from heartburn rather badly On examination the swelling in the abdomen had reached well above the umbilicus and I felt fœtal movements in it, but I did not happen to be able to hear the fœtal heart On vaginal examination the vaginal portion of the cervix was much higher up than at the previous examination and it was almost impossible to reach it. The hard swelling felt in the posterior vaginal wall was very much as before—perhaps somewhat larger The most probable date for labour to begin was Nov 16th.

It was arranged that the patient should go into a nursing home on Nov 3rd and that Cæsarean section should be performed on the 8th unless labour came on spontaneously in the meantime. This arrangement was exactly adhered to. I examined the patient when she was in the home on Nov 5th. It was then quite impossible to reach the cervix on vaginal examination The tumour was a great deal larger than at the time of the last examination The patient's general condition was quite good

On Nov 8th I performed Cæsarean section at 10 A M Dr F W Hewitt gave the anæsthetic and Dr Gow kindly assisted me at the operation. The uterus was opened by the usual longitudinal incision and the membranes ruptured, a leg of the child was seized and delivery rapidly effected The child, a male, was alive and soon cried loudly He was subsequently found to weigh 6 pounds 8 ounces After removing the placenta and membranes completely it was found impossible to find the opening of the internal os uteri. I tried several times to feel it in various directions without success and Dr Gow also tried but it was evident that the internal os was not at all dilated and we were unable to find it. After we had tried with the finger to find the opening I tried with a long coarse probe but was quite unable to locate it. We therefore decided not to trouble any more about it We thought an opening must be there and hoped that it would be large enough to allow the lochia to escape. The uterine wound was then stitched up as rapidly as possible with the usual deep sutures, avoiding the mucous surface, and numerous superficial sutures, taking the peritoneum and superficial layer of muscle only The sutures used for the uterus were as in the preceding case, of silkworm gut. At the lower end of the uterine incision the rather looser subperitoneal tissue had been slightly encroached upon. This led to a fair amount of effusion of blood immediately under the peritoneum, in the neighbourhood of the lowest two or three peritoneal sutures. An attempt was then made to prevent future conception. A loop of the right Fallopian tube was pinched up and tied, and the convex part of the loop cut off. It was then found that the uterus was so twisted on itself that though the right uterine appendages were very easily accessible the left lay deep down. The left ovary was felt close to the pelvic brim and the left Fallopian tube was tightly on the stretch, so that it lay closely applied to the surface of the uterus It would have been impossible to cut out a piece of the left Fallopian tube without very much enlarging the abdominal incision and it seemed to me unjustifiable to spend the further time that this would have required. The patient had been married ten years without being pregnant, a portion of the right tube had been already removed and the probability that she would become pregnant again seemed not very great and I decided to close the abdominal wound. Before closing the abdominal wound the relations of the tumour were carefully examined from above. On investigating the relations of the tumour with the hand, it was evidently, as had been thought, a fibroid growing from the supra vaginal cervix and extending down between the peritoneum and vagina and lower again between the vaginal wall and the rectum. I then closed the abdominal wound. After the dressing had been applied the patient's knees were held up in the lithotomy position It was then found that there was some blood in the vagina and externally, showing that the internal os was at all events open to some extent, it was not sealed over With the patient in this position it was possible now just to reach the vaginal portion of the cervix, still very high up. The external os was not in the least patulous, no more open than it had been when I first examined her in June. The patient was put back to bed

The subsequent progress of the case was very satisfactory From Nov 8th to 20th the temperature generally was in the neighbourhood of 100° at night, falling to normal in the morning On the 15th and the 17th respectively the temperature was 101 2° and 101 4° the highest points reached. The pulse rate was never over 100 and generally about 90 during this time After the 20th the temperature was below 100°, except on the 26th, when it reached 100 4° After that it never exceeded 99 4° till Dec 6th, when the patient went home. As regards the lochial discharge it was not at all profuse. At the same time it seemed about the average in quantity and it was not necessary to undertake any dilatation of the cervix to facilitate the outflow of the discharge. This was a point which gave me some anxiety till the course of events showed that there was no need for interference. For instance, if it had been necessary to wash out the uterus, it would have been quite impossible to do so without first dilating the cervix under an anæsthetic. Fortunately it was not found necessary to undertake anything of the kind. The mother did not suckle the baby, and at the end of a fortnight it was sent away from the nursing home with the monthly nurse to stay with some relations contrary to my advice, owing to the severe weather prevailing at the time However, no harm resulted, and at the time when the mother left the nursing home (Dec 6th) the baby was quite well.

Harley-street W

DIFFUSE CARCINOMATOSIS OF THE STOMACH AND INTESTINES

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WE have recently had an opportunity of examining three cases of widely diffused malignant disease of the stomach and intestines, a condition which, so far as we have been able to ascertain, has not been previously described. In all the cases a long tract of the alimentary canal was affected, the stomach and the small and large intestines being in each case the seat of a widely diffused carcinomatous infiltration. In every case the stomach presented the condition described as "leather bottle stomach," either in whole or in part. Thus in Cases 2 and 3 the stomach was

3. Another alternative was to allow the pregnancy to continue till within a few days of full term and then to perform Cæsarean section This was, in fact, the treatment adopted in both cases One question remained for consideration—viz, whether conservative Cæsarean section should be the operation or whether after delivery of the child hysterectomy should be performed. It seemed to me that as in both cases the tumour had caused no trouble till pregnancy began there was a considerable probability that after involution of the uterus was complete no further trouble would arise. If subsequently symptoms severe enough to justify hysterectomy should occur it seemed to me that it would be time enough then to perform the operation. By the conservative Cæsarean section the uterus would be retained and the menstrual function would continue as before Other things being equal this seems to be a not unimportant argument in favour of performing the conservative operation rather than hysterectomy In Dr A Donald's[3] valuable paper on Fibroid Tumours complicating Pregnancy and Labour it is said that "when Cæsarean section has to be performed, as a general rule, it should be followed by hysterectomy The presence of a fibroid renders the risks of the conservative operation greater while at the same time it affords a distinct indication for the removal of the uterus." I have already given above the reasons which led me to perform the conservative Cæsarean section in my two cases *rather than Cæsarean section followed by hysterectomy* I think that in deciding much depends on the details of the particular case If, for instance, there are several large fibroids present and if there is a distinct history that the patient has previously to the pregnancy suffered a good deal from symptoms referable to them, then the Cæsarean section should be followed by hysterectomy On the other hand, when there is apparently only one fibroid, when it seems to be only of importance as an obstacle to delivery, having caused no trouble antecedent to the pregnancy, then I think the uterus should be left

CASE 1.—On Jan. 9th, 1902 I was asked by Mr H Richardson to see a patient who gave the following history She was 42 years of age and she had been married on May 20th, 1901 She had last menstruated in the second week of September, the 10th was the last day of the period She was taken ill on Dec. 20th, 1901, with great pain in the lower abdomen and difficulty in passing urine. The temperature at that time rose to 101° F She remained in bed from that time until the date when I was asked to see her On examining the abdomen an elastic swelling was felt rising out of the pelvis and reaching rather above the level of the umbilicus. This swelling lay somewhat to the left of the middle line. A hard lump was felt just above the pubes and to the right, separated by an indistinct depression from the elastic swelling above mentioned. Nothing was heard on auscultation over either swelling The breasts looked rather active On vaginal examination the vaginal portion of the cervix was found to be very high up and to the left. A hard swelling with the convexity downwards was felt in the right lateral fornix. It was nearly fixed and bimanually could be felt to be continuous with the hard lump felt above the pubes while examining the abdomen. The vaginal cervix had evidently been pushed upwards and to the left by this hard swelling It was difficult to estimate the size of this hard swelling exactly, but it appeared at this time to be of about the size of a large orange Although I had not obtained ballottement, and it was rather too soon to expect the fœtal heart to be audible, I had little doubt that the patient was about four months' pregnant. It appeared to me that the elastic swelling described as lying rather to the left in the lower abdomen was the pregnant uterus and that the position of its upper border—rather above the level of the umbilicus—at that period of pregnancy was accounted for by the presence of the hard swelling in the pelvis It seemed to me to be quite certain, even at this time that the presence of the hard tumour to the right of the cervix would render delivery at full term of a living child absolutely impossible I was not at this time at all certain whether it was a fibroid of the broad ligament or a fibroid growing from the right side of the cervix out into the broad ligament. The possibility that the tumour might be an ovarian tumour, more or less adherent in the right side of the pelvis, was not overlooked. I advised that, if possible, the patient should be allowed to go to full term and be delivered by Cæsarean section. But I suggested that she should be examined from time to time, so that any alteration in the position or mobility of the pelvic tumour might be recognised On Jan. 24th the patient was carefully examined at a nursing home under anæsthesia and the result of the previous examination was entirely confirmed. By this time most of the symptoms (pain and so on) had practically disappeared and she was fairly comfortable. She went on in much the same way during the succeeding months. I did not see her again until May 6th. On examination on that day the physical signs were very similar except that the patient was now about eight months pregnant and the hard lump in the right side of the pelvis, described at the earlier examination, was decidedly larger, so that the vaginal cervix was even more difficult to reach than it had been in January According to my calculation from the date of the last menstruation it appeared that labour might be expected to commence about June 15th It was arranged that the patient should go into a nursing home about June 3rd and that the operation should be performed about the 10th—that is to say, about five days before full term. These arrangements were exactly adhered to She went into the nursing home on June 3rd I saw her on the 8th and asked my friend Dr W J Gow to see her with me. He was of the same opinion as myself, that delivery by Cæsarean section was the right treatment.

The operation was performed on June 10th at two o'clock. Dr Gow kindly assisted me and Mr H Bellamy Gardner gave the anæsthetic. On making the incision into the uterus it was found that the placenta lay under the line of the incision. The opening into the uterus was completed as quickly as possible and the placenta removed with the hand. A leg of the child was seized and delivery was completed without difficulty The child, a female, was alive and both in size and other respects corresponded to the development usual at full term. In a minute or two she cried vigorously The uterine wound was stitched up with two sets of sutures, deep sutures through the peritoneum and muscular coat, stopping short of the endometrium, and numerous superficial sutures for the peritoneum. The sutures were of silkworm gut. Examination of the pelvic tumour from above seemed to make it clear that the tumour was not a uterine fibroid growing out from the tissues of the uterus but a fibroid imbedded in the right broad ligament. An attempt to sterilise the patient was made by pinching up a loop of each Fallopian tube, tying tightly, and cutting off the loop The abdominal wound was completely closed. The operation lasted three-quarters of an hour and in spite of the placenta being in the line of the uterine incision no very large amount of blood was lost. The pulse was quite good at the end of the operation. The patient made an absolutely uneventful recovery and had very little pain during the two or three days after the operation, so little that she did not wish to have any morphia. She was able to suckle the baby partially The child also did perfectly well The mother and child left the home at the end of the first week in July

CASE 2—A patient, aged 35 years, was brought to see me by Dr T E Foster MacGeagh on June 2nd, 1902. She had been married ten years but had never been pregnant She had been quite well up to about four months previously Menstruation had as a rule occurred regularly every four weeks The quantity lost had been moderate and she had not usually had much pain at the time. Latterly she had had no pain at all at the periods. She had menstruated in February, the last day of the period being Feb. 12th, and since then there had been amenorrhœa. At the time I saw her she complained of a good deal of pain all round the lower abdomen and in the lower part of the back also that her "clothes had become very tight" for her She also complained that she passed urine frequently and she had also felt a little nausea in the morning All these symptoms had arisen within a few weeks of the time when she first came to see me She said that her appetite had been very good She had had no vaginal discharge of any kind. She seemed to have usually led an active life and had been accustomed to ride and cycle up to March, 1902. On examining the abdomen a soft, elastic, somewhat globular swelling was felt rising out of the pelvis and reaching to within about an inch of the umbilicus Although the general outline of the swelling was fairly uniform slight irregularities of its surface were felt in one or two places. A loud uterine souffle was heard over the swelling but no rowth was thickest at the pylorus, and here it measured ne-third of an inch in depth, traced towards the fundus it ecame gradually less and less thick. The pyloric orifice as narrowed barely admitting the tip of the little finger he mucous membrane of the organ was everywhere intact nd presented no signs of ulceration, either recent or old he duodenum was healthy The mesentery of the jejunum nd ileum presented many small nodular thickenings situated etween the two layers of the peritoneum close to the bowel nd spreading in places into and around the wall of the owel and causing a decided thickening of the bowel t these places. The cæcum was thin and a little ilated, the colon was thick walled, but there was no arrowing of the lumen. The thickening of the colon as due to an infiltration of the wall by a pearly omogeneous glistening growth similar in appearance nd in distribution to that affecting the stomach. The rowth was thickest at the attachment of the colon to he meso-colon, and it became thinner as it was traced owards the free surface of the colon. There was no ulceration of the mucous membrane of the intestine The mentum was free from growth and there was no enlargement of the mesenteric or retro-peritoneal glands There were no metastases Each kidney was in an advanced condition of hydro-nephrosis, due to the impaction of calculi in the pelvis The other organs were healthy There was nothing found post mortem to account for the subphrenic abscess drained during life, although the adhesions in the upper part of the abdomen were the probable result of this collection of pus There were no symptoms during life suggesting the presence of renal calculi, in fact these and the resulting hydro-nephrosis were quite unexpectedly found at the necropsy

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[3] Transactions of the Obstetrical Society of London vol xliii 1901, p 183.

CASE 3.—A man, aged 56 years was admitted into the General Hospital, Birmingham on Sept. 23rd, 1901 complaining of severe abdominal pain of increasing difficulty in passing his motions and of distension of the abdomen. Prior to these symptoms, which were of gradual onset and of about eight months' duration, the patient had had good health. On admission into the hospital he was very emaciated and very weak. The abdomen was greatly distended and an attempt was made to relieve the distension by tapping, but only about 20 ounces of almost clear ascitic fluid were obtained by syphonage and the distension remained evident. No tumour was definitely felt by palpation but per rectum an obstruction encircling and almost occluding the bowel was found. No ulceration of the mucous membrane was felt in the rectum nor any growth projecting into the lumen The condition suggested a fibrous stricture. When the question of more radical treatment was discussed there was hesitation as to whether the patient would be relieved more by a gastro-jejunostomy or by a colotomy So prominent a symptom was epigastric pain immediately after taking food that malignant disease of the stomach could not be dismissed. It was decided, however, to treat the rectal obstruction which was undoubtedly present rather than to attempt to relieve the problematical condition of the stomach. The subsequent necropsy revealed that either operation alone would have been ineffectual. Colotomy was performed on the 28th, the bowel being opened on the same day Ascitic fluid escaped freely at the operation and leaked constantly from the wound until the death of the patient, which occurred three weeks later from gradual exhaustion on Oct 19th.

At the necropsy the body was found to be extremely emaciated. No jaundice, œdema, or external glandular swellings were present. There was a colotomy wound in the left iliac region into which the sigmoid flexure opened. On opening the abdomen about three pints of hæmorrhagic fluid escaped The peritoneum was acutely inflamed and covered with a fibrinous exudation, matting the coils of intestine loosely together and peeling easily off the intensely injected surface beneath. The œsophagus was healthy The stomach was small and contracted and its wall was greatly thickened throughout—the 'leather bottle" stomach The duodenum and jejunum were thin and somewhat dilated. The walls of the ileum were thickened at places. The cæcum was very small and contracted and its walls were greatly thickened, closely resembling the 'leather bottle" stomach in appearance. The colon was throughout its length contracted and thick walled, the hepatic and splenic flexures and the rectum being so much stenosed that they would hardly admit the little finger There was no ulceration of the mucous membrane of any portion of the stomach or intestines. The thickening of the parts mentioned was due to infiltration of the walls of the gut by a homogeneous looking growth starting at the attachment of the gastro-hepatic omentum, mesentery, meso-cæcum, meso-colon, and meso-rectum to the various viscera (the stomach and the small and large intestines), and spreading into the wall of the bowel in the submucous layer In places it entirely encircled the bowel, but everywhere was obviously thicker and more definite at the attached border and gradually shaded off to the opposite free border of the bowel. The gut was not uniformly affected with the growth. Along the small intestine it could be better felt than seen as small nodular thickenings at the attached border of the bowel. In the large intestine the thickenings were in places very conspicuous and gave rise to the stenoses of the hepatic and splenic flexures and of the rectum mentioned above. The great omentum was free from growth. There was no infiltration of the mesenteric or retro-peritoneal glands There were no metastases The other organs were healthy

The accompanying table is a summary of the important features of these cases.

Case	Sex.	Age.	Prominent symptoms.	Diagnosis	Treatment.	Approximate duration	Site of growth.	Metastases.	Ascites	Site of obstruction.
1	F	27	Anæmia, debility abdominal pain.	General peritonitis	Laparotomy	12 months.	Pyloric end of stomach, small intestine (in places) and colon	Gall bladder kidney	Undeterminable.	Ascending colon.
2	M.	33	Epigastric pain vomiting	Gastric ulcer	Gastro-jejunostomy	3	Whole of stomach small intestine (in places) and colon (whole of)	None.	None.	Pylorus.
3	M.	56	Chronic constipation with abdominal pain and distension.	Fibrous stricture of rectum and (?) malignant disease of stomach.	Colotomy	8	Whole of stomach small intestine (in places) cæcum colon and rectum.	None.	Ascites.	Pylorus cæcum hepatic flexure, splenic flexure, and rectum.

In all the cases the microscopical characters of the new growth were identical in the main, only differing in minor details. We found that the growth was a glandular carcinoma arising in the deeper layers of the gastric mucous membrane and undergoing colloid degeneration. Our conclusions were based on the study of sections from the following parts. In Case 1 (1) the stomach wall transverse section taken at the junction of the infiltrated part with the healthy part, at a point about four inches from the pyloric end, (2) the ileum, transverse section taken at the junction of the bowel with the mesentery, including the mesenteric attachment, (3) the colon, transverse section of the free unattached portion of the wall away from the meso-colon, (4) the metastasis in the kidney, and (5) the infiltrated fundus of the gall bladder. In Case 2 (1) the stomach transverse section of the thinnest part of the infiltrated wall, (2) the ileum, transverse section of the entire intestine, and (3) the splenic flexure, transverse section of the entire intestine. In Case 3 (1) the stomach, transverse section of the thinnest part of the infiltrated wall, (2) the cæcum, transverse section of the free surface, and (3) the rectum, transverse section of the free surface.

In all these sections growth of identical nature and a typical 'leather bottle stomach," while in Case 1 only the pyloric half of the stomach was affected in this manner A similar growth to that affecting the stomach also involved the small and large intestines to different extents in the different cases. In the intestines the growth seemed to start at the attached border of the mesentery or its homologues—viz, the meso-cæcum, meso-colon, meso sigmoid, and meso-rectum—and to infiltrate the wall of the bowel for a varying distance towards its free border, in some parts entirely encircling it and in other parts only spreading into the bowel for a short distance from its attached border In places where the growth had infiltrated the entire circumference of the gut it was thickest at the attached border and gradually became thinner towards the free border In Case 1 the parts affected were the pyloric half of the stomach, the small intestine in places, and the entire colon, while the cæcum was free from growth, in Case 2 the entire stomach was infiltrated, the small intestine in places, and the whole of the colon, the cæcum again being free, while in Case 3 the entire stomach, the small intestine in places, the cæcum, the colon, and the rectum were infiltrated with growth To the colon in all the cases, and to the cæcum and rectum in Case 3 the terms "leather bottle" colon, cæcum, and rectum respectively, might be fittingly applied. In all the cases the growth had spread for a short distance in between the two layers of the mesentery and the meso-colon, and in Case 3 the meso cæcum and the gastro hepatic omentum were similarly affected In Cases 1 and 2 the cæcum and meso-cæcum were unaffected We are not sure of the condition of the gastro hepatic omentum in Cases 1 and 2, as no note was made of these parts at the time of the post-mortem examination In all the cases the great omentum and the mesenteric and retro peritoneal glands were free from growth. The fundus of the gall bladder in Case 1 was infiltrated with carcinomatous growth to the thickness of one eighth of an inch, and there was a small metastatic deposit in one of the kidneys in this case, but with these exceptions there were no metastatic growths in any one of the three cases In all the cases there was in no part of the stomach or intestines any sign of ulceration of the mucous membrane and until microscopic sections were made it was not clear where the growth had originated. The result of this widely diffused malignant disease was to cause stenosis at one or other part of the alimentary tract and sometimes at more than one part in the same case. Thus, the patient in Case 1 died from perforation of the cæcum behind a stenosis in the ascending colon, in Case 2 the patient had gastro-jejunostomy performed for pyloric obstruction, while in Case 3 there was some hesitation between performing a gastro jejunostomy for pyloric obstruction or an inguinal colotomy for rectal obstruction In this case the colotomy was finally decided upon, but the necropsy showed that a gastro-jejunostomy was just as much indicated. Case 1 was that of a female, Cases 2 and 3 were those of males The ages were 27 years, 38 years, and 56 years respectively Ascites was present in Case 3 but absent in Case 2, while the presence of the septic peritonitis in Case 1 made this condition uncertain.

The following is a brief record of the clinical aspect of each case with details of the post-mortem examinations —

CASE 1 —A woman aged 27 years, was admitted into the General Hospital, Birmingham, on June 8th 1901, with general septic peritonitis. Her previous health had been good until 12 months before her admission, and during this time she had suffered from anæmia and debility and indefinite abdominal pain of an intermittent colic like nature. A week before her admission symptoms of intestinal obstruction supervened and she was received into the hospital with signs of general peritonitis She died two hours after her admission during the administration of an anæsthetic, from asphyxia arising from regurgitation of stomach contents into the larynx.

At the necropsy the body was found to be thin with no external glandular enlargements The abdomen was much distended and it contained free gas and about three pints of turbid purulent fluid mixed with fæcal matter There was a general acute septic peritonitis, the entire peritoneum being covered by a thick fibrinous exudation loosely gluing the coils of intestine together The peritonitis was due to the perforation of a stercoral ulcer situated in the cæcum. The cæcum was dilated and thinned owing to its lying above an obstruction in the ascending colon. The œsophagus was healthy The stomach was small and was much thickened at the pyloric end the fundus and cardiac end being of natural thickness The thickening was due to an infiltrating growth of the wall of the stomach starting at the pylorus, where it was one third of an inch in thickness, and spreading for about four inches into the main portion of the stomach, gradually thinning away into the normal stomach wall. There was no stenosis of the pylorus. The mucous membrane and the serous coat of the stomach were quite intact and were not apparently affected by the growth. The duodenum was free from growth but the jejunum, ileum, and colon showed the presence of a similar growth to that in the stomach wall. In the small intestine the growth was present only at certain places along the mesenteric border of the bowel and spread only for a short distance into the wall of the bowel, but the colon was affected throughout its length and here, too, the entire circumference of the bowel was infiltrated Everywhere the mucous membrane of the intestine was intact and showed no ulceration. The lumen of the small intestine was normal but that of the colon was much encroached upon in places by the infiltrating growth The greatest narrowing occurred in the ascending colon and was so marked that the cæcum was much thinned and dilated and contained in its walls a perforated stercoral ulcer The great omentum was free from growth There were no enlarged mesenteric or retro-peritoneal glands The growth, however penetrated for a short distance between the two layers of the mesentery and meso-colon. The liver weighed 56 ounces and was fatty The gall bladder was contracted, thick walled, and empty It was the seat of a similar infiltration to that in the stomach and intestines which had started at the fundus and terminated abruptly at the beginning of the cystic duct. The spleen was soft and small. The kidneys together weighed 10 ounces and one of them contained in the cortex a small ill defined pale patch which on microscopical examination proved to be a metastatic deposit of the new growth The suprarenals were healthy, as were also the bladder and urethra, the uterus, and the adnexa. There were no metastases other than the infiltration of the fundus of the gall bladder and the growth in one kidney

CASE 2.—A male, aged 38 years, was admitted into the General Hospital, Birmingham, on Oct. 3rd, 1901, complaining of epigastric pain of about ten weeks' duration and of vomiting after meals during the past month. His history prior to May, 1900, was not obtainable At that date, however, he had an attack of severe pain in the right side of the abdomen and a right subphrenic abscess was found and was drained by an abdominal incision The cause of the abscess was not ascertainable at the time of the operation or even later at the necropsy He was free from pain after this operation till ten weeks before his admission, when a recurrence of the gastric symptoms appeared He had severe epigastric pain, which was worse after meals and occasional vomiting The pain used to come on periodically in attacks of great severity, lasting for several hours and leaving the patient very exhausted On admission into the hospital he was very emaciated and his general condition was one of marked asthenia The pain was constant, he vomited frequently almost immediately after taking food and consequently was only able to take very small quantities of liquid food at a time. The bowels were opened with difficulty—only by enemata. On Oct 7th, 1901 anterior gastro-jejunostomy was performed—a Murphy's button being used. He sank and died on the 10th

At the necropsy the body was found to be very emaciated, but with no œdema, jaundice, or external glandular swellings There was an old laparotomy scar through the right rectus abdominis close to the costal margin—the incision through which the subphrenic abscess had been drained in May, 1900—and there was a recent wound in the middle line through which the gastro-jejunostomy had been performed On opening the abdomen the upper part of the peritoneal cavity was found to be obliterated by an entangled mass of firm fibrous adhesions and the jejunum was seen to be anastomosed to the anterior wall of the stomach by a Murphy's button. The union was good, the button was *in situ*, and there were no signs of recent peritonitis. The vermiform appendix was healthy but very long and passed up over the right kidney imbedded in firm adhesions and its tip lay almost touching the fundus of the gall bladder The œsophagus was healthy The stomach was very small and contracted and its walls were much thickened—the "leather bottle" stomach. The thickening was seen to be due to a submucous infiltrating growth of a pearly homogeneous glistening appearance The condition of extreme hæmorrhage nearly always means endometrial invasion and is generally associated with a submucous or polypoid tumour Nearly all the patients suffered at times from some degree of pressure effect, especially on the bladder Two had suffered from retention of urine and accompanying cystitis for several months, and three from backward ascending trouble, leading to pyelitis and kidney disease. In the majority of patients the disabling effect is produced by a combination of repeatedly recurring moderate loss, with constant discomfort, pain, and pressure, and thus the nervous resistance of these patients is worn down by the vicious circle No doubt the social condition of the patient is a very important factor in deciding as to the necessity or otherwise for operation. This point will be alluded to again in the concluding remarks. The case of a poor woman who has to earn her living and to support her family is on a different level from that of a lady surrounded by luxury, for while in the first case it is essential to restore the patient to moderate health in order to avoid starvation or the workhouse, in the other case the favourable surroundings, while removing the necessity for operation on these grounds, do so by enabling the patient to struggle with the disease instead of being overwhelmed by it. Rest and luxury never cure fibroids. What they can do is to enable the patient to live the life of an invalid, a privilege denied to the poor, and in the case of the rich patient, if it is wished to enter again on the enjoyment of the work and duty of life, the necessity for operation is as important a factor in the one case as in the other

3 The condition of the appendages in cases of fibroid disease is an interesting point. In 18 cases one or both ovaries were cystic—that is, they contained cysts varying in size from that of a filbert to that of a hen's egg and in some there were signs of peri oöphoritis. In one case there was hæmato-salpinx, in two cases double pyo-salpinx, and in five cases hydro-salpinx. No doubt the association of tubal disease with fibroid tumour is an accidental one to a certain extent and depends on previous gonorrhœal infection and also on puerperal infection following the miscarriages to which these patients are especially subject. In a series of cases drawn from hospital patients such conditions will no doubt be especially frequent. I am, however, inclined to think that the oöphoritis and cystic changes in the ovaries are intimately associated with the tumour formation in the uterus. It is, at any rate, true that those cases have presented the worst symptoms, especially as regards pain, where the appendages have been affected. This would no doubt be expected and the difficulties of the operation are, of course, considerably increased by previous pelvic inflammation. In three of the cases the uterus contained at the time of operation an ovum from six weeks to three months old This condition was suspected before operation and was not considered a contra indication to its performance. In one case caseating tuberculous foci were present in the Fallopian tubes and tuberculous disease was proved to be present in the endometrium by microscopic examination As to the size of the tumour this varied from the enormous tumour occupying the whole abdomen and interfering with respiration, to the small intramural multi-nodular or submucous tumour which, though inconsiderable in size, often gives rise to urgent symptoms.

4 Degeneration in fibroid tumours is, I think, more frequent than is generally supposed In most of the cases of large single tumours degenerative changes were noticed in the centre, cystic changes, too, were frequently found. and this is well shown in the case of a fibroid in Douglas's pouch in which the greater portion of the swelling has been converted into a cyst containing clear yellow fluid. If the tumour be single this condition might give rise to insuperable difficulty in diagnosis, in this case the swelling was only one of several outgrowths The occurrence of degeneration cystic or otherwise, in a tumour does not seem in any way to lessen the hæmorrhage or other symptoms referable to the fibroid, nor is its presence inconsistent with a further growth of the tumour at its periphery or with the growth of other tumours

5. In two cases in addition to moderate-sized tumours, an invasion of the uterine wall by very numerous small fibroids was noted, little whorls of involuntary muscular tissue, showing all stages between this and the recognisable larger tumours. Bland Sutton and others have reported cases of this character and have drawn attention to this condition. In one of the worst cases of hæmorrhage in this series (No 2556), which previous curetting had failed to relieve, the condition found was one of marked hypertrophy of the uterine walls, which on microscopic examination was found to be due to this infiltration by microscopic fibroids, the benign character of the growth was, I think, shown by the complete recovery and absence of any recurrence after operation

6. The question of the association of fibroid disease with cancer of the uterus should be considered separately from that of the association of fibroid disease with cancer of other parts of the body In one case a large uterine fibroid was associated with a pre-existing scirrhus of the breast with glandular recurrence after removal. The effect of removal of the ovaries was very marked on the uterine hæmorrhage and the size of the fibroid, but had little effect on the course of the malignant disease, from which the patient died later One case (No 1910) of enormous fibroid was also associated with cancer of the sigmoid flexure and this was only discovered after the removal of the uterine tumour which filled the abdomen. The patient underwent inguinal colotomy for the relief of the obstruction due to the cancer of the colon and eventually died from the disease some months later The question of the association of fibroids with cancer of the uterus is an important one and can be best considered in relation to the subject of the natural history of fibroids in patients who have not had the tumour or the uterus removed by operation In recalling the histories of such cases as have come under observation during the last few years I can recall two, one of a married woman, a multipara, and one of a single patient, in which operation was declined or was not thought desirable, in which long years of invalid life were passed through owing to pressure and hæmorrhage before the climacteric, and in which after that period the symptoms of cancer of the uterus appeared and the disease ultimately killed the patients. Out of 16 cases of vaginal hysterectomy for cancer, &c., in one case the disease was associated with a moderate-sized fibroid

7 As to the nature of the operation there is no doubt that surgeons are now largely benefiting by the tentative and anxious labours, trials, and failures of the early operators, Keith, Spencer Wells, and Lawson Tait. In fact, I believe that up to the last an abdominal hysterectomy was always undertaken by Lawson Tait with anxiety and some amount of misgiving, and Keith was always anxious as to the result. It was only when the technical knowledge of pelvic operations gained by British and foreign operators was based on the bedrock principles of aseptic surgery, that the cloud of anxiety was fully lifted and that it became possible to undertake a complicated case of abdominal hysterectomy with as great a sense of mastery and assurance as has been the case for many years in ovariotomy I well recollect the sense of depression with which I closed the abdomen without feeling justified in attempting at that time to remove a very large uterine fibroid with pelvic extensions in 1886, and also the humbling effect of the lesson I learnt from an equally serious case of the same kind at about the same time, in which after advising the patient that operation involved too great a risk, and that rest, palliative remedies, and invalid life were the only course, she returned from Birmingham shortly afterwards with the uterus and tumour removed and health restored. Since that date the confidence, knowledge, and skill necessary to deal successfully with these cases have fortunately spread from the chief surgical centres all over the country

In the above series, in the first seven cases of abdominal hysterectomy up to 1895 Kœberle's serre nœud was used, except in one case in which a stout silk ligature was employed, and the stump was treated extra peritoneally on the same lines This operation, though fairly safe as regards life involved much pain from dragging and a retarded and uncomfortable convalescence. In 1896 the operation of panhysterectomy was performed in one case and from 1896 onwards to the present time in all the cases the uterus has been removed above the level of the internal os after ligaturing off the broad ligaments the formation of peritoneal trans-pelvic flaps and also flaps composed of the tissues of the divided cervix, and the enucleation of any outlying masses of tumour Accurate suturing of these two lines, the uterine and peritoneal, leaves the pelvis in practically a sound state and no injury is done to the pelvic floor In some of the cases special difficulty arose Thus, in No 2726, the subject of two previous operations, distribution was found, but the colloid degeneration was variously advanced in the different cases and of varying degree in the different parts of the same case. In all the distribution of the growth was identical. It formed a very thick continuous layer occupying the submucosa and another less thick but still continuous layer occupying the subserosa, and these two layers of growth were united to one another by strands of growth of varying thickness, splitting up the muscular layers of the stomach and intestines into bundles of muscular fibres of varying size. In the sections of the small and large intestines of these cases the muscularis mucosæ and the mucous membrane beyond were for the most part intact, occasionally, however, a mass of glandular carcinoma was found occupying the deeper parts of the mucous membrane and penetrating through the muscularis mucosæ to become continuous with the main mass of growth in the submucosa In the stomach sections, however, while the growth had the above general distribution it could be seen to arise in the deeper layers of the mucous membrane as a typical glandular carcinoma, to penetrate the muscularis mucosæ and to become continuous with the main mass of growth in the submucosa, with which again the subserous layer of growth was joined by strands of growth splitting up the muscular coat.

As we have said, the amount of colloid degeneration varied in the different cases and in the different parts of the same case. In any particular section the degeneration was seen to become more advanced as the growth was traced outwards from the mucous membrane to the serous coat, so that in every case the growth occupying the subserosa was more degenerated than the layer of growth in the submucosa of the same part. Many of the sections showed the different stages of colloid degeneration in a very beautiful manner Throughout the sections the cells of the growth stained but faintly They showed great inequality in size and there was a general tendency to increase in size as one passed from the mucosa to the serosa. With this increase in size there was a marked tendency to vacuolation and granularity of the protoplasm with displacement and distortion of the nucleus till in the serosa large spaces filled with colloid material and containing only the débris of pre-existing cells were met with. This degenerative change which we believe is of a colloid nature, was only appreciable microscopically There was nothing in the macroscopical appearance of the stomach or intestines to suggest such a change. Everywhere the infiltrated part of the stomach and intestines was of leathery hardness and we anticipated a fibrous infiltration of the parts rather than the invasion by carcinomatous growth which we found. In fact, when the necropsies were first made we thought we had the condition described in Osler's "Medicine" ("proliferative peritonitis") in which a thickening of the peritoneum is found associated with cirrhosis of the cæcum and ascending colon or of the stomach Some of the sections in which the degeneration was so advanced that practically no definite epithelial cell elements remained—the tissue appearing as a fibrous meshwork inclosing apparently empty interspaces—helped to bear out the opinion formed on an examination by the naked eye only, that the entire process was a diffuse fibrosis. A consideration of sections, however, from different parts and the evidence they afforded of different stages of the same degenerative process have led us to our final conclusion that these were cases, not of a diffuse fibrosis, but of a diffuse carcinomatosis undergoing colloid degeneration This degeneration was most marked in Case 2 and least marked in Case 1. In Case 2 the degeneration was more advanced in the splenic flexure than in the ileum and more advanced in the ileum than in the stomach In Case 3 the degeneration had an exactly opposite distribution, being more advanced in the stomach than in the cæcum, and more advanced in the cæcum than in the rectum, while in Case 1 in the stomach the degeneration was only present in the subserous layer of growth while in the ileum and colon the submucosa as well as the subserosa showed marked degeneration

We have referred at some length to the presence of the degeneration in these growths because it so masks the true (carcinomatous) nature of the growth in many of the sections that when we showed specimens of these cases at the meeting of the Pathological Society of London held on April 29th, 1902 [3] we were altogether in doubt as to their exact nature and we suggested that they might be endotheliomata. A more careful study of the sections, however, has brought us now to the conclusion that they are carcinoma arising in the deeper layers of the gastric and intestinal mucous membranes undergoing colloid degeneration. We do not seem to have been alone in describing these specimens when they were shown last April as endotheliomata, as a statement in the *Centralblatt für Gynäkologie* shows On page 1109 in No 42 (Oct. 18th, 1902) we read the following "Many so-called endotheliomata of the intestines are only metastases of, for example, scirrhus of the stomach."

We have not been able to find any account of such widespread carcinomatous infiltration of the stomach, the small and the large intestine, in the literature of malignant disease of the intestinal tract and so we have reported these cases in some detail We wish to thank the staff of the General Hospital for permission to publish these cases.

Birmingham

ON THE RESULTS IN 50 CASES OF ABDOMINAL HYSTERECTOMY FOR FIBROID DISEASE OF THE UTERUS

WITH REMARKS ON THE AFTER HISTORY OF THE PATIE AND ON THE ARTIFICIAL MENOPAUSE

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THERE is, I think, no doubt that medical opinion is s in a somewhat transitional and uncertain state as regards t wisest and best treatment for fibroid disease of the uter We need only recall recent debates at various societies order to illustrate the wide gulf which separates the views the conservative school, on the one hand, from those of t operative school on the other It is in order to add a sm portion to the sum total of positive knowledge on this i portant subject that I venture to bring forward the essenti features in 50 cases of operation for fibroid disease whi have been under my care during the last few years. I ha been especially anxious to ascertain by personal inves gation the real condition of these patients some yea after operation, to find out what sort of health they real enjoy and to what extent they are able to fulfil the duties citizenship and to take their share in the work or play of li

The investigation of the after histories of these cas is not an easy matter and I wish to give one word of cauti against hastily accepting the unverified statement of patient without opportunity for personal interview and cros examination. Many female patients who have undergone operation which, in their own eyes and that of their friend is of a heroic character are apt to give a corresponding coloured account of their later condition and they eith magnify or minimise their sufferings, or their cure, accordin to the sanguine or melancholic bent of their minds I those cases in which I have been unable personally to se the patients I have obtained valuable information from th medical men in attendance. The cases have been arrange in series in a table under the following headings Hospit or private number, age, date, married or single, an number of children, character of menstruation, presence pain, and pressure symptoms, length of disabling illnes the nature of the tumour, the condition of the appendage the nature of the operation, the primary result, the resul at the present time, together with remarks

The following lessons are to be learnt from a study o this limited series of cases of sufferers from fibroid diseas sufficiently disabling to necessitate a serious operation

1. The first point is the unfortunate history of prevailin sterility and of frequent and repeated miscarriages. In othe cases the disease may be regarded as an impediment t marriage Thus, out of 50 patients 20 were unmarried an out of the remaining 30 married women there were 11 miscarriages and only 33 children

2 The disabling effect of the disease on the workin capacity and enjoyment of life of the sufferers depends no alone, or indeed chiefly in most cases, on the profusenes of the menstruation, but on the pain and pressure effects o the pelvic tumour Of course, in cases of violent flooding this alone renders the patient a complete invalid, and this

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[3] THE LANCET, May 3rd, 1902, p 1249

TABLE SHOWING THE ESSENTIAL FEATURES IN A SERIES OF 50 CASES OF ABDOMINAL HYSTERECTOMY FOR FIBROID DISEASE OF THE UTERUS—(*Continued*)

No of case	Age	Date	Married or single	No of children (if any)	Character of the menstruation	Pain	Pressure symptoms	Length of the illness	Character of the tumour	Condition of the appendages	Nature of the operation	Result	
												Primary	Secondary
2460	50	1900	S	—	Profuse for 3 weeks with inter menstrual discharge	Yes	Yes	3 years.	Large, submucous and intramural	Left ovary cystic, both ovaries removed.	Abdominal hysterectomy through cervix	Recovered	Good health.
2494	—		M	—	—	—	—	2	Size of a nine months pregnancy	Double pyosalpinx.		"	
2523	23	"	S	—	Regular	Yes.	No	2	Large multi nodular	Left ovary cystic.	Cervical hysterectomy		"
2606	—		M	—	Profuse.		—	—	Two small intramural.	Left ovary cystic right ovary normal	Abdominal hysterectomy through cervix.		"
2651[22]	48		S	—	—		Bladder	6 years	Large.	—	Cervical hysterectomy		Died six months later
2659[23]	—		S	—	Scanty		Yes	Some years	Large fills pelvis	Tubes salpingitic.		"	Good health
2726[24]	40		M.	—	Profuse			—	Multi nodular adhesions	Right hydrosalpinx.			"
2776	34	1901	S	—	"			6 months	Large posterior wall	—			"
2807[25]	41		S	—				3 years	Intramural and submucous	—			
2821[26]	42		M.	4	Slight			—	Multi nodular	—			
2827[27]	48		S	—	Ceased for six months			2 months	Rapidly growing	Right ovary cystic.			Died from syncope 14 days later
3023[28]	37	-	M.	1	Regular		—	3 years	Small intra mural.	Left ovary cystic.	—		Good health
3027[29]	40	—	S	—			Bladder and rectum.	2	Multi nodular cystic degeneration.	—	Cervical hysterectomy	"	
3041	32	—	M.	1	Profuse.		Rectum.	2	Very large cystic	—			
3051[30]	43	1902	M.	2	Regular		Bladder	12 months	25 tumours	—		"	
3096	42		M.		Menorrhagia.		Yes	12	Size of a nine months pregnancy	Right ovary cystic.		"	
3116	43		M.	6	Excessive			6	Multi nodular	Right hydrosalpinx			
3180[31]	42		S	—	Regular		Bladder	2 years	Size of a six months pregnancy	—			
3222	34		S	—	Menorrhagia.		Yes	6 months	Posterior wall, also polypus	—			Phlebitis
3293	30		S	—	Regular		Bladder	12	Posterior wall	—		"	—

REMARKS —[1] Symptoms of menopause were slight and normal. [2] Both the ovaries and the tubes were removed hæmosalpinx. [3] Moderate menopause both ovaries were removed. [4] Both ovaries were removed. [5] Left ovary was cystic, of the size of a cocoanut the right ovary was gangrenous [6] Convalescence was delayed by prolapse of the bowel through abdominal wound. [7] Works as a nurse. [8] Operation of partial myomectomy three years previously [9] Hæmorrhage the peritoneal flaps were stitched to abdominal incision cavity tamponnaded [10] Uterus contained a two months ovum. [11] Colotomy for cancer of the colon [12] Miscarriage occurred two months before the operation [13] Normal menopause curetted three months previously [14] Patient had peritonitis at the time of the operation also pyelitis from pressure on ureter [15] No neurosis [16] Moderate menopause. [17] Slight neurosis. [18] Moderate menopause lasting 12 months [19] Patient had peritonitis profuse sweatings during the menopause. [20] Both ovaries were left the patient menstruates regularly [21] Hæmorrhage during the operation [22] Died from pyelitis existing before the operation nephrectomy [23] Patient had had retention a month before the operation tuberculosis of peritoneum, tubes and endometrium. [24] Patient had had two previous abdominal sections enterectomy [25] Slight neurosis. [26] Small hernia [27] Heart disease no pelvic complication. [28] Recovery of the patient was delayed by pyelitis [29] Left ovary was removed. [30] Normal menopause the left ovary was removed. [31] Albuminuria before the operation.

enterectomy was necessary owing to dense adhesions In one case (No. 1852), owing to persistent hæmorrhage uncontrollable by forcipressure or ligature, I was obliged to bring up the peritoneal flaps to the abdominal incision and to tamponade the bleeding cavity thus shut off from the peritoneum.

8 One of the most important points that comes out in the consideration of these cases is, I think, the establishment of the fact that the uterus may be readily and safely amputated at almost any level. It is not necessary always to remove the organ just above the internal os, the seat of election, provided that removal at a higher level efficiently removes all sources of present and future trouble In several cases the uterus has been removed at a considerably higher level and in one case (No. 2329) at a point sufficiently high up in the uterine cavity to allow of regular and free menstrual periods for some years afterwards. Moreover, in three cases of Porro's operation the procedure adopted was in reality a modification of Porro's method. The first case was treated by the serre-nœud in the usual position without separate ligature of the broad ligaments, the obstruction to labour at the full time being due to a dwarf pelvis. In the second case the obstruction was caused by large double adherent ovarian cysts behind the uterus, malignant in origin, and the uterus was amputated four inches above the level of the internal os, after ligature of the broad ligaments, the uterine flaps being involuted and sutured. In the third case, owing to the implication of the lower segment of the uterine body in the malignant mass of rectal cancer, the pregnant uterus was amputated about halfway down and just below the level of the insertion of the placenta. The somewhat voluminous uterine flaps were

TABLE SHOWING THE ESSENTIAL FEATURES IN A SERIES OF 50 CASES OF ABDOMINAL HYSTERECTOMY FOR FIBROID DISEASE OF THE UTERUS.

No of case	Age	Date	Married or single	No of children (if any)	Character of the menstruation	Pain	Pressure symptoms	Length of the illness	Character of the tumour	Condition of the appendages	Nature of the operation	Result	
												Primary	Secondary.
685[1]	54	1892	S	—	Regular but excessive	Yes.	Rectum	4 years	Multi nodular	Normal left ovary removed	Kœberle's serre-nœud.	Recovered	Good health.
778[2]	42	,,	M	—	Menorrhagia.	,,	Yes	2 ,,	Size of a six months pregnancy	Ovaries cystic	,,	Died.	–
1003[3]	50	1894	S	—	Had ceased for two years			2	Very large tumour	Left ovary cystic.		Recovered.	Good health.
1028[4]	29	,,	S	—	Profuse	—	—	2	Size of a nine months pregnancy	—	,,	,,	,,
1388[5]	43	1895	M	0	Very excessive	Yes	Yes	1 year	Tumour fills abdomen	Ovaries cystic	,,	Died	–
1414	42	,,	S	—	Profuse		Bladder	1	Size of a four months pregnancy	Normal	,,	Recovered.	Good health.
1416[6]	40	1896	M	—	,,		Bladder and rectum	—	Size of a six months pregnancy	—	,,	,,	–
1456	33	,,	S	—	Very excessive			1 year	Size of a nine months pregnancy	Ovaries cystic	Panhysterectomy		Good health.
1556	38	,,	M	0	Regular	,,	Yes	6 years	Enormous	Normal	Abdominal hysterectomy through cervix		,,
1676[8]	44	,,	M	—	Profuse.			6	Multi nodular	—			–
1740	40	1897	M	2	Regular		Retention of urine 3 months	3 months	Fills pelvis	—			Good health.
1794	41	,,	M	—	Profuse		Yes	4 years	Size of an eight months pregnancy	Double hydrosalpinx			,,
1852[9]	35	,,	M	0	Regular	—	—	2	Large multi nodular	Both ovaries removed			,,
1899[10]	39	,,	M	Five miscarriages	Absent for 10 weeks	Yes	Yes	6 months	Multi nodular fibroid	—			,,
1910[11]	40	,,	M	1	Regular			2 years	Large also cancer of the sigmoid	Normal.			Died from cancer 12 months later
1945[1]	30		M.	One miscarriage				3	Pelvis full		,,	,,	Good health.
2008[12]	35	1898	M	2	Profuse			1 year	Uniform enlargement		,,	,,	
2023	40	,,	M	0	Violent flooding				Size of an eight months pregnancy				
2037	44		S	—	Profuse	—	—	—	Tumour in posterior wall	Left ovary cystic.	,,		,,
2084[14]	40	,,	M.	—	,,	Yes	Yes	1 year	Sloughing fibroid	Ovaries cystic.			,,
2111[15]	42	,,	M	—				10 years	Multi nodular	Double hydrosalpinx	,,	,,	
2144	44	,,	M	0	Menorrhagia.			1 year	,,	Double pyosalpinx		,,	–
2213[16]	47	1899	M	0	Absent for five months				Size of a six months pregnancy	Left ovary cystic both ovaries removed			Good health.
2273[1]	40		S	—	Violent.			3 years	Large	—			,,
2294[1]	46		M	0	Profuse for 14 days			6 months	Multi nodular	Left ovary cystic tubercle in peritoneum		,,	
2324[19]	24		M.	0	Regular	,,		1 year	Multi nodular cystic degeneration.	—			
2329[20]	25	,,	M	One miscarriage.	Flooding		—	2 years	Size of a five months pregnancy	Normal	Above cervix	,,	
2388[21]	37	,,	M.	0	Regular	—	—	2	Fibroid (9 lb 9 oz)	—	Through cervix		Excellent health.
2416	56	,,	S	—	Ceased at 40	Yes	Yes.	15	Fibroid (7 lb)	—	,,	,,	Died from dropsy Dec. 1899.
2442		,,	M	One miscarriage	Menorrhagia.			7 years 6 months	Fills abdomen (14 lb)	—			–

the ovarian element in connexion, of course, with the nervous system, and to regard the uterine influence as of less importance in its effect on the nervous system, although the local sanguineous discharge is the more striking and obvious phenomenon. In the natural climacteric both factors undergo orderly and simultaneous involution, while the irregular phenomena of the artificial menopause may be due to the absence of coördination and simultaneity in this process of involution.

12 As regards the sexual phenomena shown by these three groups of cases generalisation is difficult As far as I have been able to ascertain by careful inquiry the sexual appetite persists, or is only slightly impaired, in those cases in which the uterus has been removed above the cervix and the ovaries left. In cases where the ovaries have been removed with the uterus I think there is no doubt that the sexual appetite is lost, and in cases of removal of the ovaries alone I think, in spite of the assertions of some writers to the contrary, that it is certainly diminished or lost.

CONCLUSIONS

The decision as to operation in cases of fibroid disease of the uterus must depend on the danger to life and the amount of disablement, ill health, and suffering which are caused by the disease. The social condition of the patient is also a factor to be considered, and since a comfortable *invalid life is incompatible with poor circumstances* we are not justified in withholding from poor patients the restoration to working capacity which the operation of hysterectomy, if successful, confers In patients in a better social condition the very serious moral, mental, and physical effects of long continued invalid life are not sufficiently appreciated by medical men. In nearly all cases where the disease causes disablement or where the hæmorrhage, pain, and pressure are sufficiently severe to threaten ultimate serious damage to the general health, to the nervous system, or to the pelvic viscera, in these cases the possibility of cure by operation should be laid before the patient and if the conditions are favourable the operation should be advised.

The operation of abdominal cervical hysterectomy as now carried out has a lower mortality in capable hands than is sometimes represented (4 per cent) and is comparable with that of ovariotomy The uterus can be safely amputated at any level, and the absence of recurrence of fibroid disease in the stump or cervical portion of the uterus—in any case in the present series—is an argument in favour of cervical amputation as against panhysterectomy In the former case also, the pelvic floor is left intact.

Myomectomy, the enucleation of one or more fibroid tumours with the preservation of the uterus as a whole, is a conservative operation of much value and should be practised in the case of *single and accessible tumours*

In all cases where possible, one or both ovaries should be left in the operation of hysterectomy for fibroid disease. The beneficial effect of this procedure is shown in the more complete convalescence and the modified character of the artificial menopause.

Leicester

A NEW "FILM" DRESSING FOR WOUNDS

BY PEYTON T B BEALE, F R C S ENG,
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ALTHOUGH "cyanide gauze,' now in general use for dressing wounds, has been found to be very satisfactory, I think that it can hardly be considered a perfect dressing It is usually employed in the following manner A piece of cyanide gauze consisting of about ten layers and moistened with some antiseptic lotion, is laid on the wound, care being taken that it overlaps the wound at least five inches in each direction. Over this some layers of dry gauze are applied and this is covered with several sheets of sterilised cotton wool, usually a wool impregnated with an antiseptic such as salicylic acid or boric acid. This wool again overlaps the gauze several inches in each direction and the whole is kept in position by bandages more or less firmly applied A good deal depends upon the firmness with which the bandage is applied, for it prevents the whole dressing from slipping Such a dressing must, from its bulk and heat, be uncomfortable to the patient, at any rate in most situations, moreover, it must be removed in order to see how the wound and the parts around it are progressing The removal must be accomplished under conditions which are very familiar and which are often termed "strict antiseptic precautions."

The fact that we employ so many thicknesses of gauze and wool seems to me to imply that we are afraid of septic organisms gaining access to the wound from the air, and the fact that we apply a dressing over so large an area, and with considerable firmness, that we fear the access of these organisms from the skin around the wound. I am told that the late Sir George M Humphry of Addenbrooke's Hospital, Cambridge, in pre antiseptic and aseptic days found that his amputation stumps healed best when they were exposed freely to air and light and that he used to have the stump projecting beyond the bedclothes in front of a window, and that under these conditions the wound very rarely suppurated. I believe that if we were to practise aseptic surgery and to treat our wounds at the present day in this manner we should obtain even better results, but unfortunately it would be impossible in any city to obtain pure air and it would in other ways be quite impracticable in our hospitals The next best thing would be to seal up our wounds hermetically with some material which is aseptic and which is gas and fluid proof and upon which we can apply as much pressure as may be necessary If such a substance were transparent I think it would be an ideal dressing

During the last 12 months, through the kindness of Mr Walter Reid, managing director of the Velvril Company, I have been using thin films of a substance known as "Velvril' as a wound dressing and I have so far applied it to over 100 wounds with very excellent results. Velvril is one of the many cellulose derivatives and can be produced cheaply in the form of films of any thickness in several ways. When in the form of a film it has the following characteristics It is transparent, but slightly yellow in colour, it is absolutely impermeable to all ordinary gases and fluids, it is tough and elastic and very durable, it can be easily sterilised by any of the ordinary methods, and it can be immersed in boiling water for a long time without undergoing any permanent change. It can also be easily dissolved in acetone and its solution in that fluid is quite unirritating even when in contact with a freshly made wound. The solution is, from its method of manufacture, absolutely sterile. After making various experiments I find the following method of using the film and solution gives uniformly perfect results. It is, of course, assumed that the usual precautions relating to the sterilisation of the skin of the patient and that of the operator's hands and of all instruments, towels or cloths sponges, and swabs, have been fully adopted

When the operation has been completed a piece of the sterilised velvril film is cut large enough to cover the wound and the skin round it for at least one inch in each direction. If a drain is to be used a sufficient opening is cut in the film to receive the tube or plug The wound must be as dry as possible and if ordinary methods do not suffice to check capillary oozing, washing out the wound with 50 per cent. of alcohol and sterile water will be found very efficacious The piece of film should be placed upon a boiled cloth or towel until required for use. Should the exposed surface of the film become accidentally moistened it should be gently wiped with a piece of dry sterile wool moistened with acetone. When the wound has been sutured it and the skin all round are washed freely with acetone, using dry wool as before. The wound and the skin round it for at least one inch in each direction are then painted with velvril solution applied freely, and the film is then placed upon it, the exposed surface next the solution. Upon this is placed a pad of sterile dry wool[1] and the whole is bandaged firmly, making as much pressure as may be considered necessary It is advisable to apply considerable pressure for the first 12 hours or so The preliminary washing of the skin and wound with acetone is necessary in order to remove all trace of water, the solution and the film then stick so firmly that it is absolutely impossible for any gas or fluid to gain access to the wound. If the film is left to itself it will peel off in from 10 to 12 days bringing the superficial layer of dead epidermal cells with it. A few fibres of the wool adhere to the film, so that if the wound is to be examined turned in and sutured and the peritoneum was sewn over, a more secure condition being thus left than would have been possible after Cæsarean section.

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[1] Salicylic wool makes a much better pad than absorbent wool It is firmer and more elastic.

9 *The primary result*—In this series of 50 cases two patients died from the immediate effects of the operation In one case the patient was in a very exhausted state from the long illness She had a double pyosalpinx and died from a subacute peritonitis, no doubt due to infection of the pelvic peritoneum from escape of pus at the time of operation In the second case (No 1388) an enormous fibroid and two large ovarian cysts were present, one of which was gangrenous from a twisted pedicle. Peritonitis was also the cause of death. In one case (No 2827) the patient died suddenly from syncope after an uneventful convalescence on the fourteenth day The necropsy showed nothing wrong with the pelvic area. In one case (No 1416) recovery was complicated by a giving way of the abdominal incision some days after the operation during a violent cough, and a coil of bowel escaped, this was, however, returned after due cleansing and the wound was reclosed without any marked effect on the patient Thus, in the series of 50 cases of abdominal hysterectomy for fibroids two deaths only occurred and primary recovery occurred in 48 cases—that is, if we exclude the death after convalescence on the fourteenth day, and if we take the last 43 cases all treated intraperitoneally there has been no death

10 With regard to the permanent or later result of such an operation as hysterectomy, the state of health of the patient at the present time is regarded as the measure of the success of the surgical operation The result can only be regarded as perfect from this point of view when the patient is free from any discomfort or disability, as far, at least, as the operation is concerned In some cases though relieved by the operation of all further hæmorrhage and suffering, yet the preceding years of illness have left their impress on the patient's health in the shape of a diminished nerve elasticity and a lower level of health. In some cases, too, where both ovaries have been removed the complicating effect of this procedure is also shown in the artificial menopause. In 38 cases the patients are now in good health, and able to get about, in some cases to carry on their domestic duties and in others to ride or drive or bicycle One patient (No 2416) died six months after the operation from heart disease and dropsy Another (No 2651) died six months later after nephrotomy for the relief of a pyonephrosis, the result of pre existing pressure and urethral infection A third, though relieved of pain, pressure, and hæmorrhage, is still confined to bed with the effects of venous thrombosis in the thigh and leg Another patient (No 1910) died from the cancer of the colon present at the time of operation. In four cases I have been unable to trace the patient

11. In considering the subject of the artificial menopause I wish to draw attention to one or two points which I think have been overlooked by gynæcologists. From the facts and conclusions drawn from a careful study of these cases and from the observation of other cases we are justified I think, in separating the different factors, the uterine and ovarian elements, which combine together to regulate the menstrual function Thus, I would speak of the uterine climacteric and the ovarian climacteric. No doubt in the ordinary course of events in most females aged from 45 to 50 years these factors, the uterine and ovarian, undergo involution pretty much together The nervous mechanism which is concerned in the regulation of the function gradually also follows suit and accommodates itself to the altered state of affairs in the peripheral end organs, and gradually, though not without difficulty (as shown by the flushings and other vaso-motor disturbances), settles down to the new *régime* Now in the above cases of artificial menopause or early climacteric the result of the operation, we can separate those cases in which the uterus has been removed and the ovaries or ovary left from those in which both ovaries have been removed as well as the uterus and compare these with cases of oophorectomy for fibroids and other conditions in which the uterus has not been removed. The interpretation of the results in a small number of cases is not without difficulty and further careful observation is needed

I find that there are seven cases of abdominal hysterectomy in which one or both ovaries were left and in which I have been able personally to interview the patient as to her subsequent condition—viz No 2294 No 2329, No 2807, No 2523, No 3027, No. 3051, and No 3096 To these may be added two cases of vaginal hysterectomy in which one ovary was left, and two cases of vaginal hysterectomy for cancer in young women in which there was no recurrence Most cases of vaginal hysterectomy for cancer are useless from this point of view, as many are performed at or just about the menopause, and in many local recurrence unfortunately is too common In these cases I have been strongly impressed with the greater rapidity of convalescence, the smaller disturbance of nerve balance and the far greater measure of good health and enjoyment reached by those patients in whom the uterus has been removed and the ovaries left, as compared with the other class in which the ovaries have been removed with the uterus In both, of course, the monthly uterine discharge ceases, but in the first class the climacteric is primarily uterine and not ovarian, while in the second class the climacteric is primarily both uterine and ovarian In fact, where one of the end organs, the ovary remains, certain periodically recurring nervous phenomena, such as headache, weight in the back, &c., seem to point to the fact that the ovary is still keeping up some of the periodic events which go to form part of the cycle of the menstrual phenomenon, the patient goes through a part only of the menopause at first—the part due to the removal of the uterine factor—and only gradually and later through the other portion when subsequent changes and involution occur in the ovaries Further observation is urgently wanted on this question as to the persistence of ovulation after the removal of the uterus. The flushings and irregular vaso-motor phenomena are also less pronounced in those cases where the ovaries remain—in fact, I think, are generally absent. These flushings and other nerve phenomena are, of course, the constant accompaniment of the natural menopause, in which I presume the uterine and ovarian elements undergo involution together and here they are not periodic—the ovarian influence, which I believe to regulate the periodicity of the nervous and other phenomena, having been removed, the vaso motor disturbances are to be regarded as the irregular explosions of a nerve centre or reflex chain which has been deprived of its escapement mechanism and is unregulated by any end organ influence

Now if we compare these cases of hysterectomy where an ovary is left with the remaining majority in which the ovaries have been removed along with the uterus, we find that the latter approximate more nearly, in the phenomena of their convalescence and artificial menopause, to patients in whom the ovaries alone have been removed for fibroids or other causes—in fact, to cases of oöphorectomy, provided, of course that the removal has been complete and that menstruation has been entirely stopped Flushings, irregular nerve storms, and explosions, and radiating effects on the higher centres, psychic and hysterical phenomena, are more common. Local pelvic discomfort is also more marked, whereas in the oöphorectomy series these phenomena reach their climax. With the removal of the chief regulating end organ as regards periodicity—viz., the ovary—the persistence of the other end organ the uterus, although in a partly functionless state, seems only to delay the final settling down of the nervous mechanism the function of which has now been lost and to keep up a local pelvic sense of discomfort.

It is at present premature to discuss at any length the manner in which these different end organs produce these results. With regard to the uterus I showed[1] that in the rabbit, the guinea pig and the sheep one function of the endometrium and mucous membrane lining the Fallopian tubes is to secrete a saline fluid which in the absence of external escape is probably re-absorbed and is in reality an internal secretion, and further that during pregnancy this secretion is in abeyance This secretion may have an important local and general influence. An internal secretion in the case of the ovary has been presupposed by many writers but has not at present been isolated or its effects defined

Although further facts and observations are urgently needed we are tentatively able to regard the menstrual phenomenon as made up of three factors, the uterine and ovarian elements or end organs and the nerve factor Further, the results of operative removal of one or both of these end organs have enabled us to dissociate their combined influence on the phenomenon of the climacteric or artificial menopause so produced We are thus led to recognise a uterine climacteric and an ovarian climacteric, and to attribute the function of regulation of periodicity to trace of an inferior turbinate body left, and in which the atrophied muco-periosteum is stretched tightly over the outer nasal wall, and when one attempts to inject wax into this attenuated fragment of inferior turbinate the needle either passes completely through or, after a few minims have been injected, the mucous membrane gives way and no lodgment of wax is obtained. To say, however, that it is impossible to inject such noses is, I believe, rather overstating the case, for patience and perseverance will eventually enable the surgeon to inject a few minims either into some part of the turbinate itself or under the tissues adjacent, from which the process of lifting the periosteum from the bone, once started, may gradually be continued into the turbinate itself although the results obtained in these cases are only very moderately satisfactory

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[1] Journal of Physiology, February 1898

The wax used for this purpose should be white paraffin wax melted at 105° F This is better than wax melting at a higher temperature mixed with vaseline to reduce the melting point, as has been advocated for similar work, as the vaseline seems to be more easily absorbable by the tissues than the paraffin. Non absorption is essential if it can be obtained. The syringe required should hold about 30 minims and the most serviceable length of needle is about two and a half inches. My larger needle is about one sixteenth of an inch in external diameter and the smaller one of the size of a large hypodermic needle. The needle should screw on to the syringe on account of the great resistance which has to be overcome in forcing the wax down the needle. The syringe and needle should be wrapped round with a spiral of iron wire which is attached to the galvano-cautery snare, by means of which the whole needle and syringe can be kept hot and the wax prevented from solidifying, as was originally suggested by Walker Downie. I keep the wax melting in a water bath and fill the syringe (previously thoroughly warmed over a spirit lamp) and then screw on the needle The patient's nasal mucous membrane should as far as possible be rendered anæsthetic by cocaine or eucaine The needle is inserted so as to allow of its being pushed along under the mucous membrane of the inferior turbinate, or what remains of the structure, according to the degree of atrophy present. As much paraffin is now injected as possible, the wax being kept fluid by heating the wire attached to the galvano-cautery snare The needle may be withdrawn after waiting for about one minute to allow the wax to set In very suitable cases I have replaced the turbinate with one injection of about 25 minims of melted wax In other cases it is necessary to inject several minims every week.

As a result of the restoration of the turbinate in these cases the patients express themselves as being far more comfortable, of feeling the air passing through their noses, and the formation of crusts has not recurred in cases where it had been checked before injecting and the crust formation has been more rapidly checked in cases where it was still present. Whatever the origin of this most obscure disease really is I firmly believe that in this treatment we have a means of assisting to check its progress if used sufficiently early and of restoring to relative comfort many of those in whom the disease is well established and whose nasal cavities have lost all resemblance to the normal.

Harley-street W

THE VARIABILITY IN VIRULENCE OF THE PNEUMOCOCCUS

BY H SINIGAR, M D, B S LOND, D P H, &C.,
MEDICAL OFFICER, MARYLEBONE SCHOOLS SOUTHALL LATE SENIOR ASSISTANT MEDICAL OFFICER, LEAVESDEN ASYLUM

THE late Dr J W Washbourn in the Croonian Lectures on the Natural History and Pathology of Pneumonia[1] referred at length to the variability in the virulence of different strains of pneumococci and quoted numerous illustrative experiments by himself and others. One would expect, however, an organism grown artificially with such difficulty as the pneumococcus to show great variability in laboratory experiments. I therefore thought that a short account of an epidemic which occurred last winter amongst the staff and patients of Leavesden Asylum would be of interest, as it seems to me to furnish clinical evidence of variability in virulence of the pneumococcus under natural conditions.

The first case which attracted attention was that of a male patient whose illness dated from Nov 30th, 1901, when a left basal pneumonia commenced. I saw him after he had been ill about three weeks and he then still had signs of consolidation of the left lower lobe. His general condition was bad and a microscopic examination of his sputum, which was frothy and muco-purulent, was made. No tubercle bacilli were found, but there were large numbers of capsulated diplococci present, which in their staining and morphology presented all the characters of the pneumococcus of Talamon-Fränkel. The man remained in an asthenic condition, his cough persisted, and the physical signs at the left base did not improve. Film preparations of his sputum were frequently examined, crowds of pneumococci were always found, and tubercle bacilli were always absent. A month later it was noted that the pneumococci began to assume a streptococcal character in that long spiral chains, containing 20 or more cocci, occurred, the diplococcal nature of the elements of the chain could, however, always be demonstrated.

On Jan. 7th, 1902, sickness appeared amongst the male attendants, the symptoms in the early cases consisting of headache and pains in the back and limbs, accompanied by a slight rise of temperature. The acute symptoms lasted two or three days and much resembled ordinary catarrh. Several cases occurred within a few days and it was then thought that an epidemic of influenza was beginning These early illnesses were certainly very like the indefinite cases of influenza so common in recent years but prostration was not very marked and convalescence was rapid and uneventful There was little or no cough in the earliest cases, but pharyngeal and bronchial catarrh were common in the later cases, with expectoration of scanty and viscid mucus, in which on examination pneumococci were found in large numbers, whilst influenza bacilli were never discovered Sickness next appeared amongst the female attendants and in the majority of cases the illness was of an influenzal type. Cough was now a more frequent symptom and the expectoration from these cases, scanty and viscid, was likewise found to contain no influenza bacilli but was swarming with pneumococci. Examination of the chest revealed no definite signs in the early cases, but signs of bronchial catarrh were found in most of the later cases, one nurse, however, had a small area of pneumonic consolidation and another—one of the last nurses to be attacked—developed a typical apical pneumonia which ran an ordinary course and from which she convalesced well.

At the end of January the female patients were attacked, six women becoming suddenly ill with rise of temperature, pains all over, and marked prostration. One case began with a rigor one with vomiting and another with profuse diarrhœa. Three of the women first attacked developed a cough with frothy sputum, and in these cases resonance was impaired and coarse crepitations were heard over the bases of the lungs. During the next week four fresh cases occurred, in all the onset was sudden, in three of the cases there were physical signs of patchy consolidation of the lung whilst the fourth was a true lobar pneumonia which was followed by empyema and was fatal In the next week 20 cases occurred, 15 of which were cases of lobar pneumonia, the remaining five cases consisting of a short pyrexial illness with pains in the back and limbs slight cough, and signs of bronchial catarrh, even in two of these instances resonance was impaired over the bases and the respirations were quickened. Of the 15 cases of pneumonia 12 were fatal. In the next week 13 women were attacked, nine being cases of lobar pneumonia with four deaths, whilst the other four were ill for a few days only with pains and rise of temperature. During these three weeks several cases of illness, exactly similar in all respects occurred amongst the male patients, six of whom died from pneumonia.

The epidemic subsided suddenly at the end of February Frequent microscopic examinations of sputum from many of the cases were made and in every preparation pneumococci were present in large numbers, smear preparations of the lungs from the fatal cases and also from the pus in the case of empyema, showed the same result. The gradually increasing severity of the cases was very marked, the maximum virulence being reached about the middle of February when one woman, previously strong and healthy became unconscious in 24 hours and was dead within 48 a moist swab or sponge must be passed over the film when it becomes at once transparent.

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[1] THE LANCET Nov 15th, 1902, et seq

When the film is to be removed it is only necessary to place a wet cloth or swab upon it for one or two minutes , if one corner of the film be then raised the whole can be peeled off with ease This, as a rule, can be done with perfect ease on the fifth day, when the edges of the wound will be found to be perfectly united and the sutures can be removed A very noticeable point when the film is removed is the perfect manner in which the edges of the skin have united and the clean appearance of the skin round the scar which is represented by a purple streak about the one twentieth of an inch in diameter In some cases there may be considerable effusion of blood between the film and the wound, but in few cases has this made any difference to the rapid and perfect healing of the wound.

If a drain is inserted in the wound it is as well to place it at the lower end of the incision and then to apply an absorbent sterile dressing over it. A much better plan is to make a separate skin incision for the drainage tube or plug of gauze as far from the wound as possible In some situations it is not possible to exert much or any pressure on the wound In such circumstances there may be a large amount of blood plasma or serum collecting beneath the film, but much more commonly beneath the skin This has occurred in a few of my cases, but the fluid has generally been absorbed in a few days and has only necessitated the film being left on for a few days longer

It may be said that such a film dressing is inapplicable on uneven surfaces, as, for example, the axilla after an operation for removing glands, but with a little manipulative dexterity it will be found to be easy of application even here and much safer than the ordinary dressing

When the sutures have been removed from the wound it should be washed with carbolic lotion (1 in 40) followed by a little acetone to remove the water Each stitch hole may then be painted over with a little velvril solution. It is safer again to apply wool and bandage to protect the scar from injury for a few days. In the case of a perfectly dry wound the film may be left exposed to the air It is, however, safer to apply wool and bandage as the patient is apt to scratch his wound while he is semi conscious from the effects of the anæsthetic. As a rule the patient feels none of that irritation which is often experienced during the healing of a wound under an ordinary dressing

Though various kinds of films have been used for dressing wounds I believe that it has never been possible to keep a wound hermetically sealed for any length of time with any of them I have elsewhere[2] pointed out that alcohol applied locally to a wound possesses several marked advantages over other germicides more generally in use , its power of checking capillary oozing is only one of them. When a velvril film has been applied to a small wound which is bleeding freely according to the method above indicated, some blood will escape from beneath the film for a few minutes in some instances This is due to the fact that the solution and the film in contact with it have not had time to adhere to the skin and wound. If, however, pressure be steadily maintained for a few minutes the film will, even in such disadvantageous circumstances, be found to adhere firmly and to remain adherent. I have verified this over and over again in the case of small wounds on my own hands and it has always succeeded perfectly well. I have had some remarkable results when experimenting with the solution and film in the case of septic wounds, such as abscesses, boils, &c , all acute inflammatory conditions seeming to abate very rapidly under the influence of the substance. Whether these results are due to the solvent, to the velvril itself, or to the exclusion of air, I have not determined I hope to refer again to this matter at a later date. I must thank Mr Reid and the Velvril Company for the help which they have given me while experimenting with velvril and for the amount of trouble which they have taken in preparing it in the form of films ready for use surgically

Velvril is a very remarkable substance and I think it may soon entirely supersede protective (oil silk) thin mackintosh and gum elastic in surgical practice. In commerce it is now being used very largely for a great number of different purposes and in various trades It is practically indestructible and constant in composition at all ordinary temperatures

Grosvenor-street W

THE RESTORATION OF THE INFERIOR TURBINATE BODY BY PARAFFIN INJECTIONS IN THE TREATMENT OF ATROPHIC RHINITIS

By R. LAKE, F R.C S Eng ,
SURGEON LARYNGOLOGIST TO THE MOUNT VERNON HOSPITAL FOR CONSUMPTION SURGEON TO THE ROYAL EAR HOSPITAL.

In the early part of 1902 I showed before the Laryngological Society of London[1] a case of bilateral atrophic rhinitis in which the inferior turbinate bones which had undergone absorption had been restored by the submucous injection of melted paraffin wax. Two months later Brindel of Bordeaux showed a series of ten cases which had been treated by the same method Since then I have treated several cases successfully, others with partial success. In August, 1902, a paper was communicated to the Belgian medical press by Dr P J Mink of Deventer, in which he details a series of very interesting experiments demonstrating the function of the inferior turbinate bone and its importance in respiration At the conclusion of the paper Dr Mink remarks that the value of the inferior turbinate was so great and its importance in the economy so marked that he considered it might be necessary to attempt to replace this structure when destroyed by disease—as, for example, in cases of atrophic rhinitis. On seeing a report of my case Dr Mink very kindly drew my attention to his paper It is entitled "The Nose as an Air Passage,' and in it he points out that in normal circumstances the pressure in the naso-pharynx during respiration is equal to a column of about eight cubic millimetres of water , whilst anterior to the turbinates the pressure is only four millimetres , and that after cocainisation of the inferior turbinate the pressure in the naso-pharynx falls to four cubic millimetres. From this he drew the conclusion that the inferior turbinate should be considered to exert a physiological resistance during expiration. He considered that such a resistance was extremely valuable in the oxygenisation of blood in the lungs, because the value of an expiration depends on its duration and to some extent on the resistance. This opinion he bases on the experience of Valentine who found that the relations between CO_2 and O in the expired air become raised from 1 1 18 to 1 1 31 when a normal expiration is replaced by a very short one. It was for these reasons he deprecated the removal of the inferior turbinate and expressed the above mentioned opinion as to restoring it

I had not made any experiments myself with regard to the value of the inferior turbinate bone from the point of view of the general physiology , I had worked upon the theory that the absorption of the inferior turbinate bones was not entirely due to atrophic rhinitis *per se* but that the formation and shrinkage of the crusts which are so freely formed in this disease were largely instrumental in the destruction of these bones and that if this body were restored by the injection of paraffin it would resist crust formation should that still continue. If however, the crust formation had been checked these artificial turbinates would remain and serve at least some useful purposes. These were that, by reducing the nasal passage to its normal width the patients would again be aware of nasal respiration being carried out, the loss of which sensation is often severely felt by them, and at the same time this constriction would render the removal of discharge by irrigation easier and enable the air current to exercise its physiological benefits on the nasal mucosa, for I believe that the friction caused by the passage of air through the nose is most beneficial in maintaining the parts in their normal condition. To these Dr Mink has now added a third theoretical reason and we have the testimony also of Brindel as to the value of the treatment. Brindel's work in this matter was not only independent of mine but probably even commenced earlier, and it was accident alone which caused my case to appear first in the medical press Brindel states in his report that there are certain cases in which he has been unable to inject the paraffin I have also found these cases. They are cases in which the disease is well advanced, in which there is practically no obstruction to the flow of blood in the capillaries beyond. He thought that this condition of rise of blood pressure was not confined to the later period of life, for it was not infrequently seen in the schoolboy and often in men under 30 years of age. He said that in a large majority of cases of high blood pressure there was no kidney disease and he was of the opinion that it was a blood condition which gave rise to the resistance in the peripheral vessels and also to the renal disease. When however the renal disease was established the condition was accentuated, since toxic substances failed to be excreted by the kidney The peripheral resistance was often due to contraction of the muscular fibres in the small vessels and this was well shown by the immediate effect which was produced by nitro-glycerine He then referred to the effects of syphilis on the arterial system and said that the disease affected the larger and smaller vessels at the same time, he thought that aneurysms were rare in Bright's disease and in cases of high arterial tension which were independent of syphilis.

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[2] Phonograph Record of Clinical Teaching in 1898, vol iv , p 138.

[1] Transactions of the Laryngological Society of London March, 1902.

Dr ALEXANDER HAIG said that some years ago he had made experiments of injecting uric acid into animals but the results had always been indefinite. From 15 to 20 grains were injected into animals and then the whole of the blood was collected When the uric acid was estimated in this it was found that there was no increase over the amount normally present The probable explanation of this fact was that the uric acid was taken up by the liver He stated that the return of circulation in the skin after pressure was twice as slow in a person on meat diet as it was in a person on a vegetable diet, and this fact showed that there was a contraction of the finer vessels.

Dr G NEWTON PITT said that he thought it was generally recognised that high arterial pressure preceded arterial degeneration and cardiac hypertrophy In a case of chronic Bright's disease the nitrogen in the ingesta and excreta had been carefully investigated by Dr H. S. French and had been found to be practically equal It would seem therefore that the vascular degeneration could not be due to an increased nitrogenous substance in the blood.

Dr H. D ROLLESTON said that among the interesting questions raised by Professor Allbutt two were especially important. First, the relation of high blood pressure to arterio-sclerosis, which had already been fully dealt with, and secondly the relation of kidney disease to arterial disease. No doubt tubal nephritis might lead to increased blood pressure and so to degeneration of the muscular coat and the compensatory process of chronic endarteritis The gradual alteration of a large white kidney into a small white kidney was due to arterio-sclerotic changes in the vessels which diminished the blood supply to certain portions of the kidney substance and fibrosis resulted in those portions from which the blood had been cut off.

Professor ALLBUTT replied.

MEDICAL SOCIETY OF LONDON

Suppression of Urine in a Case of Ovarian Tumour and Pregnancy —Etiology of Emphysema from the Physical Standpoint.

A MEETING of this society was held on Jan 12th Mr. A. PEARCE GOULD the President being in the chair

Mr H. B BOULTER (Richmond) presented to the society the Fothergillian medal awarded to the late Dr Robert Willan in 1790, which had been given to Mr Boulter for presentation to the Medical Society of London by a descendant of Dr Willan.—The PRESIDENT expressed the thanks of the society for this valuable and interesting gift, and remarked that this was the second Fothergillian medal awarded, the first was awarded in 1787 to Dr Falconer and the third was awarded in 1791 to Dr C Lettsom.

Mr BERNARD PITTS read the notes of a case of Suppression of Urine associated with Ovarian Tumour and Pregnancy He remarked that anuria in a case of non malignant tumour was very rare. The patient was a married woman aged 44 years, who had had seven children. About three and a half years before the operation a lump appeared in the abdomen and gradually increased in size. When she consulted Dr M. C Ward about three years later the tumour had increased immensely being hard in some parts and fluctuating in others. The patient subsequently became pregnant and the symptoms more urgent After admission suppression of urine gradually supervened and finally the urine became completely suppressed for some 36 hours Mr Pitts operated and found a large multilocular ovarian tumour It was necessary to remove the uterus in order to effect the eradication of the tumour The urinary secretion was at once restored and the urine gradually became normal both in quality and quantity The pressure of the tumour had evidently been directly upon the kidneys in the upper part of the abdomen The real interest of the case depended upon the anuria which complicated the case, and Mr Pitts discussed the causes of anuria other than pressure on the ureters.—The PRESIDENT said that there could be no doubt that the right line of treatment had been adopted and he approved the extra peritoneal method of hysterectomy in this case As to the cause of the anuria, he suggested that it might have been due to pressure both on the kidneys and on the ureters and renal vessels—Dr WARD remarked that he had known the patient for some years and noted the fact that she had been at work up to a few weeks before the operation almost without inconvenience He believed that the tumour removed, together with the uterus, weighed some 85 or 90 pounds.

Dr B J COLLINGWOOD made a communication on the Etiology of Emphysema from the Physical Standpoint. An attempt was made in this paper to bring about a compromise between the expiratory and the inspiratory theories of the causation of emphysema. It was suggested that emphysema in the protected parts of the lungs was due to inspiration and in the unprotected to expiration. Two causes were given for the production of the disease in both the protected and the unprotected parts—namely, weakness of the elastic tissue of the lungs and over straining of the elastic tissue. Both causes resulted in the production of a vicious circle, for either weakness or over straining of the elastic tissue would lead to its over distension and consequent further weakening The following facts were adduced in support of the view that emphysema in the protected parts of the lungs was due to inspiration (1) the position of the chest in emphysema was one of extreme inspiration, a result which could not be brought about by any form of expiration, (2) emphysema was a markedly progressive disease, but if it were produced by expirations the further emphysema advanced the less power would they possess, for more and more difficulty was experienced in producing expiration, and (3) emphysema was more marked at the periphery than at the centre of the lungs, but the periphery was the part most directly compressed by expiration. It was pointed out that violent expiratory efforts against an obstruction could not produce emphysema in protected parts of the lungs, for during such efforts the protected parts were slightly contracted. Although it was difficult to decide which parts of the lungs were unprotected yet it was certain that such parts formed only a small proportion of the whole lung A general emphysema accordingly must be mostly inspiratory in origin. Compensatory emphysema was stated to be due to inspirations of normal depth but excessive strength, causing hyperdistension of the pulmonary infundibula when some neighbouring infundibula owing to disease were incapable of expansion. Experiments were shown illustrating this as well as other points in the communication. A method of treatment for general emphysema was suggested which consisted in supplying some elastic support to the thorax. It was urged that this would prove beneficial by aiding expiration and preventing excessive inspiration —Dr P HORTON SMITH congratulated Dr. Collingwood upon his painstaking researches. The combination of the inspiratory and expiratory theories of emphysema explained many of the clinical facts observed in that affection which one of them alone could not. The causal explanation appeared to him to differ in the protected and unprotected parts of the lung —Dr A. G AULD could not altogether agree with the inspiratory theory suggested by Dr. Collingwood, and he referred to 'glass blower's emphysema.' He could not believe that experiments with an indiarubber bag could be made to reproduce all the conditions of the pulmonary alveoli.—Dr H. A. CALEY remarked that they must differentiate between the protected and the unprotected parts of the lung It had always appeared to him that the commonly accepted expiratory theory could not explain the occurrence of emphysema in both the protected and in the unprotected parts of the lung The dual theory appeared more reasonable. He had seen Dr Collingwood's experiments in the laboratory with rabbits lungs and they had produced hours of the onset of her illness So densely crowded were the pneumococci in films made from the sputum in this case that it seemed reasonable to assume that quite an appreciable part of her sputum must have consisted of pneumococci.

It was not possible to make microscopic preparations from every patient, but pneumococci were present in large numbers in all the cases examined The virulence of the pneumococci from the early cases of illness amongst the staff was not tested, but a mouse inoculated with sputum from one of the patients at the end of January died in 18 hours from pneumococcal septicæmia. Although the chain of evidence from a bacteriological point of view is not absolutely complete, yet the sequence of events was so very definite that we felt convinced that we were dealing with a pneumococcal epidemic amongst the staff, at first of low virulence, causing a short indefinite illness much resembling influenza, gradually increasing in severity, and then causing a more protracted illness with occasional bronchial symptoms and culminating in a case of lobar pneumonia in a nurse By the time the female patients were attacked its virulence was such that pulmonary symptoms were most in evidence and the short vague illnesses were few, even at this time, however, the pulmonary signs were those of patchy consolidation only When the maximum virulence was reached most of the cases were true lobar pneumonias with a high mortality Altogether 13 nurses, 17 male attendants, and 43 female patients were attacked, the exact number of male patients attacked was not recorded A careful investigation failed to reveal evidence of direct contagion amongst the female patients

To Leavesden Asylum the epidemic is, I think, of great importance, since for the past few years tuberculosis has been rife amongst the patients of that institution It is easy enough to imagine how well last winter's epidemic will have prepared the soil for the tubercle bacillus, for in the majority of the non fatal cases tardy convalescence, with delayed and incomplete resolution of the lungs, was noted.

Another point of interest lies in the short vague illnesses which occurred all through the epidemic but which especially characterised its early stages. Everyone is familiar with the short illness which is so glibly called "influenza," and which every medical man knows is not influenza Is it not possible that the pneumococcus may be the cause of some of these illnesses? We assume that a non pathogenic organism can acquire virulence under certain conditions with which we are not yet exactly familiar, if that is true, it is not unreasonable to assume that there may be a transition stage of moderate virulence, and it seems to me quite possible that the pneumococcus, in the course of its transition from a harmless resident of the mouth or nose to a virulent pathogenic organism, may exist for a time as an organism of moderate pathogenic powers, and whilst in this state may be capable of causing an illness such as occurred at the commencement of this epidemic.

I have to thank Dr F A. Elkins medical superintendent of Leavesden Asylum, for permission to record these facts, and Dr J F Rimmer for bringing the cases of illness amongst the staff under my notice.

Southall.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY

Rise of Blood Pressure in Later Life

A MEETING of this society was held on Jan 13th, Mr ALFRED WILLETT, the President being in the chair

Professor T CLIFFORD ALLBUTT read a paper on the Rise of Blood Pressure in Later Life He said it was inevitable that in the growth of medicine a static morbid anatomy should precede the study of morbid processes or clinical dynamics. Nevertheless, occupation with the ruins of the dead body for a time took observers away from origins to consummations and created a certain fatalism in medicine The revolution in thought which followed the publication of "The Origin of Species" extended its influence into pathology, diseases began to lose fixity of form in the mind of the physician, and the hope of detecting and neutralising morbid processes at their sources relieved the despair of the dead house Of certain early deviations from the true balance of functions it might be said that, if they did not arise primarily in the circulation, yet that in this system the first evidence of them might be perceived Of such evidence the fluctuations of arterial blood pressure were very important. In the present paper changes of pressure in the direction of increase would be considered and that mode of it which in many elderly persons was apt to be persistent The rise of pressure in Bright's disease was perhaps the best-known instance of such a rise, but the change was by no means confined to that disease. Some degrees of fibrosis of the kidneys, as of other parts, were to be found in a large majority of necropsies upon elderly persons, but "granular kidney" had peculiar clinical characters and must have its own niche in nosology It was generally assumed that arterial disease was necessarily attended with a rise of blood pressure, many kinds of arterial disease being comprehended or confused under the title "arterio-sclerosis" Such was far from being the case, it was not true of many of the acuter affections of the arterial tree, and in many of the more chronic, even of the involutionary kind, however extreme, a high blood pressure was conspicuously absent. The more senile forms of arterial disease might then be divided, from the present point of view, into those in which pressure was raised and those in which it was normal or even low The first kind—those with high pressure—tended to death by apoplexy, the latter tended, often after length of years rather to obliterative changes in the cerebral arteries with softening Pressure must depend upon two antecedents, singly or in combination—namely, diminution of the calibre of the arterial system and increased viscosity of the blood, it was not proved, or even probable, that loss of elasticity in the vessels always or generally led to loss of capacity Encroachment upon capacity in some areas was apt to be compensated by dilatation in others. Professor Allbutt suggested that the tendency to rise of pressure, often seen in elderly persons, especially in such as had led a sedentary life with positive or relative excess of food, depended on increase of viscosity of the blood Circumstances had hitherto defeated his attempts to gauge the viscosity in a series of appropriate cases. In contrast with the rising pressure of many elderly men might be set the low pressures in the young and athletic. In temperate and active men under 30 or 35 years of age the pressure ranged from 95 to 105 millimetres Hg (Hill and Barnard's sphygmometer) If the opinion here expressed that the arterial tree was prone to be "self strained," and that arterio sclerosis was a result rather than a cause of high pressure, the tendency to such rises and their causes should be watched There was no definite reason to allege that a rise of this kind was to be regarded as of the nature of gout, whatever gout might be, though it might well depend on some perversion of assimilation or excretion having an affinity to gout If the morbid tendency to rise of pressure was detected in time the disposition was remediable, chiefly by deobstruent, dietetic, and gymnastic means, some such change of habits of life being of course permanently imposed upon the patient, if, on the other hand, it was not detected till the strain had resulted in a new "set" of the vascular tissues, if palliation was possible cure was out of the question Hitherto it had been difficult to measure blood pressures, and finger estimates very properly had not commanded a ready acceptance, the personal equation of the observer entered too far into such observations Now, however, they had useful instruments for the purpose invented by von Basch, Hill and Barnard, and Oliver, Professor Allbutt had used that of Hill and Barnard.

Sir WILLIAM BROADBENT said that in general he was in agreement with the paper, though he considered it necessary to have some definite understanding of what was meant by the rise of blood pressure in later life. Professor Allbutt had noted the marked effect which emotion had in producing a rise of blood pressure and there were many other conditions which temporarily produced a like effect. The registration of the blood pressure in the radial artery would not distinguish between a fugitive and permanent rise of pressure, as, for instance, in the two conditions aortic regurgitation and advanced arterial disease The real cause of high blood pressure was the obstruction to the flow of blood in the small arteries or in the capillary network. He considered that the obstruction was probably in the capillary network and he knew of no other explanation for the occurrence of miliary aneurysms of the smaller arteries unless they were produced by the or alcohol in this case.—Dr GOODALL, in reply, observed that such cases were fortunately rare, seeing that they usually proved fatal. He thought alcohol could be excluded in his case, and it was not given medicinally until long after the symptoms had developed.

Dr H. D ROLLESTON read the notes of a case of Generalised Miliary Tuberculosis with Acute Synovitis. The patient was a man, aged 52 years, who was admitted to St George's Hospital, after two weeks' illness with a temperature of 103° F, in a semi-delirious condition, and with painful and swollen joints At first, under salicylates, the pain diminished and the temperature fell, but shortly this effect was lost There were no physical signs of any importance, except widespread tenderness, and the patient became more prostrate and delirious and died five days after admission. The diagnosis during life lay between generalised tuberculosis, severe typhoid fever, and some pyæmic state The general condition suggested tuberculosis, but the arthritic manifestations made some other form of hæmic affection more probable. At the necropsy, except for synovitis, nothing definite was found, no tubercle could be seen Pieces of the lungs and spleen after being hardened, were seen, even by the naked eye, to be riddled with miliary tubercles. The association of generalised tuberculosis with acute synovitis of several joints was a very rare condition and might lead to an erroneous diagnosis of acute rheumatism. Another point of clinical interest was the widespread tenderness.—Dr J KINGSTON FOWLER mentioned the case of a girl who had a cavity in one lung and who suddenly developed acute synovitis of the wrist-joint. He thought that in Dr Rolleston's case there must have been some other concurrent affection because if the joint affection were really due to tuberculosis they would expect to meet with it more frequently

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SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN

Discussion on Tuberculous Peritonitis

A MEETING of this society was held on Dec. 12th, 1902, when Tuberculous Peritonitis was discussed, various portions of the subject being introduced by various speakers

Dr EDMUND CAUTLEY touched lightly upon numerous questions, from the liability of the individual to invasion by the tubercle bacillus to the special modes of entrance of the bacillus into the peritoneum. The speaker remarked that since the tubercle bacillus is so extremely common a vulnerability to the microbe must play as important a part in the etiology of the disease as exposure to the possibility of infection. A farmer did not erect screens to keep out the seeds of weeds, he cultivated his land in a way which was ill suited to their growth. To fortify the body, therefore, by good food and good clothing was as necessary as more direct war against the tubercle bacillus How far peritoneal tuberculosis might be due to invasion by the bacillus of bovine tuberculosis Dr Cautley considered to be still an open question.

Dr THEODORE FISHER (Bristol) followed with a few facts in connexion with the morbid anatomy gathered from examination of the post-mortem records of 80 cases which clinically had been examples of abdominal disease. He prefaced his remarks by saying that although he did not doubt that tuberculosis might arise primarily in the abdomen it was easy to overlook a single diseased bronchial gland, and he gave instances of early infection of the abdomen where the only tuberculous focus which could be found was a solitary caseous lymphatic gland lying hidden in one of the lungs Of the 80 cases examined the adhesive variety proved to be by far the most common in the post-mortem room, though in many of these at some time of life fluid had been present. Suppurating caseous masses had opened into the intestines in eight cases and in five others ulcers had perforated. Localised collections of fluid were present in five instances, and in two of these there had been discharge of the fluid at the umbilicus. In only two instances was it stated that the great omentum was sufficiently thickened to have formed a tumour Intestinal ulcers were present in about half the cases. The Fallopian tubes or ovaries were diseased in five cases of adult women but the majority of instances were in young children. Although cases did not appear to be common in the post-mortem room where after middle life evidence of old extensive tuberculous disease of the peritoneum was present, if one could argue from analogy the frequency with which general adhesion of a pleural cavity of tuberculous nature was found after middle life would lead one to think that when the disease was limited to the abdomen recovery might be permanent. In these 80 cases the lungs were free from disease in 17 and the tubercles were limited to the pleuræ in seven. Although in the remainder the lungs were diseased in some the lesions were recent and those of older standing were not often extensive.

Dr W C CHAFFEY (Brighton) gave a few of the results of an analysis of 118 cases of tuberculosis in children Tubercle of the peritoneum was present in 45 Of these 45 cases the disease was chronic in 22, in 13 of these 22 chronic cases intestinal ulcers were present and in 17 the lungs were diseased. In the 23 cases of recent tuberculosis of the peritoneum the lungs were affected in every instance

Dr JAMES BARR (Liverpool) then dealt with the diagnosis The most striking feature was swelling of the abdomen, which, however, might be moderate in degree. Pain was generally absent in the early stages, but there was occasionally some tenderness At first the appetite might be good and there might be little indication of ill health, but as the abdomen increased in size the appetite was lost, the patient wasted, and colicky pains associated with constipation might be added, which pains, however might be removed by diarrhœa, only to return with a return of the constipation. The temperature rarely rose above 101° F and might be normal or subnormal in the morning These remarks applied especially to the ascitic variety In the adhesive form there were various degrees of resistance to be felt in several places over the abdomen and the thickened omentum as a sausage-shaped mass might occasionally be felt. Localised collections of fluid when present were generally in the lower half of the abdomen In cases in which emaciation had been very marked improvement rarely took place, but Dr Barr had seen recovery after the bursting of an abscess at the umbilicus and also in a case when a fæcal fistula had formed in the same situation. At times there might be difficulty in differentiating tuberculous peritonitis from typhoid fever from ascites associated with cirrhosis of the liver, or from a simple chronic peritonitis. As a rule, however, patience and careful observation soon settled the diagnosis, but Dr. Barr had found injection of some of the peritoneal fluid into guinea pigs to be useful

Dr GEORGE CARPENTER had seen a large number of cases of tuberculous peritonitis and briefly referred to many He laid especial stress upon the value of combined rectal and abdominal examination as an aid to diagnosis in doubtful cases

Dr J PORTER PARKINSON remarked that on looking over the notes of 22 cases he had been struck with the somewhat rapid onset. The average history of 19 cases extended over three and a half weeks Dr Parkinson thought the occasional presence of enlarged veins over the upper half of the abdomen worthy of note and suggested some interference with the portal circulation An interesting case of colloid carcinoma of the peritoneum occurring in a girl, aged 12 years, was referred to which clinically could not be distinguished from tuberculous peritonitis.

Dr G A. SUTHERLAND then read a paper upon the prognosis of the disease. The following were his conclusions 1 In uncomplicated tuberculous peritonitis the prognosis was good 2 When tuberculous pleurisy was present the prognosis was still favourable. 3. The prognosis was rendered less favourable in the case of (*a*) a strong family history of tuberculosis, (*b*) an infancy passed under bad hygienic and dietetic conditions, (*c*) a constitution of feeble resistant power, and (*d*) a history of severe infective illness in early life. 4 The prognosis was rendered less favourable in the presence of one or more of the following symptoms continuous pyrexia, rapid wasting, persistent diarrhœa, rapid pulse, and recurrent acute exacerbations 5. The prognosis was rendered less favourable in the presence of one or more of the following local complications (*a*) tuberculous ulceration of the bowel, (*b*) extensive caseation of the mesenteric glands or of tuberculous masses, (*c*) localised suppuration from infection through glands or the intestine, and (*d*) obstructive symptoms from bands or matting of the intestine. 6 The prognosis was bad in the case of the following complications (*a*) rupture of a suppurating gland or the perforation of an intestinal ulcer into the peritoneal cavity, (*b*) pulmonary tuberculosis, (*c*) tuberculous meningitis, and (*d*) general miliary tuberculosis. 7 In tuberculous peritonitis the prognosis was not appreciably affected by laparotomy Much of the paper dealt with the last conclusion. At one time Dr Sutherland the same results as those now exhibited with india rubber balls He was disposed to lay great stress on primary degenerative changes in the elastic tissue of the lungs. While, as Dr Collingwood stated, the element of mechanical strain might be the exciting cause and impaired elasticity only a predisposing cause, it would appear that in many cases the predisposing cause—impaired elasticity—was pathologically the more important.—Dr COLLINGWOOD, in reply, said that he did not mean to imply that the only cause of emphysema was a diminished elasticity of the chest wall.

CLINICAL SOCIETY OF LONDON

The Morbid Anatomy and Treatment of Congenital Dislocation of the Hip Joint —A Case of Hæmorrhagic Typhoid Fever —A Case of Generalised Miliary Tuberculosis with Acute Synovitis

A MEETING of this society was held on Jan. 9th, Mr HOWARD MARSH, the President, being in the chair

Mr T H OPENSHAW, C M.G , made a communication on the Morbid Anatomy and Treatment of Congenital Dislocation of the Hip-joint, based on 70 cases which he had observed and upon nine of which he had operated. Mr Openshaw commenced by showing a recent specimen of congenital hip dislocation obtained from a girl, aged five years, who had died from bronchial pneumonia, which he described. The head of the bone was normal in shape with the exception of a small area of flattening at the lower end and back part The neck of the femur presented no abnormality These appearances entirely accorded with what Mr Openshaw had found by operation. In his experience, in every case an acetabulum existed, but it was small, shallow and triangular, and the cartilage forming its floor was thicker than normal. In his opinion, the head of the femur up to the age of three years remained normal It then became flattened at one part, and this flattening gradually extended over the whole surface, and thus the head of the bone became deformed and, as the result of subsequent osteo-arthritic change, it ultimately disappeared. The ligamentum teres he had hitherto considered to be absent, but, he added, it was quite possible he might have overlooked a thin flaccid band such as existed in the specimen which he submitted The children did not usually walk till the second year but no symptoms were noticed in them In some cases the condition appeared to be hereditary but the etiology was obscure Mr Openshaw advocated one of two methods of treatment (1) reduction of the shortening by tenotomy and extension and then reposition, so-called, of the head of the bone by manipulation as practised by Lorenz , or (2) the remaking of an acetabulum by the open method after it had become possible to replace the bone by tenotomy and manipulation. As the result of his experience in about 20 cases treated by the first method during the past six years he considered, first, that reposition within the joint was an impossibility, and, secondly that redislocation was exceedingly common. He strongly advised the two methods combined and showed two cases where he had operated with excellent results He pointed out that if the shortening was overcome first the shock of the operation was slight and a fatal result need never be anticipated, and that if any open operation were advisable that of deepening the acetabulum was the only one to be entertained —Mr J JACKSON CLARKE remarked that the specimen shown by Mr Openshaw resembled very closely what he had found in the newly born infant He had operated in about 20 cases by the Lorenz method and in only one instance had he failed to obtain a good result In some of the cases there seemed to be almost complete reposition allowing for the arrest of growth and the consequent inevitable shortening In the one case of failure the child was suffering from spastic paralysis which had not been recognised, so that the failure was explained.—Mr NOBLE SMITH pointed out that Lorenz, who had at first employed the open method of operation, had finally abandoned it Mr Noble Smith advocated the manipulative method dividing the operation into two stages, by which means he believed the amount of force required to effect replacement was much reduced. To retain the bone in its place plaster of Paris had several disadvantages and he advocated the use of an apparatus. He asked what proportion of Mr Openshaw's cases were due to breech presentation.—The PRESIDENT urged that in discussing this question they should bear in mind the various facts worked out in connexion with its pathology, and he called attention to a valuable paper contributed by Mr F F Burghard to the *British Medical Journal* in 1891, giving the results of his very exact anatomical investigations. That author referred to the hour glass contraction of the capsule which offered an obstacle to reduction and which was probably due to the ilio psoas tendon The head of the bone was often in an upper pouch of the capsule, above the acetabulum proper, from which it was shut off by an isthmus. Mr Burghard found that division of the ilio-psoas tendon allowed of the easy replacement of the head of the femur The President suggested that a committee should be appointed to investigate and to report on the subject, but he admitted that such a committee would be confronted with the difficulty of deciding what the condition had been before operation, so that it would be desirable for it to watch cases from the beginning He himself was not prepared to assert that in all Mr Openshaw's cases the head of the bone had really been returned into the acetabulum proper He did not believe in treatment by simple extension , the best result obtainable in many cases was bony ankylosis The subsequent history of these cases was often wanting He mentioned that he had once been called to see a young woman who turned out to be the very patient whose case had previously been extensively reported as an instance of cure by long extension at the hands of a late well known surgeon, but, as a matter of fact, it was clearly a case of unaltered unreduced congenital dislocation.—Mr OPENSHAW, in reply, maintained that it was not only the ilio-psoas tendon that was at fault, the capsule as a whole being contracted.

Dr E W GOODALL communicated a case of Hæmorrhagic Typhoid Fever The patient was a hospital nurse, aged 28 years After being out of sorts for a week she noticed on Jan 20th some purpuric spots on her legs and it was found that her temperature was 104° F Within the next few days a considerable number of purpuric and petechial spots appeared in the skin and subcutaneous tissue and there was bleeding from the fauces and gums, together with epistaxis, hæmatemesis, hæmaturia, metrorrhagia, and melæna. There was continued pyrexia but no rose spots and the spleen was not enlarged The patient gradually sank and died at the end of a fortnight from the appearance of the purpura. A post-mortem examination revealed typhoid ulcers in the small intestine and hæmorrhages into the stomach, peritoneum, bladder, and right kidney In the kidney were also a number of small yellow spots which under the microscope proved to be masses of round cells surrounding clumps of bacilli, probably bacillus coli. The blood gave only a feeble serum reaction An agar culture taken from the heart blood gave bacillus coli, while those taken from the spleen and a mesenteric gland gave bacillus coli and bacillus typhosus The case was reported because of the difficulty that attended the diagnosis and also because of its rarity The diagnosis made was acute bacterial infection perhaps streptococcal and it was not till two or three days before death that typhoid fever was suspected. The rarity of the case was shown by the fact that it was the only marked one of its kind in a series of 1733 cases of typhoid fever The pathology of these cases was obscure, probably the purpura was due to the action of bacteria or their toxins, in this case perhaps the bacillus coli In a similar case reported by Dr A G Nicholls and Mr G E Learmonth[1] in THE LANCET the organism concerned appeared to be the staphylococcus pyogenes albus. In the present case calcium chloride and adrenalin chloride were given without avail —Dr W LEE DICKINSON referred to two similar cases, both in confirmed alcoholics, reported by American authors, and mentioned one of the same kind which he had observed at St. George's Hospital The patient was a woman, aged 29 years, who bled from almost every mucous surface. He recalled the statements recently made by Dr A. E. Wright before the Royal Medical and Chirurgical Society to the effect that in the acute stage of typhoid fever the coagulability of the blood was hindered, whereas in the later stages it was abnormally increased, thereby disposing to the formation of clots That observer also stated that alcohol diminished the tendency of the blood to coagulate.—Dr W COODE ADAMS mentioned a case which he had observed during an epidemic in North London The patient developed patches of purpura over the limbs and trunk, but she recovered There could be no question of deficient nutrition never quite efficient and a slight stress might turn the scale, and (4) when cardiac enfeeblement was extreme and irremediable. In the first stage, as a rule, no treatment was necessary except a general warning against overstrain, but occasionally there might be excessive arterial tension or excessive pulse rate. Such symptoms might well be treated by the method to be described. In the second stage baths and exercises held the place of pre-eminence The earlier the treatment was begun in this stage, the greater the value of mechanical methods. In the third stage mechanical methods tended to become useless and finally were contra-indicated while drugs might still retain their potency The application of mechanico-balneological treatment by the family physician was advocated because he was more likely to see the patient at the time when it was of greatest value. Where cardiac dilatation and arterial tension were prominent relief must be afforded by arterial relaxation. In cases of less severity gentle stimulation might be adopted These effects could be brought about by varying the temperature, composition, and duration of the baths A temperature of from 92° to 95° F produced moderate dilatation of the vessels, with slowing of the pulse rate. When the temperature was lowered to 85° contraction of the peripheral vessels was caused, with great increase in the force of ventricular systole, the total effect being one of stimulation. The most useful constituents of the bath were the chlorides of sodium and calcium and carbonic acid gas. The greater the proportion of these the greater the stimulating effect. The duration of the bath should be longer when a sedative action was required. When the first indication was heart relief, to a bath of 50 gallons five pounds of common salt should be added and five ounces of calcium chloride, together with half the contents of one of Sandow's boxes The bath was to be given at 95° and lasted about 15 minutes, the patient then remained recumbent for two hours After a few days the temperature was gradually reduced to 92°, while the proportion of saline constituents was doubled As the patients improved stimulating treatment was introduced by lowering the temperature of the bath still further and increasing the added solids Very gradually the temperature of the bath was lowered to 85° and the strength of the saline solution was increased to 6 per cent. Beyond this it was rarely necessary to go Systematic exercises were chiefly of service in the early part of the second stage or when relief had already been obtained from baths They could be carried out without a specially trained assistant by the following method. Instead of the reversal of each exercise being a continuation of the initial part an intermediate pause was introduced. Thus the first portion was made to last 15 seconds, the part moved was retained in the position it had reached for five seconds and the reversal was made to occupy 15 seconds. In very muscular subjects extremely light weights might be placed in the hands. The pulse was counted immediately before the exercises and again after three minutes had elapsed, by which time its rate should have fallen This was the simplest test as to the prospective value of the exercises During the exercises the breathing should be even and continuous Instead of the Nauheim exercises a system of weights and pulleys might be used. At the end of a series of exercises it was well to examine the area of cardiac dulness and the position of the apex beat If the area of dulness was enlarged it might be taken that the dosage was too high The cases which benefited most were those of moderate dilatation accompanied, and in great part caused, by general malnutrition. Cases presenting minor degrees of arterio-sclerosis might be accepted for treatment. In supposed cardiac neuroses, such as tachycardia and arhythmia, the patients often did well There were many failures among elderly persons Cases in which the imagination alone was at fault should not be treated as they certainly detracted from the reputation of the method.—Dr O W Chapman said that the patients suitable for Nauheim treatment were (1) convalescents from acute cardiac disease after prolonged rest had been taken, (2) patients presenting cardiac symptoms, but devoid of organic disease, (3) patients in the early stages of cardio-vascular degeneration, and (4) the large class known as neurotics. The treatment was contra-indicated in (1) all advanced cases of heart disease, (2) marked cases of cardio-vascular disease, especially with albuminuria, and (3) the labouring classes who required rest above all things.—Dr A Morison, Dr F H Alderson, and Dr A J R Oxley also spoke.—Dr Otto F F Grünbaum read a paper on the Value of Examination of the Blood as an Aid to Diagnosis and Prognosis He said that an increase in the number of white cells accompanied many forms of malignant disease, nearly all fevers, and extensive formation of pus but when pus was present there was generally also an increase in blood platelets and in the amount of fibrin In certain doubtful cases of syphilis the method introduced by Justus might assist the diagnosis Justus found that in this disease, as soon as the lymphatic glands were affected, the intravenous or intramuscular injection of mercury caused the disintegration of a considerable number of red cells This disintegration was detected by estimating the hæmoglobin of the patient's blood. When the reaction to the injection was positive a fall of from 10 to 20 per cent of hæmoglobin would be noted within 48 hours, returning to the normal a few days later After a few injections the percentage ceased to fall and ultimately it might actually increase. The reaction did not occur when mercury was given by the mouth Cryoscopy, or the estimation of the freezing point of blood, might be of use in supplying information as to the state of the kidneys. In renal disease the quantity of salts and of urea in the blood was greater than normal. The greater the amount of these substances in the blood the lower would be its freezing-point. The average freezing point of normal human blood was – 0 56° C, if it fell to – 0 6° C, or lower, grave doubts as to the efficiency of the kidneys must be entertained Reference was also made to the estimation of choline in the blood, to agglutination reactions, and to the examination of the blood for micro-organisms It was also pointed out that, except in leukæmia and certain parasitic diseases no diagnosis could be founded on the examination of the blood alone.—Dr A. Whitfield said that he had used Justus's test in a number of cases of syphilis and had only found it fail once. He instanced a patient in whom the symptoms were so slight that diagnosis was not easy Finding that a drop of from 12 to 15 per cent. in the hæmoglobin took place in 24 hours after inunction with mercury he adopted the usual treatment. There was ultimately a very severe attack. The test was only of use in cases which had reached general constitutional infection and had not recently been under treatment with mercury

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[1] THE LANCET Feb 2nd 1901 p 305

BRITISH GYNÆCOLOGICAL SOCIETY—The annual meeting of this society was held on Jan. 8th, Sir J Halliday Croom the President, being in the chair—The Fellows elected to succeed the retiring officers were as follows —President Dr Heywood Smith Vice-Presidents Mr E Stanmore Bishop, Dr H Macnaughton-Jones, Dr J A Mansell Moullin Mr Christopher Martin, and Dr F F Schacht Members of the council Mr G Roe Carter, Dr Eber Chambers, Sir J Halliday Croom, Dr F Edge, Dr Clement Godson, Mr A W Mayo Robson Mr Charles Ryall and Dr B T Smith Secretary Dr S Jervois Aarons—Dr J J Macan read his report upon the journal of the society, which was accepted with the thanks of the society to him for his services as editor—Dr Macnaughton Jones read notes of cases of (1) Binovular Pregnancy and Birth of Female Twins after Salpingo-oöphorectomy and Resection of the other Ovary, and (2) Repeated Pregnancies after Salpingo-oöphorectomy and Ventrofixation of the Uterus The patient had two uncomplicated labours, the children being healthy, but a third pregnancy ended in a miscarriage.—Dr Heywood Smith and the President commented on the cases—Dr William Duncan exhibited a very large Sarcoma of the Uterus removed by abdominal hysterectomy eight years after an uncomplicated menopause, the tumour detected ten years previously, had increased gradually till six months before the operation when rapid growth took place with loss of flesh and strength in the patient At the operation a cavity was opened from which escaped a clear odourless fluid, being taken to be a cyst it was freely incised but it proved to be the urinary bladder, drawn about three inches above the navel by the tumour The incision was closed by a single layer of silk sutures supplemented by a few finer stitches through the peritoneal coat, and the fundus of the elongated organ was fixed to the abdominal wall just above the pubes The tumour after much difficulty was got out of the abdomen and amputated When the posterior layers of the broad ligaments had been united from behind forwards a cavity as large as an adult head was left above the small cervical stump, this cavity was marsupialised to the lower part of the abdominal wound and lightly packed with gauze. Little blood was lost and the patient stood the operation, which lasted an hour and three had been an advocate of laparotomy, but further experience had convinced him that it had no effect upon the course of the disease More cases had recovered at the Paddington Green Children's Hospital under medical than under surgical treatment.

A communication from Dr JAMES CARMICHAEL (Edinburgh) stated that there had been only nine deaths in 48 cases which had been under his care, 13 of these cases had been kept under observation for a prolonged period and remained in good health.

Dr ROBERT HUTCHISON thought that a clear distinction must be drawn between cases where the disease was limited to the abdomen and those in which it was more widespread Possibly the abdominal tuberculosis might be bovine in nature and less serious than the human variety All cases of ascites in children were not necessarily tuberculous in nature. Some of those which recovered might be instances of a simple chronic peritonitis

Dr LEONARD G GUTHRIE read a paper on the medical treatment He thought that in the opinion of some surgeons the discussion of anything connected with tuberculous peritonitis except surgical interference would be mere waste of time. Dr Guthrie however, thought that it was probable that the surgeons might learn something from Ambroise Paré who during a campaign had ran short of boiling oil and could not sleep one night for thinking of the sad plight of the wounded in consequence. Much to his surprise, however, he found the following day that they were much better without it If cases of tuberculous peritonitis were watched instead of being operated upon with the majority it happened that they did well. The surgeons might say that the cases in which recovery took place were not tuberculous, but Dr Guthrie thought that it was a little hard that the physician should be right when he called the surgeon in and wrong when he did not. Possibly the letting out of fluid was beneficial, but Dr Guthrie considered that in acute cases, unless the fluid produced great distension and distress, it was inadvisable to interfere, for if the fluid was removed it would speedily reaccumulate. In more chronic cases, however, where the fluid showed no tendency to subside it should be withdrawn Tapping or aspiration was dangerous and a small incision followed by a blunt trocar should be used While, however, the value of laparotomy except in some cases where complications arose, was doubtful, the use of remedies such as mercury and arsenic was a matter of opinion. The treatment was mainly symptomatic with rest in bed, and after recovery hygienic. Some cases were greatly benefited by the fresh air treatment.

Mr W WATSON CHEYNE thought when he heard of the change of front of the physicians that they had discovered some new remedy, but he found that it was only that they had come to realise that tuberculous peritonitis was curable. For that discovery they had to thank the surgeons, since six years ago he had been unable to find any statistics bearing upon the prognosis. The discovery by the surgeons was no doubt the result of accidents made in cases where the diagnosis had been doubtful or mistaken, but the fact remained that the physicians were indebted to the surgeons for their knowledge on this point As to the comparison of statistics of cases medically and surgically treated Mr Cheyne believed that the worst cases were taken to the surgeon, so that no comparison could be made While he wished to keep an open mind on the subject he could not yet admit that laparotomy was of no value. Mr Cheyne admitted that it was difficult to understand how laparotomy could be beneficial, but it possibly altered the tension of the circulation and thus gave indirectly a stimulus to reparative changes.

Mr F C ABBOTT thought the cases particularly benefited by operation to be those which started in diseased Fallopian tubes or ovaries, and Dr R H. A. WHITELOCKE (Oxford) expressed similar views

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY

Exhibition of Specimens.—Prolapse of the Urethra

A MEETING of this society was held on Dec. 19th, 1902, Dr S BUCKLEY (Manchester), the President, being in the chair

Dr D LLOYD ROBERTS (Manchester) showed a specimen of a Papilliferous Cystadenoma removed from the Abdominal Wall 14 years after Ovariotomy The patient, who was a married woman, aged 48 years, a VII para, and whose last child had been born four years previously had noted a lump in the abdomen for about six months. It was steadily increasing The left ovary had been removed for cystic tumour 14 years previously The tumour was felt just to the left of the cicatrix left by the former operation. It was attached to the abdominal wall but was freely moveable otherwise. It felt hard but resonance was only slightly diminished over its surface. The abdomen was opened and about three pints of ascitic fluid escaped. The tumour was found to be attached to the cicatrix and was intimately connected with the parietal peritoneum. Some coils of intestine adhered to the under surface and required separation The cyst was carefully detached and removed. There was no pedicle. The right ovary was healthy and there was no trace of the left ovary which had been removed 14 years before. The patient recovered The specimen was described as a papilliferous cystadenoma of the subperitoneal tissues of the abdominal wall The structure closely resembling that commonly occurring in the ovary suggested that the growth was secondary to the ovarian tumour previously removed

The PRESIDENT showed a large Fibromyoma and Cystic Ovaries removed by abdominal section The operation was undertaken in consequence of the severe pain, especially on the left side, which had existed for two or three years There had recently been an increased menstrual flow but this increase had not been sufficient to interfere with nutrition. When the abdomen was opened a large fibroid was found attached by a short broad pedicle to the fundus uteri. The growth was removed by myomectomy as were also two smaller fibroids from the anterior surface of the uterus. The ovaries were found to be cystic and were of the size of large walnuts They were adherent and wedged between the tumour and the uterus, and after separation were removed together with the tubes It was probable that the severe pain had been chiefly due to the condition of the ovaries and to their compression by the growth The patient recovered well and is free from pain.

Dr W WALTER (Manchester) showed a Solid Ovarian Tumour removed from a patient, aged 58 years The swelling had been noticed about three years, but during the last 12 months it had increased more rapidly and the presence of ascites had become obvious There was no loss of flesh or cachexia, but the patient s three sisters had all suffered from abdominal tumours. The tumour had a short pedicle and was so closely adherent to the back of the uterus that the signs were those of a uterine tumour rather than of an ovarian tumour The ascitic fluid was reddish and amounted to about two pints The other ovary was cystic and contained a small fibroid nodule The microscopical sections showed the growth to be a simple fibroma with commencing myxomatous degeneration. The patient made a good recovery The difficulty of diagnosis and prognosis in solid ovarian tumours was discussed —Dr Walter also showed an ovarian cyst with a twisted pedicle

Dr H BRIGGS (Liverpool) showed - 1 A small Ovarian Cyst (2¼ inches by 4¼ inches) associated with metrostaxis and retro uterine hæmorrhage. 2 A Fundal Fibroid Polypus and Inverted Uterus. The uterus and growth had been successfully removed by vaginal hysterectomy The patient having passed the menopause no attempt was made to save the uterus. Reposition of the uterus after removal of the polypus would no doubt have been impossible 3. An early Cancer of the Cervix Uteri.

Dr ARNOLD W W LEA (Manchester) related a case of Acute Prolapse of the Urethra. Owing to the œdematous and strangulated condition of the prolapsed mass it was found necessary to resect this part of the urethral mucous membrane The result was completely satisfactory The cause of the condition was obscure There was a little cystitis, but this was probably not present before the attack. Masturbation was suspected

WEST LONDON MEDICO-CHIRURGICAL SOCIETY —A meeting of this society was held on Jan. 2nd Mr Rickard W Lloyd, the President, being in the chair —Dr Neville T Wood read a paper on the Treatment of Chronic Heart Weakness by Baths and Exercises in Family Practice. Chronic heart failure might, he said, be divided into four stages (1) a period when compensation was efficient, (2) a stage when the heart worked well under favourable conditions but failed under those of medium stress, (3) when the circulation was

Reviews and Notices of Books.

An Essay on Laughter its Forms, its Causes, its Development, and its Value By JAMES SULLY, M.A , LL.D London Longmans, Green, and Co. 1902. Pp. 441. Price 12*s* 6*d* net

PROFESSOR SULLY has produced a searching and interesting work upon a very inviting theme. It is not to be expected that a psychological essay should be anything but solid merely because it deals with a light subject—laughter Our lightest actions, our most trivial movements, our least serious ideas, become matters of solemn moment when they are regarded in the light of evolution of modes of expression or when from them it is attempted to deduce the foundations and the course of action and speech and thought in general. Nevertheless, in this essay on laughter, among much serious and perhaps at times laboured consideration of emotions and expressions themselves anything but serious, the author has managed to introduce an appropriate anecdote or two and a spice of the humorous which come as an unhoped for oasis of amusement in a psychological work dealing with laughter Professor Sully is a laughter lover This is as plainly shown in the way in which he seizes any opportunity of treating a subject with humour as it is actually demonstrated in his text Medical readers will have no difficulty in supporting his contentions as to the physical benefits derived from open hearty laughter They will also be interested in the associations that the author makes between the physical and the psychical conditions involved in laughing The question is treated from the evolutionary standpoint in this book and perhaps its most interesting passages are those relating to the laughter of children and of savages and to the questions of laughter or allied expressions in animals such as apes and dogs In the examination of laughter on a wider basis, the "choral laughter,' as Professor Sully calls it, many pregnant observations are made upon the social groups into which a civilised community becomes differentiated and, generally speaking, we find ourselves better pleased with the writer's manner and grasp of his subject when he is dealing with broad considerations such as these than when he is involved in a minute investigation of some individual mental attitude. We read with greater pleasure the explanation of culture groups in a community and the way in which laughter is evolved from among them than we did, for instance, the detailed examination of the "hat comedy"—the comedy wherein a father in his child's hat and a child in his father's hat are under comparison as laughter raisers.

LIBRARY TABLE.

Lectures on the Use of Massage and Early Passive Movements in Recent Fractures and other Common Surgical Injuries, the Treatment of Internal Derangement of the Knee joint, and the Management of Stiff Joints. By Sir W H. BENNETT, K.C V O , F R C S. Eng , Senior Surgeon to St. George s Hospital, Member of the Court of Examiners, Royal College of Surgeons of England, &c. Second edition, with 17 illustrations. London New York, and Bombay Longmans, Green, and Co 1902 Pp. 115. Price 6*s*.—The value of massage in the treatment of recent fractures was first pointed out by Lucas Championnière, but the practice received little support in this country until Sir William Bennett advocated its adoption There is no better account than that contained in this work of the method of carrying out the treatment of fractures by means of massage The massage is combined with early passive movement and with what is called "internal massage'—that is to say, the voluntary movement of the muscles which lie about the fractured bone. We commend the treatment to all those who have not tried it and we venture to say that they will be surprised at the early mobility obtained and the absence of adhesions Of course the method must be employed with care if the best results are to be secured. The volume also contains an interesting lecture on Internal Derangement of the Knee-joint with its treatment and a lecture on the Treatment of Stiff Joints by Forcible Manipulation , and the author gives a skiagram of a knee in which forcible flexion produced fracture close to the joint. This chapter is certainly of value and affords important information on a subject which is but scantily dealt with in the text-books.

Operations-Vademecum für den Praktischen Arzt (*A Vademecum for Operations.*) Von Dr EDMUND LESER, Professor an der Universität Halle-a S , Mitglied der Kaiserlichen Leopoldino-Carolinischen Deutschen Akademie der Naturforscher Mit 84 zum Theil farbigen Abbildungen. Zweite vermehrte und verbesserte Auflage. Berlin S Karger 1902. Pp 186. Price 5 marks —This little volume is intended to assist those surgeons to perform operations who may suddenly be called upon and yet have had little or no previous experience in operating In the case of each operation there is first a list of the instruments required and then a somewhat brief account of the procedure. In many cases very useful practical hints are given Many diagrams are provided and some of them are useful. We may specially mention those illustrating the operation for hare lip and other plastic operations on the face In these the incisions required are marked in red, thus showing very clearly what has to be done. Photography has been largely used in the preparation of the illustrations and generally with success, but some are less happy , for instance, Fig 6 is intended to show the operation of ligature of the brachial artery at the bend of the elbow , this figure is useless, as really nothing can be seen

The Treatment of Fractures By CHARLES LOCKE SCUDDER, M.D , Assistant in Clinical and Operative Surgery, Harvard University Medical School, Surgeon to the Out-patient Department, Massachusetts General Hospital Third edition, thoroughly revised, with 645 Illustrations. London and Philadelphia W B Saunders and Co 1902. Pp 485 Price 19*s* net.—In THE LANCET of June 22nd, 1901, p. 1766, we noticed at some length the second edition of this work and we then drew attention to the lavish supply of illustrations. In the present issue the illustrations have been increased by 45, while the pages only exceed those in the previous edition by 25. A chapter on Gunshot Fractures of the Long Bones has been added and the author has incorporated in his description many facts and illustrations from Mr Makins's ' Surgical Experiences in South Africa." This is a valuable account of the effects of the small bore bullet. Thus the additions to the volume, though not very numerous, are of some importance and the work is certainly a clear and trustworthy guide to the treatment of fractures

Lehrbuch der Hautkrankheiten. (*A Text-book of the Diseases of the Skin.*) Von Professor EDUARD LANG, K.K. Primararzt im allgemeinen Krankenhause in Wien, Mitglied der Kaiserlichen Leopoldinisch Carolinischen Akademie, &c. Mit 87 Abbildungen im Text Wiesbaden Verlag von J F Bergmann. Obtainable from F Bauermeister, Glasgow 1902. Pp 655. Price M. 14 60 or 14*s* 9*d* —The name of Professor Lang is well known in this country for valuable dermatological work that he has done and therefore a systematic treatise on the diseases of the skin will be sure to meet with appreciation here This work contains a fairly full account of dermatology and appears from its arrangement and size to be very suitable for the use of students and medical practitioners who quarters, well and made an uneventful recovery Her urine, drawn off every three hours, was blood stained for three or four days, as was the gauze from the cavity in the broad ligaments, but she was well enough five weeks after the operation to be sent to a convalescent home.—Dr Bedford Fenwick pointed out the valuable information to be gained by passing a vesical sound when operating on large tumours and for large cavities in the broad ligaments he recommended complete closure above and drainage through the vagina.—Dr Herbert Snow said that the microscopic section proved that the tumour was sarcomatous, but the duration for ten years suggested that it was the result of degeneration of a fibroid.—Mr F Bowreman Jessett had found a catgut suture of the mucous membrane with Halsted's suture of the peritoneum an efficient way of closing wounds of the bladder, for which he did not think more than two layers were required, but he would have preferred to introduce in this case, as he was in the habit of doing in all his vaginal hysterectomies, a self retaining catheter, to spare the patient the annoyance of the repeated passage of an instrument.—Dr Macnaughton Jones did not consider that vaginal drainage of such a cavity as the one described was desirable if complete hæmostasis could be secured —Dr Duncan replied.—The President delivered his valedictory address Specialism, he pointed out, not only had great advantages, but was now absolutely necessary on account of the vastness of the field opened to the medical profession by the increase in scientific knowledge due to new and improved methods of research. Whatever the future of gynæcology might be it had made more substantial progress than any other branch of surgery He could understand the position of those who held that as absolute diagnosis was often impossible until the abdomen had been opened the operating gynæcologist must be a skilled abdominal surgeon, and that if a general surgeon was to do hysterectomy a gynæcologist might perform gastrotomy But the difficulty was where the line was to be drawn if gynæcology was to remain a specialty The tendency at present was to ignore the medical element in gynæcology, but even on its surgical side its proper field was the genito-urinary tract. In Edinburgh he and his colleagues professed obstetrics and the diseases of women, and he held that to be the reasonable position for gynæcologists to adopt.

Aberdeen University Medical Society —At a meeting of this society held on Jan 9th, Professor J T Cash presiding, a very interesting and lucid paper on Anæsthesia, Past and Present, was given by Professor J A. MacWilliam. Sir Humphry Davy advised the use of nitrous oxide for small cases where there was not too much bleeding without giving any reason for the reservation Chloroform began by paralysing the higher centres and worked downwards, but certain centres were exempt—vaso motor, respiratory, &c —and on this fact depended the possibility of anæsthesia. Localised anæsthesia of blood going from the lungs to the heart was caused say, by the patient taking a few rapid breaths, so that a quantity of chloroform, harmless when uniformly spread over the circulation, might, when localised prove fatal. The best way of administering chloroform was to put the patient partially under, then to let him come out, and then to place him under it again. The administrator should always allow a good deal of air to be inhaled at the same time Idiosyncrasy affected its influence—cats, which closely resembled the human subject in many ways could not in some cases be killed by chloroform, though of course, they were deeply anæsthetised They had to consider more than one symptom in cases of collapse. If respiration failed artificial respiration was enough If the heart was paralysed squeezing the heart rhythmically with the hand was a powerful remedy in the case of a cat, in one human subject recently the heart was successfully squeezed through the diaphragm —Dr J Scott Riddell said that severe bleeding accompanied throat operations under nitrous oxide anæsthesia Out of 10,000 chloroform operations he had seen, only five deaths had occurred He strongly advocated the special course on anæsthesia which was to be given at the Infirmary

Glasgow Pathological and Clinical Society —A meeting of this society was held on Jan. 12th, the President, Dr A. E Maylard, being in the chair Dr Henry Rutherfurd showed (1) a child operated on for Intussusception at the age of three months, and (2) a child showing Scars of Intra uterine Small pox and Deformities probably due to the same cause, and read notes of the cases —Dr John H. Treacher gave a lantern and microscopical demonstration of Chorionepithelioma (deciduoma malignum of authors) and of Chorionepitheliomatous and Hydatidiform Mole like Structures in Teratomata of the Testis The latter part was from preparations the gift of Dr Schlagenhaufer of Vienna, Dr Schmorl of Dresden, and Professor Marchand of Leipsic. Dr Treacher also gave a short account of the opinions held as to these tumours —Dr J Kerr Love and Dr J W Leitch showed a specimen of Aneurysm of the Aorta in which death occurred from rupture of the heart and read notes of the case —Dr J K Kelly read notes and showed a specimen and microscopic sections of Sarcomatous Disease of the Uterus and Right Ovary, with Adeno-cystoma of the Left Ovary, removed from a patient, aged 66 years —The following exhibits were on view during the meeting—by Dr R S Thomson and Dr Robert Fullarton, (1) Water colour drawings illustrative of the Prodromal Rashes of Variola, &c, and (2) photographs illustrating various phases of the Variolar Eruption, by Dr John Brownlee, a microscopical demonstration illustrating certain features of the Variolar Eruption, and by Dr T K Monro, a Water colour Drawing by Dr A. J Ballantyne representing Severe Scrofuloderma.

Edinburgh Royal Medical Society —A meeting of this society was held on Jan 9th, Dr S A K Wilson being in the chair —A paper on Ectopic Gestation was read by Dr M Holmes. The paper was illustrated by four cases which had been treated lately in the Edinburgh Royal Infirmary He emphasised strongly the value of getting a correct history in diagnosing such cases In two of the cases the patients were not operated on and they had made a good recovery —Dr A. H Firth read notes of the following cases 1 A case pointing to Circulatory Embarrassment. After being in hospital some time the patient died suddenly A section of the liver and also a section of the lung were exhibited The former showed marked chronic venous congestion and the latter silicosis 2 A case with symptoms pointing to Lung Trouble. The post mortem examination demonstrated a sacculated aneurysm of the arch of the aorta.—A communication on Intestinal Obstruction in the Child by Dr Hey was read in his absence by Mr Nutt.

Æsculapian Society —A meeting of this society was held on Jan 9th, Dr Thomas G Stevens, the President, being in the chair —The President read a paper on Uterine Prolapse He said that the causes of prolapsus lay in the weakening of the pelvic floor through laceration of the levatores ani and undue stretching of the ligaments of the uterus during confinement. At the labour's completion or within the next three months the surgeon could cure the prolapsus but later than this time cure could only be expected by a radical operation, such as amputation of the cervix uteri, curetting the uterus and repairing the perineum When prolapse of the uterus occurred in virgins it was usually associated with anæmia and was due to some intra abdominal extra pressure. He advocated in the early cases repair of the perineum, the use of a vaginal glycerine plug to excite vaginal secretion, to induce uterine involution and to stimulate the levatores ani, rest in bed, and the application of a firm perineal pad

Birkenhead Medical Society —A meeting of this society was held on Jan 9th, Mr G S Stansfield (in the absence of the President) being in the chair —Dr J Herbert Dixon drew attention to the working of the Vaccination Act, in view of the probability of its being modified next year He proposed the following motions, which were seconded by Dr J Lambert and unanimously agreed to —

1 That the post of public vaccinator should be abolished and that every registered medical practitioner should be paid by the constituted authority for vaccinations performed

2. That the names of all children for whom at the age of four months the necessary certificate is not forthcoming should be handed by the vaccination officer to the parish medical officer for the district in which such children are resident who should vaccinate them and be paid at the same rate as other practitioners

3. That lymph should be supplied by the Government

4 That the conscientious objector's clause should be abolished.

Bristol Medical Charities —The employés of Messrs. W and H. Wills contributed £457 in 1902 to the Bristol medical charities. The employés of Messrs. E. and A Robinson contributed £285 for the same object.

manufactured and supplied by Mr F Davidson, optician, 140, Great Portland street, W, to whom I am much indebted for the skill and care with which my ideas have been carried out. The ophthalmoscopic drawings were all executed by Mrs. Davidson whose artistic talents are well displayed therein while to Messrs. Bale, Sons, and Danielsson much credit is due for their excellent lithographic reproduction of the drawings The price of the model is very moderate

H PERCY DUNN, F R C S Eng
Ophthalmic Surgeon to the West London Hospital Lecturer on Ophthalmology at the West London Post Graduate College
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MEDICINE AND THE LAW

Indecent Literature and the Law

SEVERAL prosecutions have taken place during the opening days of 1903, both in the City of London and elsewhere in the metropolitan district, in which the defendants have been street hawkers who have been fined for selling indecent literature. This might be taken to indicate an awakening of zeal on the part of the authorities on behalf of the public morals, but a perusal of the work objected to hardly bears this out. It consists of a skit upon the new Licensing Act apparently written by a somewhat illiterate person, and although it is unquestionably vulgar without being in the least degree amusing it requires a stretch of the imagination to describe it as indecent. Indeed, the Lord Mayor and another magistrate appear to have felt obliged to lay stress on the fact of the sheet objected to being headed with the Royal arms, the use of which may be illegal but can hardly be indecent within the police court meaning of the term If the police authorities desire to punish poor men for offences such as these they might well turn their attention to richer ones first They might, for example, examine the advertisements in cheap periodicals of quack nostrums for the treatment of nervous debility, of lost virility, and venereal diseases which would be indecent by statute if affixed to the walls of a public latrine and are not, so far as we are aware, rendered more seemly by appearing in the public press The advertisements of quack abortionists were long tolerated without complaint and have only disappeared because a few of the advertisers themselves have been successfully proceeded against. Even this class of obnoxious, and in our view indecent advertisement has not entirely vanished and "female remedies" are still occasionally offered with impunity If, however, they have doubts on the subject of the advertisements themselves the police authorities, at the cost of a few shillings spent in correspondence with the advertisers, might possess themselves of a mass of indecent literature far more likely to corrupt and to ruin ignorant young men and women than the silly broadsheet to which they called unnecessary attention in the cases to which reference has been made above.

The Licensing Act, 1902

There can be no doubt that the opening sections of the new Licensing Act which refer to drunkenness are being eagerly made use of and that as their provisions become more widely known by means of the police reports frequent recourse will be had to them throughout the country They concern medical practitioners because they increase the number of offences in which drunkenness is an essential feature and in the trial of which the fact of drunkenness may be disputed and may have to be proved or disproved by medical evidence. Under the new Act a person found drunk and apparently incapable of taking care of himself in a highway or public place may now be apprehended and dealt with according to law Before the present year such a person was usually taken to the police station in order to secure his own safety but on the following day he could not technically be taken before the magistrate without first being released and summoned. Persons found drunk in public when in charge of children under seven years of age may now be severely punished and it is not necessary that these should be apparently incapable of taking care of themselves. A married man or woman can obtain from a court of summary jurisdiction an order of separation from a wife or husband by proving that she or he is a habitual drunkard. In cases in which an order of detention under the Inebriates Act, 1898, might be made the magistrate must, whether he makes such an order or not, cause a notice to be sent to the police authority which will have as its result that the person convicted may be punished for obtaining liquor on licensed premises during the next three years and that any person knowingly serving him with liquor may be punished also The habitual drunkard for the purpose of an order of separation from a wife or husband is defined by the Habitual Drunkards Act of 1879 as "a person who not being amenable to any jurisdiction in lunacy is notwithstanding by reason of habitual intemperate drinking of intoxicating liquor, at times dangerous to himself or herself or to others, or incapable of managing himself or herself, and his or her affairs" It is as well that attention should be called to this because in one or two instances magistrates before whom separation orders have been sought seem to have been under the impression that the "habitual drunkenness" could only be established by proof of convictions for offences connected with drink. It is easy to see that although medical evidence is not likely to be required very often in the case of the poorest class whose lives are patent to their neighbours and who are less eager to disguise their failings, with regard to those occupying a better position the case is different and medical evidence may be of considerable importance The instances also that have occurred in the past of the police and public mistaking sudden illness for drunkenness are not likely to become less frequent. It is to be observed that the new Act does not apply to Scotland or Ireland

Who is to Blame?

It has been stated, with reference to the cases of typhoid fever at Winchester believed to be caused by eating oysters that the owner of the Emsworth beds, from which the oysters in question apparently came, is threatening an action against the local authority and that he will claim heavy damages from them for the injury done to his trade through the alleged contamination of the oyster beds with sewage matter It was said at a meeting of the urban district council concerned that the conditions complained of were due to the bringing of the oysters to the sewage, rather than to the bringing of the sewage to the oysters, and it was resolved to defend any action which might be brought. Apart from the questions immediately concerning the parties in this instance the trial of such an action should be watched with attention by those concerned with the public health, as whatever its result may be it can hardly fail to define in a manner highly to be desired the rights and liabilities of local authorities and of the dwellers in their districts with reference to the disposal of sewage matter, both generally and in respect of the discharge of sewage into tidal and other waters

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WINSLEY SANATORIUM —The Swindon town council has decided to contribute £500 towards the cost of the erection of the sanatorium for consumption at Winsley and to contribute £130 annually towards the maintenance of the institution, provided that two beds are reserved exclusively for cases from Swindon

ROYAL INSTITUTION —The course of six Christmas lectures at the Royal Institution was delivered by Professor H S Hele Shaw, professor of engineering in University College Liverpool, on Dec 27th and 30th, 1902 and Jan 1st, 3rd, 6th, and 8th, 1903 These lectures, which are adapted to a juvenile auditory, dealt with Locomotion (1) on the earth, (2) through the water, and (3) in the air The first lecture was taken up with preliminary considerations relating chiefly to wheels and rails The second described the various kinds of motor car for ordinary roads driven either by petrol, steam or electricity The third and fourth lectures dealt with vehicles travelling on rails—namely, ordinary railway trains with steam locomotives or electrical locomotives and electrical tramcars. No electrical railway existed 25 years ago the first one was in Berlin and commenced working in 1879, the first successful one in the United Kingdom was at Portrush in Ireland, the dynamos generating the electricity being driven by water power A description was also given of the so-called mono rail, which really consists of five rails—one for supporting the carriages and a pair of rails on each side for steadying them. The fifth and sixth lectures were devoted to various types of steamships, balloons, and flying machines.

wish to have a general knowledge of the subject and a convenient work of reference For such purposes the descriptions of the diseases and the sections on treatment are amply sufficient, but the absence of references will detract from its value for dermatologists, though indeed it makes no claim to be an exhaustive treatise. There are 87 illustrations , some of these represent histological details, but the majority are reproductions of photographs of patients, and so far as skin diseases can be shown in black and white they are successful. One of the illustrations represents a very severe case of keloid resulting from a burn with sulphuric acid and another shows the same case after excision, some of the wounds so formed being stitched up and others covered with Theirsch grafts. This case is of interest, as many surgeons hold that excision is useless in keloid recurrence always taking place Another excellent illustration is one showing a case of psoriasis with conical scabs, "psoriasis ostreacea."

The Hair and its Diseases, including Ringworm, Greyness, and Baldness an Introductory Handbook. By DAVID WALSH, M D Edin., Physician to the Western Skin Hospital (Medical Monograph Series, No 6) London Baillière, Tindall, and Cox. 1902 Pp 96 Price 2*s* 6*d* net —There is much that is good in this little book, for it sets forth clearly the manifold microbic dangers to which the scalp and hair are liable and gives useful directions for avoiding the spread of infection, but the general plan of the book and many of the phrases and expressions used seem to indicate that it is intended for the perusal of the layman rather than of the medical man As ' unkempt" simply means uncombed it is somewhat curious to read that "were it not for daily brushing the head would soon become unkempt and full of dust"

Prize Essay on the Erection of a Sanatorium for the Treatment of Tuberculosis in England By ARTHUR LATHAM M D London Baillière, Tindall, and Cox 1903. Price 5*s* —The essay which gained the first prize among the competing essays for a scheme for the erection of the King's Sanatorium has now been published in separate form by Messrs Baillière, Tindall, and Cox. The essay as published in a volume is identical save for the addition of a bibliography, with the essay published in THE LANCET of Jan 3rd The bibliography, which is a very complete one, was added with the idea that it might be of some service to His Majesty's Advisory Committee and consists of references to books and articles on sanatoriums and on the sanatorium method of treatment, showing the author's intimate and wide acquaintance with the subject With the larger type, the side headings, and the varieties in printing which the volume form permits of, Dr Latham's essay makes a very attractive as well as a very useful little book, while the rapid and excellent production is a matter upon which the publishers must be congratulated The sanatorium treatment of pulmonary tuberculosis is now the recognised method of dealing with many classes of cases and medical men and public authorities are glad, as we know of an opportunity of learning what is at the present time considered to be the most effective form of building

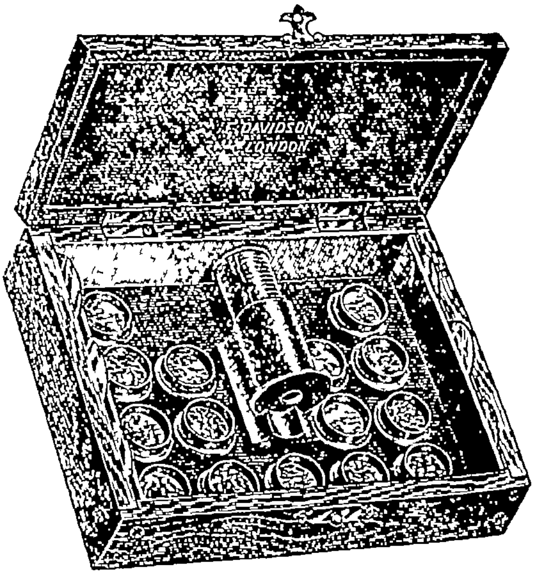
JOURNALS AND MAGAZINES

Practitioner —The January number of this periodical introduces a new editor—Dr W Cecil Bosanquet—and a new external appearance. We cordially welcome both. The altered form of the journal is certainly to its advantage and it is now a well printed substantial looking production with the list of contents readily displayed. As to the contents of this particular number there is no marked change to remark from the usually excellent class of contribution that the *Practitioner* has led us to expect, unless it be in the editorial notes. These are of a character purely professional rather than professionally political as they were wont to be

New Inventions.

AN IMPROVED MODEL EYE.

THE next best thing to practising retinoscopy and the use of the ophthalmoscope with the human eye is to employ an appliance which almost answers the same purpose. Believing, however, that a model eye completely fulfilling these requirements has so far not been available for practitioners and students I proceeded some time ago to devote attention to the subject and I now venture to think that the result described below will be helpful in supplying the need indicated The model itself is an improvement upon a design which has for some years been known in America. It consists of two brass (blackened) cylinders one of which is fixed on a stand, the other being moveable, sliding backwards and forwards inside the former On the moveable cylinder is a printed graduated scale by which a maximum of myopia of 6 D and of hypermetropia of 6 D can be measured At one end of the fixed cylinder is a lens of two-inch focus, thus enabling the observer, by altering the position of the moveable cylinder, to produce various degrees of ametropia The beginner, for example, might make the model eye myopic to 4 D and proceed with the lenses taken from an ordinary trial case to estimate the defect, having arrived at the correction he can then ascertain by looking at the graduated scale whether his result corresponds therewith Furthermore, different lenses are provided with the model, by which various degrees of astigmatism can be created by merely inserting one or other of the lenses in front of the lens in the fixed cylinder In addition a diaphragm is supplied to be placed in the slot in front of the two inch lens for the purpose of representing the pupil in an undilated state. For the study of changes in the fundus 17 metal discs are provided so made as to cover the outer end of the moveable cylinder, each containing an ophthalmoscopic drawing On the reverse of these discs a number is placed which corresponds with a number on a printed list fixed inside the lid of the box, the idea being that the student should first examine the drawing with the ophthalmoscope in the ordinary way and make a diagnosis of the condition of the fundus depicted before referring to the list.



The following is the list of drawings in question (1) optic neuritis , (2) posterior staphyloma , (3) coloboma of the choroid , (4) normal eye , (5) retinitis pigmentosa , (6) opaque nerve fibres , (7) syphilitic neuro-retinitis , (8) detachment of the retina , (9) sarcoma of the choroid , (10) advanced chronic glaucoma , (11) sub-hyaloid hæmorrhage , (12) albuminuric retinitis , (13) post-neuritic atrophy , (14) disseminated choroiditis , (15) embolism of the central artery of the retina , (16) rupture of the choroid , and (17) primary atrophy of the optic nerve. The model is it may fairly ask the public to find the money for the structure. For the proposed course there is this to be said. The governors of the hospital are mostly City men As the hospital is clearly wanted in the City—of that there is no doubt—why should not the Lord Mayor of the City ask the citizens for the money to keep the institution in their midst at the highest pitch of efficacy? Against the appeal by St Bartholomew's to the charitable public it must be urged that many other hospitals, notably the London Hospital and Guy's Hospital, are in great financial straits. The endowment of the former is inconsiderable and the income of the latter has dwindled terribly of late years. An appeal to the public from St. Bartholomew's Hospital may undoubtedly tend to divert funds from the London Hospital and Guy's Hospital, neither of which institutions has any other way of obtaining money save by appeals to charity In these circumstances, while we recognise that St. Bartholomew's Hospital requires the immediate expenditure of a large sum of money upon its fabric to render it a suitable place for the treatment of the sick, we deeply deplore that the governors can make no effort to cope with the financial position out of the great resources of their institution It seems to us better for the public that St. Bartholomew's should temporarily bear the burden of a debt to the bank than that supplies which are the very life blood of other charities should be jeopardised.

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Infective Arthritis

THE Bradshaw Lecture at the Royal College of Surgeons of England which was published in our columns on Dec 16th, 1902 (p 1603), proved to be a particularly valuable contribution to medical knowledge Mr HOWARD MARSH took for his subject certain cases of affections of the joints which do not fall readily into any of the recognised categories of articular disease In a damp but temperate climate like that of England rheumatism in one or other of its manifestations is an exceedingly common disease and therefore if any obscure affection of the joints is met with there is always a very great probability that it will be classified as "rheumatic," just as in countries where malaria is rife any rise of temperature or disturbance of doubtful origin is put down to malaria. So it has happened that the term "rheumatism" has become extremely wide, as it is applied to many conditions which have no other connexion with true acute rheumatism than that they affect joints

Mr MARSH very happily started with a comparison between the peritoneum and the synovial membranes. It is not so very long ago that peritonitis was considered to be often idiopathic" but now it is recognised that no such condition exists and that peritonitis is microbic in origin. Histologically there is the closest resemblance between the peritoneum and the lining membrane of joints, and pathologically the likeness between these two structures is also very great, and therefore *a priori* we should look for a microbic origin for synovitis and arthritis. In the first part of his lecture Mr MARSH pointed out that in the great majority of the specific diseases the joints are liable to be infected. This is fully acknowledged with regard to tuberculosis and syphilis and these diseases were therefore not considered further, and ordinary septicæmic infections and gonococcal arthritis were also put aside as too well known to need discussion The lecturer then discussed seriatim various morbid conditions which are associated with an infective arthritis He showed that the starting point of our present view was the discovery by WEICHSELBAUM in 1888 that the pneumococcus has the power of producing an acute inflammation of the joints, and a paper by Dr E J CAVE, published in THE LANCET of Jan. 12th, 1901, p 82, advanced our knowledge greatly, in this article it was pointed out that pneumococcal arthritis generally sets in only a few days after the onset of an acute pneumonia, though occasionally it may precede the pulmonary affection, and in a few cases it has occurred independently of any pneumonia. In a very large proportion of the cases the inflammation went on to suppuration and nearly three fourths terminated fatally, but this very high mortality is not to be ascribed to the affection of the joints only for the pneumonia and other inflammations which are present, such as endocarditis and meningitis, are largely responsible for these unfavourable results Of all the forms of infective arthritis there is probably none worse than that due to the pneumococcus, for it is essentially a septic infection In typhoid fever, too, affections of the joints are not uncommon. Some of these are examples of ordinary septic arthritis, the streptococci or staphylococci having been absorbed from the surface of the ulcers in the ileum or from bedsores or boils. There is a second form of articular affection in typhoid fever which is apparently due to the presence and direct action of the typhoid bacillus. In these cases suppuration is rare, complete recovery sometimes occurring, while in others fibrous ankylosis results. There is yet a third form of articular affection in enteric fever, it arises early, lasts only a few days, and then disappears, leaving no ill effects behind. These cases have been called examples of "rheumatic typhoid arthritis," but the name is confusing, for no one will maintain that they have anything to do with true rheumatism. It is not improbable that they are the result of irritation by toxins and that the typhoid bacillus is not present in the joints affected. Accompanying scarlet fever are two forms of articular disease, one of these is suppurative and is probably merely a part of a secondary sepsis but the other is early in its appearance, is not severe in character, and usually soon subsides. It has been looked upon as a true rheumatism but far more likely it is a veritable scarlatinal affection of the joints. Influenza, too, seems occasionally to be complicated by an affection of the joints which goes on to form a stiff joint and Mr MARSH related two instances of this condition which came under his own observation. When we consider how very common a disease influenza has been of recent years and still is this complication must be obviously very rare. Erysipelas and glanders may also be added to the list of diseases which are liable to be accompanied by an affection of the joints.

So far only articular complications of general diseases have been referred to, but there are certain unclassified cases of infective arthritis. Mr MARSH quoted two cases of bronchiectasis in which several joints were affected, and in one of these the condition of the joints varied with the bronchiectasis, when the sputum was small in

THE LANCET.

LONDON SATURDAY, JANUARY 17, 1903

St Bartholomew's Hospital

CRITICISM of rather lavish kind has been expended upon the affairs of St Bartholomew's Hospital lately in the columns of more than one newspaper, and to a large extent the articles which we have read have been the easy product of the versatile journalist, in that a broad flow of exaggerated notions has proceeded from a minute source of imperfect knowledge Such articles need not seriously detain anyone truly interested, and is there any medical man who can fail to be interested in the present position and the future welfare of the oldest and one of the greatest of London hospitals? All medical men know the good work that St. Bartholomew's Hospital, the hospital of ABERNETHY and PAGET, has done, and all will be concerned to learn that so venerable and dignified an institution is, despite its great possessions, about to make an appeal to the public for assistance Whether this appeal is justifiable has exercised the minds of many during the last week, and the question is a very difficult one to answer Some writers have been glib with regard to the iniquity of extending hospital accommodation upon land so valuable as that in the heart of the City and with respect to the advantages of removing a City hospital to a site more remote from the centre of London. Unfortunately, their rhetoric shows but too plainly a complete ignorance of the actual work carried on at such a hospital as St. Bartholomew's and only the faintest suspicion of the immense difficulties involved in any considerable change of position for such an institution. Two articles on the position of St. Bartholomew's Hospital which appeared in the *Times* of Jan 7th and 8th, are, however, well informed, and these, together with a consequent letter from Sir TREVOR LAWRENCE, the treasurer of the hospital, give a clear and judicious statement of the circumstances which have led to so much rambling discussion.

In the first place even the staunchest supporter of St. Bartholomew's Hospital will grant what has been already freely admitted by Mr ANTHONY A. BOWLBY and Sir THOMAS SMITH before the House of Lords committee—that there is much overcrowding in many departments at the hospital. The buildings, though finely designed and executed are excessively old for a hospital and incapable of rising to the best modern requirements of ventilation and sanitation. It is, indeed, because such considerations as these are fully realised by the governors of the hospital that they have gone to the length of expending nearly a quarter of a million of money upon acquiring additional space contiguous to the present hospital. That this sum has been largely provided from the savings of the hospital itself reflects credit upon the administration of the hospital, and is to some extent a justification of an appeal to public charity for power to carry out to the full the proposed additions and improvements. The public may always with propriety be asked to help those who help themselves If, however, St. Bartholomew's is justified in appealing to the public for large sums of money, the public in turn are equally justified in demanding that for these sums the greatest possible amount of benefit shall accrue. Will that be the case if these sums are expended in maintaining extensions and improvements upon land of almost incomparable value? Might not much more be done, and even better done, upon a site of less extravagant pretensions? Might not a still larger number of patients be as conveniently provided with hospital attention in a less central position? Two reasons for maintaining the hospital in its present position at once suggest themselves. The first is one that is quite obvious, though it has been ignored almost entirely by the critics of St Bartholomew's Hospital. There is a very large number of emergency cases, both surgical and medical, occurring daily within the City of London and requiring hospital treatment The public has the vaguest notions of what is meant by a day's work at St. Bartholomew's or any other large London hospital Half a dozen fractures a bad burn, two "run-over cases," and a "fall from a ladder" would make no extraordinary history of a morning's casualties received into the accident wards of St. Bartholomew's Hospital. Similarly there are numerous medical emergencies which daily require prompt attention in the City and there can be no question that considerable hospital accommodation is absolutely necessary within the City precincts Again, it must be remembered that St Bartholomew's Hospital serves the greater part of northern London It is the only large hospital for such populous districts as Highbury, Islington, and Clerkenwell, while it is a very accessible institution, having stations of the Metropolitan Railway, of the Central London Railway, and of two or three other railways at its gates. No new site is likely to be as convenient for either the patients or the medical staff as the present site is, and these are matters of prime importance which in all discussions that have come under our eye have been completely ignored. The second reason against a removal of the hospital is based upon what may be termed sentimental grounds. We may dismiss this reason more briefly than it deserves by saying that sentiment where it concerns the traditions of a great medical school as well as a great hospital is something more than an idle abstraction It plays an actual part in the production of enthusiastic and capable medical men

But while we are of opinion that St. Bartholomew's Hospital should remain, at any rate for the present, upon its historic site we are quite alive to the difficulties of the situation.[1] The hospital requires, to bring it up to modern standards of what a first-class hospital should be, a new isolation block, new operating theatres, new surgical out patients' rooms, new quarters for the resident staff and the nurses, new clinical laboratories, and a new mortuary It has acquired at an immense cost the site whereon to erect these necessary innovations, but, wealthy as it is, it considers that members of the Parliamentary bar and of most of the est known of water engineers. If the Water Board s to make anything of a fight on behalf of the eople whose interests are intrusted to it its policy must be directed with ability and with a strict regard to usiness principles. It will be well, therefore, if the members of the Board are men of knowledge and of nderstanding rather than men who darken counsel with plethora of verbiage. It is a wise provision of the ct that the electing authorities are not restricted in the hoice of their representatives It has been suggested by ir WILLIAM J COLLINS that the London County Council hould not elect members to the Water Board because it has ot exclusive charge of the whole enterprise. It is hardly be supposed that the Council will follow this advice which oes not appeal to us as practical. In the case of the etropolitan boroughs it may well be that gentlemen who ould firmly decline civic honours would in many cases e willing to place their special knowledge at the disposal f their fellow-citizens by service on the Water Board If ne or two distinguished engineers could be prevailed upon to ke this course the Board would be greatly strengthened.

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[1] We recommend all our readers to refer to a letter published in our columns on April 5th, 1902, p. 990 from the pen of Mr Peyton T B Beale This communication discusses the growing difficulties of the London hospitals in a very interesting manner

It was suggested in the House of Commons by Mr ONG that Lord LLANDAFF might be invited to become member of the Board. No one in either House has a nowledge of the London water supply comparable in any gree to that which Lord LLANDAFF acquired whilst he esided over the Royal Commission which is associated ith his name and every one of the meetings of which he tended. The Metropolis Water Act is, however, a very ifferent measure to the one which he indicated and the ork done by Lord LLANDAFF has never been properly ppreciated—he has been abused by a certain section of e press and damned with the faint praise of his colleagues. e may well think that he has already spent enough time nd trouble over the London water question. There is, owever, one office which he could well hold, that of chair an of the Board The Board has the privilege of electing chairman from outside its own members, and if Lord LANDAFF at the unanimous invitation of the Board should onsent to fill that post we should consider the circumstance t happy augury

Annotations.

"Ne quid nimis."

SELF-PERFORMED OPERATIONS

IN THE LANCET of Dec. 20th, 1902, p 1716, we reprinted om THE LANCET of Dec 18th, 1824, an account of a litho omy performed by a French army surgeon on himself, the peration was a success and the surgeon patient completely covered On the perusal of such an account a feeling of oubt as to its truth might naturally arise, but there are ufficient cases on record to make it certain that such opera ons as this have been performed—nay, that even more evere operations have been carried to a successful termina ion by patients. In considering the reports of such cases e must put into an entirely separate category all those utilations which have been performed by persons of un ound mind, they are very numerous and of great interest, ut they must not be confused with instances of self perations for the treatment of a definite condition. In the case quoted from THE LANCET of 1824 the operator was a surgeon and therefore we need not feel so much surprise that the operation was a success as if he had not been acquainted with the subject, though our amazement at his endurance and perseverance is in no wise lessened. Gould and Pyle in their work on the "Curiosities of Medicine" mention that a Dutch blacksmith and a German cooper performed lithotomy on themselves In another case what may be called lithotrity was carried out on himself by a draper From the age of 17 years he had had a perineal fistula as the result of a fall Later he suffered from symptoms of a vesical calculus and he introduced a chisel through the fistula and chipped off pieces of the stone, this was continued and eventually the remainder of the stone came away, in all it weighed over 14 ounces He recovered and survived the operation 11 years. A somewhat similar case is that of General Martine who founded the Martinière Colleges of Calcutta and Lucknow He suffered greatly from stone and determined to rid himself of it. In order to do this he prepared a piece of wire and by filing roughened one end, converting it into a file. The wire was then introduced into the bladder and brought into contact with the stone, against which it was rubbed until the pain compelled him to desist, some débris came away This procedure was repeated until after 12 months' work all the stone was removed Dr James Murphy has recorded a case in which a man suffering from strangulated inguinal hernia incised the swelling with a razor, cutting off two large masses of omentum and almost completely severing the spermatic cord. It is somewhat doubtful if this case falls within the scope of the subject under consideration, as though the intention was curative the operation was not a success and in all probability the patient was insane at the time The most impressive cases of self operation are those in which Cæsarean section has been performed. These are numerous and, curiously, no small number has been recorded in coloured women Many of the cases have been successful, the uterus contracting firmly and very little blood being lost. A razor has generally been the instrument, though in one case a broken butcher's knife was used. Occasionally the child has been wounded, sometimes fatally The incision is most often made to the right of the middle line, but in some cases it has been median. Prolapse of intestine has occurred in some instances. In one case a neighbour sewed up the abdominal wound and recovery followed. The most remarkable case was reported in *La Gazzetta degli Ospitali* in May, 1886, and a *resumé* was published in THE LANCET of May 8th. A peasant woman, aged 23 years, who was pregnant opened the abdomen with a kitchen knife by an incision on the right side and as she found it impossible to remove the child its head and one arm were removed. The uterus having been emptied she tied a broad bandage tightly round the body, did some household work, then went on a cart to visit her sister, walked about for five hours, and then fainted. On examination an extensive prolapse of intestine was found to have occurred through the wound. This was cleansed and returned and the wound was sutured. Complete recovery followed.

SHELL-FISH AND TYPHOID FEVER

THERE is no doubt that the recent outbreak of typhoid fever at Portsmouth Southampton, and Winchester, caused by oysters, urgently calls for fresh legislation which shall apply to shell fish of all kinds. According to the report of the medical officer of health of Portsmouth, Dr A. Mearns Fraser, it would appear that in the present state of the law the sanitary authority is almost helpless There is legally no power vested in a sanitary authority by which the sale of oysters may be prevented because they may amount and only slightly fœtid the affection of the joints was less severe, but as the sputum increased in quantity and fœtor so the articular condition grew worse. In this case we cannot avoid the conclusion that the condition of the joints was dependent on the absorption of a toxin from the dilated bronchi Two very instructive cases were under the care of Mr H W PAGE at St. Mary's Hospital. In each a painful swelling of a knee ensued a few weeks after injury, the symptoms were severe and tapping caused some improvement but recovery did not occur until the joint had been washed out with a weak solution of carbolic acid A diplococcus was found to be present which produced a polyarthritis in rabbits The conclusion of the whole matter is that in very many diseases caused by microbes morbid conditions of the joints may occur The joints may be affected in any one of four ways. Firstly, only the toxins of the micro-organisms may reach the joint, giving rise to a not very severe form of arthritis which tends to subside and which results generally in complete recovery of the joint. In a second form the special microbe of the disease is present in the joint and the result will vary according to the micro organism In some cases, as with the pneumococcus, suppuration is very likely to occur, with destruction of the joint, in other cases a more chronic process is set up, leading to much plastic exudation in and around the joint and generally ending in fibrous, or even bony, ankylosis, while in others, again, the inflammatory process is much less severe and more or less complete recovery may follow In a third group of cases there are, in addition to the specific organisms, one or more varieties of the ordinary septic cocci, and there is a further group in which these septic organisms are present alone In these two classes of cases extensive and severe suppuration is certain to follow

As to treatment, Mr MARSH recommends that in the mildest "toxic" forms rest on a splint is probably all that is required. In the microbic cases with effusion into the joint the fluid should be at once removed with an aspirator or by an incision and the joint should be freely irrigated with antiseptic lotion In the form with much plastic exudation the prognosis is unfavourable as to complete recovery, but rest on a splint will be followed by firm ankylosis and this is probably the best that can be hoped for, any injudicious attempts at movement will almost certainly be followed by an aggravation of the symptoms and a postponement of convalescence When septic organisms are present the only hope of doing any good depends on early evacuation of the contents of the joint with free irrigation. Mr MARSH's lecture has thrown much clear light on a very obscure domain of pathology He has brought order out of chaos and has pointed out clearly the direction which bacteriological investigation should take to perfect our knowledge of infective arthritis.

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The London Water Board

THE comparative calm which followed the political excitement attending the debates on the Education Bill materially helped the Government to expedite the consideration of the Metropolitan Water Bill, and a certain prestige and elation which the Ministers experienced doubtless favoured the rapid settlement of a less contentious measure. The permanent clerks of the Local Government Board had great reason to desire the success of the measure and as no member of the Opposition had in any way mastered the subject the graceful concessions which Mr LONG was willing to make in minor matters resulted as he wished in insuring the rapid passage of the Bill through Parliament. Now, having received the Royal sanction, it has become the Metropolis Water Act 1902 (2 Ed VII., Ch 41) Such is in unvarnished language the story of the quick and easy passage of the measure through Parliament The first effect of the Act will be the formation of the Metropolitan Water Board, the members of which are appointed under regulations provided in the Act, the details of the election having been left for the arrangement of the Local Government Board the only point which it is necessary to mention here is the fact that with one exception (that of the Thames Conservancy Board) all the authorities which have the power of election are left entirely free and unfettered in regard to the representative whom they appoint It is not necessary for them to elect any member of their own body

The Metropolis Water Act having come into force it is obviously the duty of those concerned to make the best they can of it We pointed out in sufficient detail our objection to the Bill when it was introduced and since that time we have made direct appeals to the Government to reconsider the question in the light of facts which we had brought to notice The Members who had charge of the Bill disregarded our appeals and all we can now do is to advise as to the best course to be taken under the new conditions which have been called into being by the Act From a purely political standpoint it is probable that the Ministers in the measure which has now become law have shown more statesmanship than appears in any previous attempt which has been made in this direction It must also be conceded that the question itself was forced upon the Government by the constant agitation of the London County Council and the fact that enormous sums of money were annually spent by that body and by the water companies in Parliamentary and legal procedure, the Bill for which the people of London had either directly or indirectly to pay It may be further urged in favour of the Act that it does actually, though in a somewhat cumbrous manner, provide for the representation on the Water Board of all the various interests at stake. On the importance of this general principle we have constantly insisted.

The authorities in Water London are now called upon to elect the first members of the Metropolitan Water Board. The successful working of the Act will depend in great measure on the representatives chosen to carry out the important work allotted to them and much will be decided by the character of the start which is made. The first duties which the Board will have to undertake have reference to the purchase of the water companies' undertakings, and on the successful conduct of the case for the purchasers pecuniary interests involving large amounts necessarily hang The water companies have had for years the benefit of the advice of a great majority of the most able and eminent e arrived in Canton on a Thursday, but, unfortunately uld not get on to our home that night We slept in a bed eviously occupied by one who six weeks before had an tack of dengue and still had pains But the bedding attresses, &c., had not been sterilised, although the sheets d been changed. We met, also, one other person who eight eeks before had an attack and still had pains Neither of s were bitten by mosquitoes, which are blamed by the hinese for transmitting the disease On Friday we returned Fatshan and next day my wife suddenly collapsed with all e signs of the disease and in a few hours I followed. My ttack was very light and in a week I resumed my hospital uties, although rather hampered by pains. Almost all the rugs mentioned in the books I have tried on myself or my hinese patients but with little success Perhaps ammoniated incture of quinine, in half to one drachm doses, gave the best esults but practically nothing touched the pains But in easoning about the conditions of the disease in our own case nd comparing our experience with that of a colleague who ad returned from Japan with us and escaped I came to he conclusion that we had been infected by sleeping in an nsterilised bed. My colleague slept in one not previously ccupied by an infected person and has been entirely free. Then, further, I noticed that when my wife recovered a little nd went to Canton she was entirely free from pain. I, staying at home, continued to have them. She occupied an uninfected bed but on the next day after her return her pains were almost as bad as ever I therefore concluded that she was reinfected by sleeping in her own bed. So I suggested that we should take a bath in hot water and some fairly strong disinfectant, and that meantime all mattresses, bedding &c., should be exposed to the sun during the day This was done. After two days of such treatment all our pains vanished, nor have they returned We were not taking drugs. This simple line of after treatment I have, with entire success, carried out with my Chinese patients, as with 'medicine water' it is easy to persuade them to sponge themselves down and to sterilise, in the hot sun we have here, all their beds and clothes. I give simple tonics when necessary The treatment is apparently as effective as simple. I feel convinced that one reason for the long continuance of pains is the nightly re infection. This is quite in keeping with the fact that there is a fine desquamation of the skin often prolonged over two or three weeks in some. The sun evidently speedily kills any infective germs in the desquamated skin dust"

A HOSPITAL FOR PAYING PATIENTS

ON Jan. 9th the Duke of Northumberland opened the hospital for paying patients at Fitzroy House Fitzroy square, London, W, which has now been partly rebuilt and completely renovated. In 1877 Sir Henry Burdett suggested in a letter to the *Standard* that an association should be formed for the purpose of founding a hospital for well to-do patients to which admission should be by payment only A little later a public meeting was held at the Mansion House and ultimately the Home Hospital Association for Paying Patients was incorporated in 1878 A sum of over £20 000 was contributed by those interested in the movement and in 1880 the first home hospital was opened in Fitzroy square. Later the association acquired the freehold of the neighbouring house and a lease of other adjacent premises Fitzroy House, as this home hospital was called, has for 22 years done much work for middle-class patients, for it has always been conducted on a system which provides that each patient shall be charged but little over the cost price for his accommodation and shall pay and be attended by, his own medical man From first to last 5376 patients have been under treatment in Fitzroy House. Last year it was recognised that the hospital must be reconstructed and largely rebuilt so as to provide a perfectly equipped modern hospital. For this purpose it was found necessary to raise £10,000 and of this about £2300 have already been subscribed, leaving about £7700 yet to be raised. The work of renovation has been now completed and the new Fitzroy House contains about 40 rooms, 30 of which are bedrooms. The floors have been covered with papyrolith, which amongst other things contains asbestos, paper pulp, sawdust, and magnesite. This is laid like a cement and forms when dry an extremely hard and impervious surface. A model operation room has been provided on the top floor, with a north vertical light and a top light in addition. The walls and ceiling of the operation theatre are lined by six inch glass tiles All the rooms are fitted with electric light and the whole hospital has been decorated and fitted in a very artistic manner A passenger lift working by electricity renders easy the removal of a patient from one floor to another In its present condition the building is well suited for the purpose for which it has been designed—namely the nursing at moderate rates of middle-class patients The fees charged are inclusive of everything except medical attendance and range from four to ten guineas per week. The hospital is self supporting—in fact, a very small profit is made, for the management endeavours to carry it on at as low a rate as is possible without incurring a debt, and yet the patients have all the attractions and comforts and more than all the medical conveniences of a well appointed house. It is pointed out that the hospital is to a certain extent of the nature of a charitable institution, for the money for renovating the building has to be provided by donations but that, inasmuch as the fees charged to the patients only just suffice to maintain the hospital, it is really self supporting Certain privileges in the way of priority of admission are granted to those who subscribe 20 or 50 guineas. There is, no doubt, a future for institutions such as this when conducted on right principles, for the average private house is ill adapted for sick nursing of any kind, and especially for operations It is felt that there is a need for self supporting pay hospitals in which a lower charge is made than four guineas a week, and Sir Henry Burdett suggests that pay wards should be located in ordinary hospitals and that a two-guinea or a 50*s* minimum fee per week would suffice to cover the cost of maintenance, while the patient could select any medical man he preferred, the medical fees being paid out of a fund formed by putting aside 10 per cent. of all moneys received. The question as to whether this percentage would provide sufficient funds for the purpose appears to rest on the supposition that in many cases more than £2 10*s* would be charged, as the scheme suggests that all the patients should pay what they can afford but in no case less than the above sum.

THE COLORIMETRIC DETECTION AND ESTIMATION OF BORIC ACID

SINCE it is probable that some day—and already we have waited long—the Government may be led to adopt the recommendation of the Foods Preservatives Committee to the effect that the use of boric acid should be altogether prohibited in milk and that the quantity of the preservative should be restricted in butter and cream, it is desirable that we should be in possession of a trustworthy process for the detection and estimation of boric acid in foods. According to Mr C E. Cassal and Mr Henry Gerrans, analysts engaged in the examination of foods under the Sale of Foods and Drugs Acts, the old turmeric test may be improved considerably by adding oxalic acid. They apply the test for free or come from a polluted source. Authoritative warnings as to the dangers from the pollution of oyster beds by sewage have in the past been issued, as Dr Fraser says, only to be ignored. Dr Fraser makes out a strong case in favour of the oysters having been the origin of the outbreak. There is no other conclusion left in the face of the following facts—(1) that all the 25 persons attacked ate oysters about the time they must have contracted the disease, (2) that these oysters came from the Emsworth oyster fisheries, (3) that the fisheries were open to contamination from the specific organism of typhoid fever, and finally (4) that there is no other condition common to all the cases which would account for the outbreak. It is pointed out that whatever lines legislation should take oysters, cockles, and mussels should all receive attention Dr J T C Nash, the medical officer of health of Southend, has clearly traced outbreaks of typhoid fever through sewage polluted cockles from Leigh and bacteriological examination has shown that the momentary immersion of sewage polluted cockles in boiling water does not destroy the materies morbi Dr Fraser remarks that in connexion with prospective legislation there is also the question of imported shell fish to consider, for all attempts to protect our own fisheries would be defeated if no precautions whatever were observed in regard to the shell fish imported from foreign sources

THE SHROUD OF CHRIST

IN THE LANCET of April 26th, 1902, p 1216, we gave a short *résumé* from the pen of our Paris correspondent of the paper read by M Vignon before the Paris Academy of Sciences upon the Holy Shroud of Turin. We also pointed out in an annotation that it was by no means beyond the bounds of probability that a dead body would give off emanations or "vapours" which would affect a linen cloth which had been prepared with aloes and unguents. In a work recently issued[1] M Vignon has expanded his paper and has gone exhaustively into the questions (1) whether the markings on the shroud are painted, (2) whether there do exist substances in or upon a dead body, especially that of a person dying a lingering and painful death, which could affect preparations of aloes, and (3) whether the markings on the shroud correspond to those known to have been inflicted on the body of Christ according to the Scriptures There seems to be little room for doubt that M Vignon has established that the outlines on the shroud are due to the emanation of vapours, and he suggests that these impressions might be called "vaporographic" prints He certainly seems to have proved that the material must have been the shroud of a crucified person, and not only of a crucified person but of one who underwent also scourging and the other accompaniments of death which by both the Scriptures and tradition are ascribed to the Passion of Christ. As to whether or not the Holy Shroud be the actual shroud in which was wrapped the body of the Saviour there is, indeed, no proof, but according to M Vignon's deductions there would seem to be a high degree of probability Aloes, according to his experiments, fulfil the twofold conditions necessary for a substance which could produce such impressions as those found on the Holy Shroud. It remains to determine what vapour the dead body would give off which could affect or discolour aloes in the manner shown on the shroud It is asserted that in order to fulfil these conditions it is only necessary that the body should be covered with pathologic sweat and especially the sweat of fever It is well known that in morbid sweat the increase of urea is quite astonishing and M. Gautier has stated that urea may be produced so abundantly in morbid sweat that it form crystals on the surface of the body Again, the same writ says that viscous sweat strongly charged with urea will b given off by any fever patient in a crisis of pain. Th transformation of urea into carbonate of ammonia provides vapour which would act upon aloes in the way indicated Experimental observations point to these conclusions being correct and M Vignon and his collaborator, M. Colson are convinced that a linen cloth which had been saturated with oil and aloes would, after a lapse of years o rather centuries, look like an ordinary cloth except i those parts where it had been subjected to the action o ammoniacal vapours In these parts it would be covered with blotches varying in intensity, more or less shaded a the edges, of the colour of rust or rather resembling blood stains, giving just, in fact, the aspect of the impressions presented by the Holy Shroud of Turin The phenomenon therefore, if thus accurately described, is analogous in some respects to the effects of the emanation of vapour from metals on the sensitised plate and attributed by Dr W J Russell, F R.S, to the formation of peroxide of hydrogen. Accordingly, the phenomenon of radio activity would appear to have played no part in the production of the impression o the Holy Shroud. Whether M Vignon is right or wrong h certainly has pursued an exceedingly interesting line o research which has yielded very remarkable results, while his deductions are decidedly ingenious

THE EPIDEMIC OF DENGUE FEVER IN CANTON, CHINA

DR W J W ANDERSON of the Wesleyan Mission at Canton writes to us under date Nov 24th, 1902, as follows —"The year 1902 has been an exceptional one in and around Canton. In the early months of the year there was prolonged drought followed by a severe outbreak of cholera. Then the rain fell and plague raged like a fire amongst the people. In Fatshan (near Canton), a city as large as Leeds it was no uncommon thing to find two or three in the family having died from the dread disease In June, July, and August another epidemic swept over the delta and I am not far wrong in estimating that dengue temporarily claimed 95 per cent. of the population as its victims, foreign and Chinese alike. Extensive opportunities for observation of the disease amongst all classes have convinced me that it affects all alike —rich and poor, foreign or native True, there are some differences, as the fair skin of a foreigner allows of the rash being much more pronounced, while the thick tough skin of the native does not seem to lend itself to the development of a good rash and the yellow pigment of the skin obscures its redness somewhat But for severity of pains, height of fever and general malaise, all have suffered alike The disease is practically never fatal I have heard of one old man who seems to have succumbed to the disease. Nevertheless it is a distressing condition because of the pains they are so severe, continued, and crippling. In this epidemic the ankles and wrist-joints have been specially affected and pains have been felt even after the elapse of eight or ten weeks Any immunity that is conferred is probably of short duration only, as second, and even third, attacks have come under my notice. As to the cause, it is probably a germ The disease is certainly intensely infectious and is transmitted from man to man and conveyed in fomites. It does not appear to be carried any great distances by the air or to be affected by dry or wet atmospheric conditions, so long as it is hot This is essential. I am inclined to believe that the germ can live a long time in unsterilised things like blankets, bedding, clothes, &c., at the same time it is exceedingly easy to kill. My own experiences afford an excellent illustration, for I returned with my wife from Japan in splendid health after a holiday died 72 hours after the operation. Dr Lund thinks that the rupture of the intestine was from within and the result of a sort of *contre-coup* In cases of abdominal injury perforation may occur from within the fluid contents of a loop of gut confined for the time in a narrow space are by the impact thrown into a state of tension and are forced through the intestine Several cases are recorded of perforation from falls on the back. In all of these the perforation was at the beginning of the duodenum, where the gut is held down by a fold of peritoneum and has but little mobility

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[1] The Shroud of Christ: Translated from the French of Paul Vignon D Sc. (Fr) Westminster: Archibald Constable and Co 1902. Pp 170 Price 12s 6d net

THE MEDICAL MAN, THE CORONER, AND THE PATHOLOGIST

IN the *St James's Gazette* of Jan 10th there appeared a paragraph, headed Coroner Troutbeck Replies to his Critics,' which reported a speech made by Mr Troutbeck t an inquest held in Wandsworth on the previous day As ar as we were compelled to criticise Mr Troutbeck his eported words contain no reply whatever According to the t *James s Gazette* he said that—

> He had recently been carrying out a policy of considerable moment o the public. A long time since the London County Council came o the conclusion that many of the post-mortem examinations made ere a waste of money because they were not properly carried ut, and without obtaining legislation on the subject the Council ad done what they conceived to be their duty to the public by nabling coroners to engage the services of a skilled pathologist. t was perfectly clear that a great many medical men in the neighbour ood thought that the law was made for the good of medical practi ioners and not for the good of the country but that was a position hat he (the coroner) would not *for one moment* recognise. It had lways been held in this country that interests of any particular class ere all very well so long as they did not clash with the com nunity as a whole the moment they did that class must give way He was bound to carry out his duty without fear favour or affection nd to the best of his skill and knowledge. If it was true as had ppeared in print that his policy as it affected local medical men was n attack on the liberty of the people," it was time they changed it For his own part he believed a coroner possessed the discretion of alling what medical evidence he chose, and he was bound to exercise hat discretion for the good of the inhabitants and the country That was the policy he meant to adopt and he did not mean to change from his purpose on account of any suggestion that Battersea money should be spent on Battersea doctors" and so on such assertions would not influence him in the slightest degree. The only thing that could influence him was what was the best evidence to put before the jury to get the best results.

Mr Troutbeck's words, as recorded above leave every issue unanswered that has ever been raised by thoughtful unbiased persons No one doubts that the services of a skilled pathologist—we are not referring to Dr Ludwig Freyberger of whose scientific merits we have not expressed, and do not express, any opinion—may be of value in special cases. It is probable that the expert ought to be called for by the jury and not by the coroner but, passing the point over, why are so many inquests in Mr Troutbeck s district attended with peculiar circumstances? No sensible person has ever raised the cry of ' Battersea money for Battersea doctors" or thinks that the law is made for the good of the general practitioner, the skilled pathologist, or the coroner. Reasonable critics of Mr Troutbeck's position say that if he neglects to call as a witness at an inquest the medical man who has attended the case he does not do his duty to the community He does not obtain his verdicts upon the best evidence and his procedure may result in some awful miscarriage of justice. We congratulate Mr Troutbeck on the unwavering courage and cold impartiality with which (he is made to say) his actions are inspired, but we would point out that he appears simply to be carrying into effect the orders of the London County Council, in accordance with a promise made before he accepted his recent appointment. When if ever, Mr Troutbeck seriously replies to his critics he will have to prove the legality of his actions He will have to show that the County Council has the power to enter into an agreement with him whereby he should act contrary to the law of the land. It will not be sufficient and it will not be straightforward, to suggest that there is nothing behind the agitation against his conduct save a greediness on the part of "Battersea doctors for Battersea money" This is an unworthy innuendo on the part of a professional man against a group of professional men, and we trust that Mr Troutbeck will state publicly that he has been misreported.

THE TRANSMISSION OF SMALL CHARITABLE CONTRIBUTIONS

MR J BERNARD LAMB, the secretary of the Royal Medical Benevolent College, has sent us a letter in which he suggests a scheme for the transmission of small contributions to the larger hospitals and charities in London. Mr Lamb s scheme is as follows (1) a department of the Charity Commission is to be authorised to receive contributions and the moneys received, less a percentage for poundage and postage are to be handed to the charities for which the subscriptions are sent once or twice a year, and (2) the issue of post-card cheques of values ranging from 6*d* to £1 1*s*. payable only to the Charity Commission. The scheme seems to be practicable though it may require modification. As the writer of the letter points out, a feeling certainly does exist among some people that small amounts are not worth contributing towards the funds of a charity Moreover, when adverse circumstances compel subscribers to curtail their list of contributions they invariably cease to subscribe altogether Facilities for remitting small contributions are not numerous and a scheme like Mr Lamb s ought, if carried out, to have the effect of adding considerably to the income of the various charitable institutions.

FACIAL PARALYSIS IN SECONDARY SYPHILIS

ONLY a limited number of cases of facial paralysis in secondary syphilis has been recorded. Several explanations of the paralysis have been given. The usual one is pressure on the facial nerve *from inflammation* within the Fallopian canal, but pressure at its origin from the medulla produced by a patch of meningitis and pressure after its exit from the canal produced by lymphatic glands have also been invoked. Finally syphilitic infection possibly produces neuritis of the facial nerve, as it does of *other nerves* So far the explanations are only hypothetical, in no case has the opportunity of making a necropsy arisen. At the meeting of the Société Médicale des Hôpitaux of Paris on Nov 21st, 1902, M Georges Thibierge and M. Paul Ravaut related a case of facial paralysis in secondary syphilis which derived additional value from the fact that the cerebro-spinal fluid was examined—for the first time in this condition. On Nov 18th a girl, aged 19 years, went to hospital with mucous patches on the vulva which had existed since the middle of August. She had a pigmentary *syphilide* on the neck, enlarged cervical and inguinal glands, and mucous patches on the lips and *tonsils* On Nov 17th she complained that since the previous day she had had some difficulty of speech and mastication, with lacrymation of the right eye There was right facial paralysis, the furrows on the right side of the face were effaced and the eye could be shut only slowly and incompletely Hearing was not affected. On the 19th the paralysis was a little increased and lumbar puncture was performed. The fluid obtained showed abundant leucocytes and a few polynuclear and mononuclear cells. The importance of this result is rendered greater by the fact that examination of the cerebro-spinal fluid of five women in the secondary stage of syphilis revealed no such marked meningeal reaction. In three of them who complained of headache the fluid contained no cells, in the two others, of whom one had slight iritis and the other paralysis of the third cranial nerves, the fluid showed only slight lymphocytosis. Lymphocytosis of the cerebro-spinal fluid has the value of an anatomical *fact* and shows the existence of a meningeal reaction. In the case described above it points to a meningeal lesion as the cause combined boric acid in milk or other foods by first drying and burning the residue to an ash. It is well to add a little caustic baryta solution before evaporation and incineration as otherwise small quantities of boric acid might be lost. The ash is treated with a few drops of dilute hydrochloric acid, then with a saturated solution of oxalic acid, and, finally, with an alcoholic solution of curcumin or turmeric, and the mixture is dried on the water bath and the residue is taken up with a little spirit. The spirit will be coloured a more or less intense magenta red if boric acid is present Mr Cassal and Mr Gerrans state that they have been able to employ this test for the determination of the actual amount of boric acid present. If their observations are confirmed this method should be of obvious service

THE CONTAGIOUSNESS OF CANCER

IN a leading article in THE LANCET of Dec. 6th, 1902, p 1558 we reviewed the reasons for thinking that, in spite of the fact of our ignorance of the real etiology of cancer, we were justified in looking upon it as contagious and in taking all those precautions to prevent its spread which that theory of its origin would suggest. Dr A. T Brand of Driffield has drawn our attention to the address which he delivered last May on the occasion of his installation as President of the East Yorks and North Lincoln branch of the British Medical Association. In this address Dr Brand maintains the contagiousness of cancer and supports his contention with many of the arguments which we advanced in the leading article referred to, and he quotes an instance of apparent contagion occurring within his own knowledge It is in the suggestions for prophylaxis that Dr Brand's address is especially interesting In addition to most of the precautions which we advocated, such as destruction of the dejecta and dressings, he mentions "notification." This might prove to be a valuable measure as it would enable precautions to be taken against the spread of the malady and would give us more accurate information as to the localities where the disease arises than can be obtained from statistics as to the places of death from cancer

SCOTTISH POOR-LAW MEDICAL OFFICERS' ASSOCIATION

THE report of this association for the year 1902 states that during that period the committee was occupied with a number of important questions The secretary (Mr W L. Muir, 1, Seton terrace, Glasgow) was summoned before the Committee of the Privy Council which has for some time been considering the subject of the sale of poisons His evidence on that occasion was to the effect that in the Highlands, islands, and country districts where there were no druggists it was necessary for medical men to supply the public with all drugs required, poisonous or otherwise, and it was a serious hardship for a medical man to be found guilty of "infamous conduct" by the General Medical Council because in his absence someone in his surgery had supplied a scheduled poison to a member of the public The secretary was also summoned before the Scottish Local Government Board as a witness in its inquiry as to the medical relief of the poor The general character of his evidence was that it was absolutely essential that the Poor law medical officer should have a more secure tenure of office than at present, with an appeal to the Local Government Board against unjust treatment, that he should have the power of ordering invalid diet, stimulants, and the like, without the same being vetoed by the inspector of poor (an official corresponding to the clerk to a board of guardians in England), and that for all fractures, midwifery, and other exceptional cases there should be extra fees The Bill for the amendment of the Local Government (Scotland) Act, promoted by the association, was persistently blocked by one of the Scottish Members of Parliament and did not reach the second reading The Lord Advocate's Bill to amend the Local Government Act likewise never reached a second reading, having been blocked by the same Member Both Bills will, however, be introduced again next session.

THE DISTRIBUTION OF PLAGUE

AS regards the Mauritius a telegram from the Governor to the Earl of Onslow, acting for the Secretary of State for the Colonies, received at the Colonial Office on Jan. 6th, states that for the week ending Jan 1st there were 9 cases of bubonic plague and 5 deaths from the disease.

THE TREATMENT OF ABDOMINAL CONTUSION WHEN RUPTURE OF THE INTESTINE IS POSSIBLE

WE have recently called attention to the difficulty and even impossibility of diagnosing rupture of the intestine in cases of abdominal injury The great importance of early operation has led American surgeons to advocate the performance of laparotomy within a few hours of the injury in all serious cases of abdominal contusion [1] In the *Boston Medical and Surgical Journal* of Nov 27th, 1902, Dr F B. Lund relates six cases of early laparotomy in rupture of the intestine with four recoveries—eloquent testimony of the value of this treatment He points out that beyond the fourth or fifth hour after injury every hour adds to the danger, and that the surgeon cannot afford to wait for certain signs of perforation In his successful cases the interval between the injury and the operation was three, five, nine, and 16 hours respectively, in his unsuccessful cases 18 and 24 hours respectively One case presented the remarkable feature that apparently there was no contusion of the abdominal wall but that there was of the back. The patient was a man, aged 40 years, who was taken to hospital six hours after he was struck in the back, below the left shoulder blade, by the shaft of a wagon and knocked down He felt faint for a time. Severe abdominal pain, chiefly above the umbilicus, followed. He soon got up and was able to walk three quarters of a mile A cup of tea which he drank brought on vomiting and the pain increased. On admission the pulse was 92, thready, and of low tension, the temperature was subnormal, the lips were pale and the face was ashen The abdominal wall showed no evidence of injury The abdomen was distended and everywhere was rigid and tender There was no dulness, even in the flanks. On the back, over the left tenth rib, about three inches from the middle line, was a red contused area. Immediate operation was advised but declined. A high enema brought away but little fæces. A quarter of a grain of morphine injected subcutaneously gave only slight relief He grew steadily worse and 18 hours after the injury consented to operation. On opening the abdomen much dark brown fluid, evidently bile-stained, and flakes of fibrin and particles of food escaped The peritoneum of the small intestine was congested and covered with fibrinous exudation. A perforation which easily admitted the forefinger was found in the jejunum opposite the mesenteric attachment, extending downwards from it in the long axis of the bowel was a peritoneal tear one and a half inches long Owing to its position and to abdominal rigidity the perforation was sutured with difficulty The patient recovered well from the operation, the pain ceased, and the pulse improved, but on the second day after the injury severe diarrhœa began. It was controlled by opium and he improved On the third day he again became worse and he country, but Dr Bleyer's observations would suggest a further trial in combination with the open air treatment

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[1] THE LANCET Jan 25th, 1902, p 247

THE RISKS OF SHAVING

THE use of soap lather prior to shaving the beard is regarded merely as a means of facilitating the troublesome operation. Soap is said to extract the oily matters from the hair and thus to render it brittle so that the blade of the razor saws through it easily, for after all shaving is a delicate sawing process. With sensitive skins of course a soap of good quality and preferably free from alkaline excess is desirable On the other hand, it might be thought that an excess of alkali would prepare the beard more readily than a pure soap or superfatted soap The corrosive effect of alkali, however, leaves no doubt as to which description of soap should be used. Soap probably plays a more important rôle than that of a saponifier of the natural oil of the hair In spite of the fact that those who use the razor frequently cut themselves yet it is rarely that anything more serious than a cut follows the slight wound generally healing quickly, and the risk of septicæmia arising in this way would seem to be almost *nil*. In the majority of cases therefore it is clear that the razor blade must be bacteriologically clean—i.e., free from septic matter—which may be attributed to the fact that probably it is dipped into hot or sterilised water before use or else that the soap lather is antiseptic. The latter explanation seems the more probable of the two. The amount of soap rubbed on the skin is considerable if the shaving is to be in any degree comfortable, and soap has considerable antiseptic power, a 6 per cent. solution being sufficient to destroy the typhoid bacillus. There can be little doubt, therefore, that the skin is rendered sterile by the liberal application of soap, and this fact is in favour of any cut that may be made remaining healthy and without any serious consequence. In a word, soap in the operation of shaving not only facilitates the process but plays the same valuable rôle when the shaver is unlucky enough to cut himself as does the antiseptic in surgery

A HOSPITAL FOR THE INSANE IN SYRIA

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THE RISKS OF SHAVING

THE use of soap lather prior to shaving the beard is regarded merely as a means of facilitating the troublesome operation. Soap is said to extract the oily matters from the hair and thus to render it brittle so that the blade of the razor saws through it easily, for after all shaving is a delicate sawing process. With sensitive skins of course a soap of good quality and preferably free from alkaline excess is desirable On the other hand, it might be thought that an excess of alkali would prepare the beard more readily than a pure soap or superfatted soap The corrosive effect of alkali, however, leaves no doubt as to which description of soap should be used. Soap probably plays a more important rôle than that of a saponifier of the natural oil of the hair In spite of the fact that those who use the razor frequently cut themselves yet it is rarely that anything more serious than a cut follows the slight wound generally healing quickly, and the risk of septicæmia arising in this way would seem to be almost nil. In the majority of cases therefore it is clear that the razor blade must be bacteriologically clean—i.e., free from septic matter—which may be attributed to the fact that probably it is dipped into hot or sterilised water before use or else that the soap lather is antiseptic. The latter explanation seems the more probable of the two. The amount of soap rubbed on the skin is considerable if the shaving is to be in any degree comfortable, and soap has considerable antiseptic power, a 6 per cent. solution being sufficient to destroy the typhoid bacillus. There can be little doubt, therefore, that the skin is rendered sterile by the liberal application of soap, and this fact is in favour of any cut that may be made remaining healthy and without any serious consequence. In a word, soap in the operation of shaving not only facilitates the process but plays the same valuable rôle when the shaver is unlucky enough to cut himself as does the antiseptic in surgery

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THE annual meeting of the Neurological Society of London ill be held at 11, Chandos-street, W, on Thursday, an 22nd, at 8.30 P M. The Presidential Address will be iven by Dr J N Langley, M.A., D Sc., F R.S, on the utonomic Nervous System

PROPHYLAXIS

N ADDRESS DELIVERED BY PROFESSOR NOTHNAGEL OF VIENNA AT THE MEDICAL CONGRESS IN CAIRO ON DEC 24TH, 1902.

(*Specially translated for* THE LANCET)

'THE most valuable asset is man." These true and high-minded words were uttered by one of the most enlightened of princes, our deeply mourned Crown Prince Rudolf of Austria. It surely finds an echo in the noble heart of the protector of this congress who is swayed by the same enthusiasm for the human race. It shows the most beautiful sympathy with mankind, and who so loves his fellow man and seeks the good of the State must strive earnestly after the fulfilment of the high ideal put before him in this great saying, both in his profession and in his sphere of influence.

For us medical men this duty becomes a challenge. Medical science must eventually make therapeutics unnecessary, which, though it sounds paradoxical, I feel in my innermost soul to be its true and final mission To put it from the first plainly before you, understand this not therapeutics but prophylaxis, not the healing but the prevention of disease must be the mission of medical men. The following briefly outlined examples will serve as proofs of the truth—nay, of the necessity—of this maxim.

Until quite recently all the efforts of medical knowledge were devoted to the cure of man already diseased. Medical knowledge existed and exists to cure. In former days there was supposed to be one or more definite remedy for each illness and symptom but we have long put away such childish beliefs. It was recognised that the physician must in each case of sickness draw up certain indications for treatment in order to carry out his therapeutics according to definite scientific formulæ. There are three headings of such indications for treatment (1) the *indicatio causalis*, (2) the *indicatio morbi* and (3) the *indicatio symptomatica*—that is, the indication of the cause of the illness and its symptoms. Very rarely are we able to satisfy ourselves as to the *indicatio causalis* chiefly because in only a limited number of diseases is the real cause known. For instance, it has long been acknowledged that the much accused "chill" only prepares the way for the scene of action of the real cause, but does not in itself cause disease. We hardly possess the early beginnings of a dawning knowledge of the etiology of a long list of diseases resulting in the process of metabolism. It is true that, thanks to the wonderful development of bacteriology in the last ten years, we have to a certain extent mastered this knowledge in the case of the large group of acute and chronic bacterial infectious diseases, but, unfortunately, this is but one group in the mass of pathological conditions And in these, as in other cases where the cause is the introduction of a known chemical poison (alcohol mercury, &c.) so for all other pathological conditions we must, respecting the *indicatio causalis* be perfectly clear about one point, which marks the direction in which we must act. At the moment when the medical man sees the patient the pathogenic causes have already produced effects representing the symptoms of disease, which are, of course the signs of irregularity in the normal course of life which prove the existence of illness. But these *functional* reactions of the organism are invariably accompanied by more or less evident organic changes, visible to the naked eye or with the microscope. And treatment cannot, under these conditions, be limited to the eradication of results it must also undertake the further task of curing these diseased organic conditions.

But how about the fulfilment of the second indication for treatment, the *indicatio morbi?* Verily, the deeper we search and the more we discover the marvellous ways in which nature overcomes disease, the more deeply we feel convinced that it can be only in exceptional cases possible for us to overcome pathological conditions by actual cures, that is, by our direct interference. I can cure a case of malaria with quinine, syphilis with mercury and iodides, with the latter also certain affections of the glands, besides certain nerve and skin affections with arsenic, anæmia with iron and diphtheria with the special serum. And thus a limited number of cases could be cited where the medical man really becomes the *master of nature*, but what an infinitely small number compared to the innumerable pathological conditions that exist. The utmost we can do in most cases is to remove what is preventing the work of restoration by nature, or to assist to our uttermost the energy displayed by her One of the greatest strides made by therapeutics in the last century is that the recognition of this fact has become more universal.

We admire the wonders of aseptics, but do not let us deceive ourselves, be the operation ever so daring and brilliant the surgeon has not the power of healing, he can but prepare the way for the readjustment of normal conditions attempted by nature. The words of Ambroise Paré are as true to-day as they were 350 years ago "Je le panse, Dieu le guérit" Even in the case of the most simple operation union by first intention is only brought about by the cells of the severed tissues, not by the mechanical sutures. A catarrh cannot be cured by any local or general treatment, but by the action of the cells of the blood and the lymph stream. The serious functional and anatomical disturbances displayed in cases of typhoid fever, small pox, scarlet fever &c., can up to now only be overcome by the means of defence set up by the organism itself. How our views have in many respects changed. We no longer regard the symptoms of inflammation or of fever as an evil that must be destroyed. We now recognise that these symptoms are in themselves some of the means of defence employed by nature and that only when they appear in excessive degree do they need direct treatment. Look at the marvellous adjustment and adaptation by nature which renders harmless the serious changes occurring in many chronic diseases A defect of the heart can be so influenced by hypertrophy that though it would otherwise inevitably have fatal results yet it may cause no important disturbance for many years. The loss of one kidney can functionally be made good by the increase in size of the other A threatened obstruction of the intestine above a narrowing of the bowel is prevented by rapid muscular development of the walls of the intestine, a change that is often completed within the space of a week. When a blood vessel is diseased collateral circulation carries on the work, one nerve tract will act for another which has been cut And thus hundreds of examples could be brought forward in which the organism undertakes the adjustment of diseased conditions and does its work almost to perfection It is the natural adaptation which takes place unaided in pursuance of the biological laws of the organism which has the power, if not to cure, yet to protect to some extent from further injury But what if the diseased part is not accessible to these influences, in consequence of its peculiar nature and intensity, or because of certain anatomical conditions? What can art do then? The answer is depressing in the extreme, we can then only depend upon symptomatic treatment There is no doubt but that this also serves a great purpose in lessening pain, in bringing peace and comfort Never will medical art be able to dispense with symptomatic therapeutics so long as disease exists.

Digitalis and antipyrin diuretin and atropine, and a long list of other substances, above all others opium and morphia, are invaluable possessions in the treasury of medicine for the accomplishment of symptomatic treatment There can be no doubt of the immense benefit they can be to a sufferer when they are properly employed They may even accomplish so much that the patient may dream that they have effected his cure For so long as he is free from suffering in his anatomically changed organs he cares not whether his heart be big or small his life smooth or troubled And when hydrotherapy succeeds in the case of a tuberculous patient suffering from fever, or one of typhoid fever or pneumonia in improving the temperature and circulation, or in nerve cases and subjective conditions, it may be considered indispensable And so countless examples might be given to prove the value of symptomatic therapeutics But in the end we come to this—they cannot cure because many in accord He also gave a good character to the available supplies of lymph The various arguments adduced by the well informed speakers, as well as Mr Long s statesmanlike reply, will call for further report and notice from us

CASSIA BEAREANA AND THE MALARIAL PARASITE.

IN THE LANCET of Feb 1st, 1902, p 282, we published a communication from Dr D R. O'Sullivan Beare upon a native remedy which he had used with great success in blackwater fever and in cases of remittent fever The remedy in question was a species of cassia which has been named "cassia Beareana." Messrs Thomas Christy and Co, to whom Dr O'Sullivan Beare sent a supply of the root and who prepared a fluid extract thereof, now send us two communications on the matter One is from a lady who had to leave Ceylon on account of malaria and who came home by the advice of the Government medical man at Newasa, Eliya. She had seen an account of the remedy in the *Ceylon Observer* and at once applied for some of the fluid extract which she took without apparently any medical advice. But she improved so much after taking it that she has determined to go back to Ceylon The other communication is from Dr C C Beling of the New Jersey State Hospital, Morris Plains, N J, U S A, who wrote to Messrs Christy and Co as follows —

> DEAR SIRS —In reply to my request of Feb 11th 1902 you sent me a 4-oz bottle of cassia Beareana. I tried the drug on some cases of malarial fever with gratifying results I have tried to procure more of the drug in New York through the State Hospital but it was not on sale in the New York market
>
> You will probably have already heard from Messrs Schieffolin and Co with regard to the cassia
>
> I am desirous of obtaining some more of the fluid extract and I shall therefore be very much obliged to you for a further sample or for information regarding its purchase in New York
>
> The following is a short description of the results —
>
> Case 1 —H C aged 17 male Chills and pyrexia. April 10th 1902. Blood examination: Plasmodium malariæ, tertian parasite intracellular pigment. No quinine, administered cassia Beareana ʒvi 30 drops in water ev two hours no more chills no plasmodium on subsequent blood examination
>
> Cassia seemed to check nausea and vomiting
>
> Case 2.—J C aged 10 History of malarial fever in summer 1901 had first chill with severe headache and prostration on May 16th 1902. Blood examination: Pigmented crescentic forms and ring shaped bodies in all stages of development. No quinine cassia Beareana 15 drops ev 2 hours Has been doing well Did not return for further treatment. No second blood examination
>
> Case 3 —John C aged 40 m First attack May 16th 1902 Took quinine sulph gr viii on Friday May 16th had subsequent attack Cassia B ev 2 hours Took ʒi or a little more altogether No subsequent attacks
>
> Bl exam: May 16th 1902 Tertian parasite
> May 21st 1902 No organism
>
> From the meagre experience with the drug it is not legitimate for me to say that cassia B is a specific for all cases of malarial fever but it would seem that it has a special action on the organism and as far as my knowledge goes is not accompanied by any unpleasant symptoms

Although we cannot approve of the action of the lady from Ceylon in taking a new drug without medical assent, yet it would appear from the two communications which we have quoted that cassia Beareana is likely to prove of use in the treatment of more forms of malaria than one.

THE UNIVERSAL EXPOSITION OF ST LOUIS, 1904

THE Universal Exposition which will be held at St. Louis in 1904 will commemorate the acquisition by the United States in 1803 of the great territory then known as Louisiana but which now comprises the state of Louisiana and 11 other States The area of the territory is 1,000,000 square miles and Napoleon sold it to the United States not from any love of America but because he was engaged with various wars in Europe, and notably with England. The intent of the exhibition is, in the words of the official circular, "to form a roll of honour of man and the works of man in his industries and crafts." The Exposition will cover some 1200 acres and no charge will be made for space to exhibitors Cranes and hoists for handling heavy exhibits will also be provided free of charge and in addition all power necessary for the showing of machinery exhibits or for demonstrating processes will be supplied free. All exhibits from foreign countries will be admitted free and no exhibitor from a foreign country is to be held liable for the infringement of any United States trade-mark or patent "where the complaint is based upon the exhibition of any article or thing at the Exposition ' Among the various departments are those of education, social economy, art, the liberal arts, including the medical profession in some of its forms, manufactures, transport, agriculture, and anthropology Under the heading of agriculture are included preserved foods, wines, spirits, and fabrics It is intended that the juries for deciding on the excellence or otherwise of the exhibits shall be international. We earnestly hope that one section or portion of a section will be devoted to adulteration, substitution, or what are euphemistically called "trade terms ' For instance, what is called brandy is often made from beet or rice, Mocha coffee, although real coffee, comes from Jamaica, silk which *is in great part cotton, and so on We are only too* well aware that this sort of fraud is systematically practised in our own country and we have every reason to suspect that the same thing happens in other countries. Our contention is that any substance which is sold under one name but which contains a large proportion of another substance should be sold, not simply as a mixture, but should be labeled with a ticket showing the exact quantity of the different substances Take, for example, coffee, instead of saying, "This is sold as a mixture of chicory and coffee" the label should run, "This is a mixture of three parts of chicory"—or whatever the proportion may be—"to one part of coffee." An exhibition in which the various fraudulent processes were set out would do an enormous amount towards enabling the people either to get pure substances or at least to know what they are buying

COMPLAINTS have recently been made that some of the metropolitan water companies have raised their water rates and the suggestion has been made that this has been done in order that a larger sum may be given for compensation when the companies' undertakings are sold The *Times* of Jan. 9th contains the summary of a complaint by a gentleman who is supplied by the Southwark and Vauxhall Company It is not to our purpose to go into the merits of this or any other particular case, but it may possibly be of use for us again to point out that the Metropolis Water Act, 1897 provides facilities for the investigation of any cause of complaint not only in regard to the quantity or quality of the water supplied but also of the charges imposed by the companies (See report of THE LANCET Special Commission on the Metropolitan Water Supply, The Question of Control, THE LANCET, July 21st, 1900, pp 181–197)

The King has granted to Dr Percy Athelstan Nightingale His Majesty's Royal licence and authority to wear the Insignia of the Fourth Class of the Royal Siamese Order of the White Elephant, conferred upon him by His Majesty the King of Siam in recognition of valuable services rendered to the Government of Siam when acting as Siamese delegate to the International Medical Conference at Brussels

A dinner of the past and present students of the University of Durham College of Medicine will be held on Friday, Jan. 30th, at 7 P M, in the County Hotel Newcastle-upon Tyne when the chair will be occupied by Professor R Howden. Tickets, 7*s* 6*d* each, may be had nel Stevenson s transference to the Medical Staff College ondon would not entail a loss to the successful candi- s for the Indian Medical Service, for he would instruct the junior and senior classes at the college, so that valuable teaching and the influence he had so long and eficially exercised at Netley would still be exercised the good of both services. They were also very fortunate having Colonel Macleod as professor at Netley, he was o er of strength to the school to which he gave the eht ot his great teaching ability and long experience. y might also expect assistance for the teaching staff here, hat they had much to be thankful for and especially that Advisory Board for the Army Medical Services had lertaken the supervision of the course of instruction ried out at Netley and they might now hope that the ool would remain available for lieutenants of the Indian dical Service until a similar course could be provided else- ere. Many present could bear testimony to the great ue of the laboratory course which they had undergone in giene and pathology at the Staff College in London under direction of the Advisory Board as an important part of War Office reorganisation scheme. Those interested in the lian Medical Service considered it to be essential that the n who proceeded from Netley straight to service in India ould have the benefit of clinical instruction under skilled idance in the great hospital at Netley directly after the oratory course—whilst methods and processes were fresh the mind—for greater facilities and more clinical material tropical diseases were available there than elsewhere in United Kingdom Professor Macleod had kindly read a st gratifying report on the work of the class during the urse now closed and he heartily congratulated both the ofessors and the class on that report. Gentlemen (he ncluded) you will soon be called on to put to full e the valuable knowledge you have acquired during your rriculum and we shall watch your careers with much terest You have gained entrance to a grand service with eat traditions and made famous by many celebrated mes. I commend to your perusal a most interesting count by Surgeon General W B. Beatson, of "The Indian edical Service, Past and Present," first published in the *siatic Quarterly Review* for October last. In his paper rgeon General Beatson gives a history of the service, as r as it can be ascertained from the records which he arched, from its origin in the latter part of the sixteenth ntury, and he mentions most of the eminent men who ave contributed, up to a comparatively recent date to the me and renown of our grand service. Surgeon-General eatson concludes with the following well-deserved ibute —

> Since 1800 the Indian Medical Service has been completely re- ganised, and in many respects improved. Study of its past history veals how closely it has been associated with the foundation of the ritish Empire in India how great has been its influence in support g and developing it in harmonising differences and in reconciling to ritish rule the multitude of races and tribes which constitute the eople of India. It tells how much has been done by Indian medical ficers to increase our knowledge of Indian products and the evelopment of industries arising out of them how it has originated nd developed great departments of the public service.
>
> Indian medical officers have been largely concerned in bringing to erfection the post and telegraph systems the forest department. the anagement of gaols the system of State sanitation, and have held edical charge—executive and administrative of the military and ivil stations of India. They have helped to introduce the study of nglish literature and science into the scheme of native education in ndia.
>
> They originated the system of medical education which is now arried on in the Presidency towns and numerous other centres By eans of Indian officers a system of medical education has been stablished and has resulted in the formation of a class of well- ducated native medical practitioners and subordinate warrant medical fficers who administer the hospitals and dispensaries provided verywhere by a benevolent Government for the relief of the sick nd suffering

Surgeon-General Townsend thanked Sir William Hooper for coming to Netley to distribute the prizes and for his dmirable address, he said that he had that morning eceived a letter from Sir Joseph Fayrer which he should ike to read —

> Dear Surgeon-General Townsend —Pray accept my warm thanks or the kind invitation you have just sent me to attend the istribution of prizes at Netley on the 10th inst., and also my regret hat I am unable to avail myself of it
>
> For many years I have been a deeply interested attendant of these eetings and I rejoice to know that they are to continue. Having ong known what valuable services the Army Medical School has endered to my old and much loved service I am anxious to express to he candidates my warm gratification that the old meetings are to be ontinued and my earnest hope that the school will long continue to urnish able and competent officers as hitherto
>
> I regret my absence, necessitated by the state of my health which does not admit of my taking a long journey in winter the more that it deprives me of an opportunity of expressing as one of the oldest members of the Indian Medical Service, my congratulations to Sir William Hooper on the honour which has recently been bestowed on him, which is but a fitting acknowledgment of his services to the State, both in India and at home, as well as of his consistent and strenuous advocacy of the claims of the service which he adorns and which owes him so much for all he has done for it.
>
> Will you also convey my heartiest congratulations to the successful candidates and say how much I regret being absent on this interesting occasion, and offer them my best wishes for success in the noble service which they are now entering?
>
> Yours sincerely
> J Fayrer.

Surgeon General Townsend brought the proceedings to a conclusion by wishing the young officers God speed and every success in India. The company was subsequently entertained at luncheon by the officers of the Royal Army Medical Corps.

ASYLUM REPORTS

Gartloch Asylum, Glasgow (*Report for the year ended May 15th, 1902*) —The average number of patients resident during the year was 557 comprising 290 males and 277 females The admissions during the year amounted to 262—viz., 136 males and 126 females. Of these 174 were first admissions Dr W A Parker, the medical superintendent, states in his report that the most prolific immediate causes of insanity during the year were alcohol and syphilis. In 99 out of 262 admissions, or 37 per cent., there was a history of alcoholism and in 89 out of the 99 alcohol seemed to be the prime factor in the causation of the insanity The number of patients discharged as recovered during the year amounted to 107, comprising 60 males and 47 females or 18 9 per cent. of the average number resident. The deaths during the year were 52, or 9 2 per cent. as calculated on the same basis. Of the deaths three were due to renal disease, six each to senile decay and cerebral hæmorrhage, 10 to pulmonary and other forms of tuberculosis, 15 to general paralysis of the insane, and the rest to other causes A sanatorium for the isolation and treatment of consumptive patients was opened in the autumn of 1902. Four cases of serious fracture of bones occurred during the year, one of these being the fracture of a femur sustained by a patient in an attempt at suicide by jumping through a window For a short interval during the year the asylum had to be closed to visitors owing to the prevalence of small pox in Glasgow, but happily the precautions taken sufficed to keep the disease at bay The Commissioners in Lunacy state in their report that the asylum was found to be in excellent order, that the condition of the patients as a whole produced a favourable impression, and that the medical case-books and registers were carefully and well kept. The committee of management states in its report that plans for the enlargement of the asylum which had been accepted a year ago had been departed from in the meantime. Arrangements for increasing the lavatory accommodation in the official block of the asylum and at the mortuary have been made, and the drainage of the moss-land which forms part of the estate near the loch has been almost completed.

London County Asylum Colney Hatch (*Report for the year ended March 31st 1902*).—The average number of patients resident during the year was 2505, comprising 914 males and 1591 females. The admissions during the year amounted to 473—viz. 145 males and 328 females. Of these, 389 were first admissions. Dr W J Seward, the medical superintendent, states in his report that the admissions included 26 cases of epilepsy and 44 of general paralysis and that 25 per cent. of the patients admitted were stated to have shown a suicidal tendency before admission. With regard to the probable causes of insanity, hereditary tendencies were ascertained to exist in 25 per cent of the cases and in 5 per cent. there was congenital defect, 28 per cent. had been under treatment for previous attacks and 13 per cent were known to be of intemperate habits

The number of Jewish patients admitted during the year was 71, the great majority of whom were Russian Poles and at the present time there are 244 Jewish patients in the asylum.' The number of patients discharged as recovered during the year amounted to 194, comprising 41 males and 153 females, or 7 7 per cent. of the average number resident The deaths during the year amounted to 206—viz., 76 males and 130 females, or 8 2 per of these conditions are incurable If now we consider the general effect of the treatment of causes of illness which have already brought forth reactive symptoms of the body we shall see that in most cases the effects are illusory and only in very isolated cases effective On the other hand, in these latter cases the effect, as in malaria or acute polyarthritic rheumatism, is distinctly brilliant. The removal of established lesions must be left to the self defence of the organism itself both in acute and in chronic conditions. If this is not possible ease can only be procured by systematic treatment. When a condition of atrophia granularis renis cum hypertrophiâ cordis exists neither art nor knowledge will ever be able to enlarge the shrunken kidneys or to shrink the enlarged heart. An emphysematous lung can never be made to resume its normal condition, in the case of multiple insular sclerosis of the brain and spinal cord the sclerosed nerve can never be converted back into normal tissue. In many cases of organic disorders, established by an acute process, a better prospect of relief has been opened up by the serum treatment. But here also there must remain a large number of cases which are inaccessible both to the self-defence of the organism and to therapeutic measures Medical art and knowledge must ever be satisfied with this—the limits of the healing art end here

And are we to rest content with this state of affairs? Must we resign ourselves to it? No, indeed, for if now and in the future we are unable to cure the greater number of diseases when once they have developed, yet one other course remains for us to pursue—the prevention of the development of disease, the perfection of prophylactic measures. The furtherance of this ideal must be our aim. I am convinced that in no great length of time we shall attain this result, that as hygiene is now taught beside pharmacology so the special study of prophylaxis will be established. The dawn of this new phase of medical knowledge broke more than 100 years ago with the marvellous discovery of vaccination against small pox There followed upon this discovery a long period of inactivity, but it was the original pioneer who opened out the way for the principles of bacteriology If cholera and plague have lost much of their severity in their original homes we may thank prophylaxis for it. It is questionable whether we shall ever obtain a serum or an antitoxin capable of destroying the cholera or plague developed in India or other acute infectious diseases But without doubt there is now more certainty in protecting a country or an individual from the invasion of the seeds of disease. If this is the case with this class of disease, which includes acute and curable conditions, so much more can it be said of those conditions in the course of which absolutely irreparable changes are developed. In spite of many pharmacological attempts and other measures against tubercle, this most terrible disease can only be combated in one way—viz, by the protection from all infection. For such cases as contraction of the kidney or cirrhosis of the liver, and countless other diseases, no therapeutic principles but only prophylaxis are to be thought of. I will give no further examples, those that I have quoted will serve as illustrations

It is evident that you can only treat a disease when you know its character and its cause in order that the latter may then be avoided Our experience with acute infectious diseases is the certain proof of this. It follows that there must be a restless constant striving after the cause of disease and the recognition of these causes is the first step towards the fulfilment of the medical art of the future.

The proceedings of this Congress have given us another proof that in prophylaxis lies the hope of the future. Cholera, abscess of the liver, dysentery bilharziosis, and ankylostomiasis can only be combated by prophylaxis I fear that for many reasons the attainment of this ideal object will be postponed to the distant future. But it must be striven for and eventually it will be achieved. That in principle, at least, the work of us medical men should become unnecessary must be our constant striving, and to this end we must, to the best of our powers, assist.

Gentlemen, this brilliant Congress, with its fruitful and original work has now come to an end We strangers must leave this beautiful country which has been blessed by the culture of antiquity If in future years we should return here we shall see that the pregnant words of the Arab saying have come to pass "The Nile will come to the desert because the king was good." Then that which in its beginning promises such wonders will have grown to a more perfect blossoming, the noble spirit of my colleagues who are working here will have borne still finer fruit. And so may God bless the exalted ruler of this beautiful country and his people.

MEDICAL STAFF COLLEGE, NETLEY

THE second half of the first session of the Medical Staff College, held at the Royal Victoria Hospital, Netley, for lieutenants of the Indian Medical Service, was brought to a close on Jan. 10th, when the prizes were distributed by Surgeon General Sir William R. Hooper, K C S I., I M.S., President of the Medical Board at the India Office.

The proceedings commenced at 11 30 A.M in the presence of a large company, which included the principal medical officer of the hospital, Surgeon General E. Townsend, C.B., C M G, R.A M C, Colonel H Cayley, C M G, Dr A. E Wright (late professor of pathology), Colonel W F Stevenson, C B, R A.M C, Colonel Kenneth Macleod, I.M.S. (ret.) (professor of military and tropical medicine), Major W W Webb I.M S (ret), and the military and nursing staff of the Royal Victoria Hospital

Colonel Macleod read a report giving details of the work of the session, which extended over a period of two months.

The following list shows the results of the examination at Netley only —

INDIAN MEDICAL SERVICE.

List of lieutenants on probation of the Indian Medical Service who were successful at the Netley examination The prizes are awarded for marks gained in the special subjects taught at the Medical Staff College.

		Marks			Marks
*‡1	F P Mackie	1421	16	R D Saigol	1077
2	A T Pridham	1264	17	H M H Melhuish	1057
3	J O Leary	1241	18	H. M Brown	1051
4	T C M Young	1220	19	H C Brown	1037
5	A K Lauddie	1214	20	W J Collinson	1023
**6	S R Christophers	1207	21	A. F Pilkington	1013
7	C L Dunn	1199	22.	V B Nesfield	1003
8	P G Easton	1183	23	W W Jeudwine	983
9	J H Murray	1180	24	F C Rogers	963
10	H Emslie Smith	1177	25	M Baker	937
†11	G A. Jolly	1172	26	C E Bulteel	931
12.	F P Vieyra	1159	27	C A. F Hingston	882
13	R F C Talbot	1129	28.	G F Humphreys	853
14	H R Dutton	1125	29	J L Lunham	820
15	H H. Kiddle	1116			

* Gained the Montefiore prize of 20 guineas and medal.
† Gained the second Montefiore prize
‡ Gained the Martin memorial medal
** Gained the Maclean prize for clinical and ward work

Sir WILLIAM HOOPER having handed the prizes to, and congratulated, the winners, delivered the following address which was listened to with great interest and received with repeated marks of approval He said that the four prizes which he had just had the honour of presenting formed the share, and a fair share, allotted to the lieutenants of the Indian Medical Service of the nine prizes formerly open to lieutenants of both the Royal Army Medical Corps and the Indian Medical Service, four being now competed for by lieutenants of the Royal Army Medical Corps on completion of the Medical Staff College course in London, whilst the ninth prize—that for hospital administration, presented by Mrs Marshall Webb in memory of the late Surgeon General William Marshall Webb—was open to officers of both services and was won this session by Lieutenant Mackenzie of the Royal Army Medical Corps. It was particularly gratifying to him to have the honour of presenting the prizes, for in July last, when Earl Roberts very kindly made the distribution at the Royal Victoria Hospital, it was feared that there would be no subsequent distribution there and that the War Office might even close the school in which under Parkes, Longmore, Maclean, Aitken, de Chaumont, Boyes-Smith, and more recently under Colonel Cayley, Colonel Notter Colonel Bruce, Colonel Macleod, Colonel Stevenson, and Professor Wright, a long list of men of both services had received most valuable instruction. Everybody would greatly regret that Professor Wright had severed his connexion with the Staff College—a teacher of great ability who possessed the gift of imparting to his hearers some of his own zeal and love for science Under him many members of both services had qualified for the valuable work they had since done. They must all feel thankful that

Looking Back.

FROM

THE LANCET, *SATURDAY, JAN* 15, 1825

SURGICAL LECTURES,

DELIVERED BY

MR. ABERNETHY

Theatre, St Bartholomew's Hospital

LECTURE 14[1]

Nervous Affections.

I say that there is a certain *disorder* of the nerves of the part antecedent to *disease* in the part. Suppose that there is disturbance in any part, you cannot say that it is disease, it begins with irritation, and therefore I object to the word disease in that sense. Functional disorder precedes any change in the structure of the part, but I believe it to be originally nervous. I say to persons who come to me with weakness of the muscles spasm, and irritation, occurring in any part of the body, that it is the result of something wrong in the nervous system as a whole. I could quote plenty of cases illustrating this, showing that local irritation and disease are the effect of something wrong in the nervous system. This is very well exemplified in the complaints which attend dentition in children, where the nervous irritation sometimes disorders all the parts of the body, there are convulsions, weakness of the muscles, the arms are turned out and sometimes inwards and so on. The larynx also becomes affected, and all persons lose their voices all of a sudden, all through an affection of the nerves of the part.

Then again the nerves of a part may be influenced by something operating on the trunks of the nerves leading to those parts, as in injuries or affections of the spinal column, all the nerves in the parts supplied from below the part of the medulla spinalis injured, will be deprived of their vitality Again, affections of the nerves of the cerebrum may produce local affections in every part of the body We cannot conceive disease to be merely local, there must always be a plurality of parts affected. The subject is one difficult to explain, but what I want chiefly to call your attention to is, a very painful affection of the nerves of a part called *Tic Doloreux* It was a rare thing, in the early part of my life, to see many cases of disease produced by increased vascular action, which are now common, and so it is with diseases depending on an undue nervous action in a part, for I do not think there was such a thing as *tic doloreux* ever dreamt of in my time. How this comes, I don t know

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[1] An excerpt only of the report of the lecture is transcribed.

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN 76 of the largest English towns 9164 births and 5350 deaths were registered during the week ending Jan. 10th. The annual rate of mortality in these towns which had been 19 6, 16 9 and 20 0 per 1000 in the three preceding weeks, declined again last week to 18 5 per 1000 In London the death rate was 18 8 per 1000 while it averaged 18 4 in the 75 other large towns. The lowest death rates in these towns were 10 0 in Hornsey 10 9 in Handsworth and in West Hartlepool, 11 8 in Walthamstow 12 3 in Southampton 12 4 in York, and 12 7 in Leyton, the highest rates were 21 7 in Manchester 22 7 in West Bromwich and in Rochdale, 23 7 in Liverpool 22 4 in Wolverhampton 24 4 in Rhondda 25 2 in Oldham, and 58 2 in Great Yarmouth The 5350 deaths in these towns last week included 504 which were referred to the principal infectious diseases, against 620, 493, and 603 in the three preceding weeks, of these 504 deaths 136 resulted from measles, 132 from whooping cough, 73 from diphtheria, 65 from scarlet fever, 50 from diarrhœa, 38 from "fever" (principally enteric) and 10 from small pox. No death from any of these diseases was registered last week in Hornsey, Bournemouth, Reading Norwich, Burton on-Trent, Bootle, Warrington, Barrow in-Furness, Huddersfield, Halifax, York, or Stockton-on Tees, while the highest death rates from the principal infectious diseases were recorded in West Ham, Hastings, Smethwick, Liverpool, St. Helens, Tynemouth, Newport (Mon), and Cardiff. The greatest proportional mortality from measles occurred in Hastings Devonport, Walsall, Liverpool, Salford, Tynemouth, Newport (Mon.), and Cardiff, from scarlet fever in Great Yarmouth, King s Norton, Coventry, and St. Helens, from diphtheria in Hastings, Hanley, Smethwick, Bury and Preston, from whooping cough in Tottenham, West Ham, Oldham, and Cardiff, and from diarrhœa in Wolverhampton. The mortality from "fever" showed no marked excess in any of the large towns. Of the 10 fatal cases of small pox in these towns six were registered in Liverpool and one each in London, Derby, Oldham, and Preston The Metropolitan Asylums hospitals contained 10 small-pox patients on Saturday, Jan 10th, against 21, 17, and 14 on the three preceding Saturdays, four new cases were admitted during last week, against five, none, and one in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 2487, 2523, and 2378 at the end of the three preceding weeks, had further declined to 2219 at the end of last week, 223 new cases were admitted during the week, against 279, 205, and 214 in the three preceding weeks The deaths referred to diseases of the respiratory organs in London which had been 408 343, and 415 in the three preceding weeks, declined again last week to 354, and were 203 below the corrected average number Influenza was returned as the primary cause of 39 deaths in London last week, against 37 28, and 37 in the three preceding weeks The causes of 74, or 1 4 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner The causes of all the deaths were certified in West Ham, Bristol, Leicester, Salford, Leeds, Newcastle-on-Tyne, and 42 other smaller towns, the largest proportions of uncertified deaths were registered in Hanley, Birmingham, Smethwick, Liverpool, Warrington, Sheffield, and Sunderland

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 21 1, 21 3, and 21 6 per 1000 in the three preceding weeks, further rose to 22 6 per 1000 during the week ending Jan. 10th, and was 3 8 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 17 0 in Perth and 17 3 in Greenock to 24 2 in Leith and 24 4 in Glasgow The 740 deaths in these towns included 24 which were referred to whooping cough, 22 to diarrhœa, 15 to measles, seven to diphtheria, seven to "fever, and three to scarlet fever, but not one to small-pox. In all 78 deaths resulted from these principal infectious diseases last week, against 68 59, and 77 in the three preceding weeks. These 73 deaths were equal to an annual rate of 2 4 per 1000, which was 0 8 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping cough, which had been 20 and 33 in the two preceding weeks declined again last week to 24, of which 17 were registered in Glasgow, two in Edinburgh and two in Dundee. The deaths from diarrhœa, which had been 18 and 14 in the two preceding weeks rose again to 22 last week, and included 14 in Glasgow two in Edinburgh two in Aberdeen and two in Greenock The fatal cases of measles, which had been five, six, and 10 in the three preceding weeks, further increased last week to 15, of which 10 occurred in Aberdeen, two in Glasgow, and two in Edinburgh. The deaths from diphtheria, which had been four six, and 13 in the three preceding weeks, declined again to seven last week, and included three in Glasgow, two in Edinburgh, and two in Dundee The fatal cases of 'fever," which had been six, six, and four in the three preceding weeks, rose again last week to seven of which four were recorded in Glasgow The three deaths from scarlet fever corresponded with the cent as calculated on the same basis. Of the deaths, nine were due to pneumonia, 10 to cardiac disease, 14 each to epilepsy and senile decay, 26 to colitis, 29 to pulmonary tuberculosis, 36 to general paralysis of the insane, and the rest to other causes There has been a considerable amount of serious illness on the female side of the asylum during the year, including cases of enteric fever, scarlet fever, and colitis. The Commissioners in Lunacy state in their report that the patients were found remarkably tranquil and on the whole contented, that many of the wards were improved as regards their lighting and ventilation, and that the medical case books and pathological records were well kept. The committee of management states in its report that plans have been prepared and approved by the Home Secretary for the erection of an isolation hospital, and for this purpose a sum of £2000 has been voted. The farm shows a profit of £652 for the year The expenditure on repairs has amounted to £8270 5s during the year, while the sum of £281 has been expended on additions, alterations, and improvements

THE BLOODLESS REDUCTION OF DISLOCATION OF THE HIP

A DEMONSTRATION BY PROFESSOR LORENZ

PROFESSOR A. LORENZ of Vienna demonstrated on Jan. 14th at the City Orthopædic Hospital, Hatton garden, London, E C, his bloodless method of reducing congenital displacement of the hip He performed the operation on two cases, one being a case of bilateral congenital displacement of the femora and the other a unilateral displacement. This was followed by a demonstration of the method adopted in the treatment of congenital club-foot. He was aided by his assistant, Dr Friedrich Müller, Mr J, Jackson Clarke, Mr John Poland, and Mr Noble Smith, and an audience of over 90 medical men watched his procedure His remarks, which he gave in English, were frequently received with applause and his reception was altogether of a most cordial character

The proceedings were opened by Mr NOBLE SMITH introducing Professor Lorenz to the meeting in a short speech in which he said that though a distinct expression of opinion adverse to the operation advocated by Professor Lorenz had been definitely put forward at the Clinical Society of London quite recently, still it was the custom in England to give everyone a fair field and no favour and that was all that Professor Lorenz wished for

Professor LORENZ while he was operating said he was glad to take advantage of the occasion to communicate theoretically and practically one of his bloodless methods. The most important of these methods was the treatment of congenital hip dislocation by what he called "the functional weight-bearing method" The first step in the treatment was to place the head of the femur into the acetabulum. The possibility of this reduction was limited by the age of the patient In very young children of course, there would never be any difficulty in pulling down the head to the right place, in older children or in adults there was less possibility of doing so To accomplish the reduction all soft parts, in particular the long muscles, must be stretched, and, if necessary, torn, so as to overcome their resistance. The adductors showed the greatest resistance. The anterior muscles offered a great resistance which must be overcome by traction and in case of necessity by over extension The posterior muscles offered less resistance which could be considerably lessened by bending the knee It became possible by these manipulations to pull down the femoral head so as to bring it opposite the acetabulum and thus the preparatory steps of the treatment were finished The real reduction—i e, the placing of the head into the acetabulum—could be done by traction and by bringing pressure to bear on the trochanter He preferred the reduction by forced abduction which was kept up until the well known signs of the slipping of the head over the posterior border of the acetabulum could be felt If the acetabulum were of normal shape and size the leg could be brought down to its normal position without any further delay But as in these cases the acetabulum was of subnormal size the head would slip out of it immediately after the leg was brought into even an approximately normal position In order to retain the head in its place it was necessary to put the leg in the position of right-angled abduction In case of great instability of the replaced head, to the abduction a slight hyper-extension had to be added. In order to add to the security of fixation of the head in the acetabulum it was expedient to stretch and to enlarge the anterior part of the capsule by rotary movements of the thigh In the new position all the flexors of the knee-joint were too short so that there was rigid flexion of the knee. This was a symptom which indicated the completeness of the reduction. This contracture must be corrected by stretching while the patient was still under the anæsthetic. The extreme abducted position of the leg must be fixed by a plaster of Paris cast which, in order to present all the details, was applied in the presence of his audience Continuing, Professor Lorenz said that his routine was to leave the plaster of-Paris cast undisturbed for six months at least, sometimes for even longer Of course, he took all necessary precautions to keep the skin under the cast in a healthy condition. The cast was applied over knitted drawers, underneath which a three inch calico band ran, protruding at both ends By pulling this band in different directions a regular rub down was administered. His principle guiding the after treatment, after the cast was removed, was to keep the head of the femur pressed against the acetabulum. He did not try to correct the position of the legs in any hurry but allowed only so much reduction of the extreme abduction as was indispensable for letting the child get about with spread legs during the day At night the primary extreme abduction was reinstituted, for this purpose a wedge shaped cushion was adjusted between the legs and fastened there, the patient being in the recumbent position. Another important feature of the after treatment was appropriate gymnastic exercise, which mainly consisted in passive and active flexions of the hip in order to procure mobility. Professor Lorenz thought that next to congenital dislocation of the hip-joint the most frequent congenital deformity was congenital club-foot. The treatment of this deformity in the newly born was almost uniformly a bloodless one and he advocated his "bloodless modelling method" as one which thoroughly cured the deformity in the newly born, so that a bloody operation in the more advanced age did not become necessary In explaining this method he said it consisted, firstly, in overcoming the shortening of the soft parts whatever they might be—i.e., the skin, the subcutaneous tissue, the tendons, the fascia, and the ligaments. It was very important not only to overcome the resistance of these shortened soft parts, but this resistance had also to be practically annihilated. By merely correcting the deformity the soft parts were stretched, but their elasticity would counteract the correction and as soon as the foot was let go it would return to the wrong position. If at this stage of affairs the foot were retained in its corrected position by any appliances, casts, or splints there would be painful sores on the points most exposed to pressure The principle of his modelling was to keep on with the single acts of correction until the elasticity of the tissues was completely destroyed so that the foot rebounded no more into its previous wrong shape The foot must become "as pliable as a piece of [illegible] cloth" In this state he could mould it in almost any shape and it would stay there without any tendency to return to the previous position. As to the special technique, it was entirely erroneous to try to redress the deformity, so to say, in its bulk The deformity must be divided into its component parts and be overcome in a certain order. First came the correction of the faulty adduction, then the straightening out of the extreme inflection over the instep, then the equinus position had to be attacked, and then the supination. After this gradual correction was accomplished the complete reduction of the deformity *in toto* was feasible. The cast might now be applied without any danger of pressure and its sequelæ. It must be kept in mind that by this rather forcible treatment slight disturbances of the circulation were caused, so that a swelling of the limb resulted This circumstance necessitated the following precautions. Any cast applied must be fenestrated so that it was possible to keep the condition of the foot under permanent and full control It was his principle to make sure that the circulation in the extreme tips of the toes was perfect before dismissing the child with its cast. The cast could be kept on the foot for several months and renewed after removal until the foot was in complete valgus position even after being freed from all dressings Then gymnastic exercises and massage should be resorted to, the aim being to develop and to strengthen the pronators so that the valgus position was maintained by the tonicity of these muscles.

Looking Back.

FROM

THE LANCET, *SATURDAY, JAN* 15, 1825

SURGICAL LECTURES,

DELIVERED BY

MR. ABERNETHY

Theatre, St Bartholomew's Hospital

LECTURE 14[1]

Nervous Affections

I say that there is a certain *disorder* of the nerves of the art antecedent to *disease* in the part. Suppose that there is isturbance in any part, you cannot say that it is disease, begins with irritation, and therefore I object to the word isease in that sense Functional disorder precedes any hange in the structure of the part, but I believe it to e originally nervous. I say to persons who come to me ith weakness of the muscles, spasm, and irritation, occurring n any part of the body, that it is the result of something rong in the nervous system as a whole. I could quote lenty of cases illustrating this, showing that local irritation nd disease are the effect of something wrong in the nervous ystem. This is very well exemplified in the complaints hich attend dentition in children, where the nervous ritation sometimes disorders all the parts of the body, there re convulsions, weakness of the muscles, the arms are urned out and sometimes inwards, and so on. The larynx lso becomes affected, and ah! persons lose their voices all f a sudden, all through an affection of the nerves of the art.

Then again the nerves of a part may be influenced by omething operating on the trunks of the nerves leading to hose parts, as in injuries or affections of the spinal column, ll the nerves in the parts supplied from below the part f the medulla spinalis injured, will be deprived of their itality Again affections of the nerves of the cerebrum ay produce local affections in every part of the body We annot conceive disease to be merely local, there must lways be a plurality of parts affected. The subject is one ifficult to explain, but what I want chiefly to call your ttention to is, a very painful affection of the nerves of a art called *Tic Doloreux* It was a rare thing, in the early art of my life, to see many cases of disease produced by ncreased vascular action which are now common, and so t is with diseases depending on an undue nervous action in part, for I do not think there was such a thing as *tic oloreux* ever dreamt of in my time. How this comes, I on't know

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[1] An excerpt only of the report of the lecture is transcribed

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN 76 of the largest English towns 9164 births and 5350 eaths were registered during the week ending Jan. 10th. The annual rate of mortality in these towns, which had een 19 6, 16 9 and 20 0 per 1000 in the three preceding weeks, declined again last week to 18 5 per 1000 In London the death rate was 18 8 per 1000 while it averaged 18 4 in the 75 other large towns. The lowest death rates in these towns were 10 0 in Hornsey 10 9 in Handsworth and in West Hartlepool 11 8 in Walthamstow 12 3 in Southampton, 12 4 in York and 12 7 in Leyton, the highest rates were 21 7 in Manchester, 22 7 in West Bromwich and in Rochdale, 23 7 in Liverpool 22 4 in Wolverhampton 24 4 in Rhondda, 25 2 in Oldham and 58 2 in Great Yarmouth The 5350 deaths in these towns last week in ded 504 which were referred to the principal infectious diseases, against 620, 493, and 603 in the three preceding weeks, of these 504 deaths 136 resulted from measles, 132 from whooping cough, 73 from diphtheria, 65 from scarlet fever, 50 from diarrhœa, 38 from "fever" (principally enteric) and 10 from small pox. No death from any of these diseases was registered last week in Hornsey, Bournemouth, Reading, Norwich, Burton on Trent, Bootle, Warrington, Barrow in Furness, Huddersfield, Halifax, York, or Stockton on Tees, while the highest death rates from the principal infectious diseases were recorded in West Ham, Hastings, Smethwick, Liverpool, St. Helens, Tynemouth, Newport (Mon), and Cardiff. The greatest proportional mortality from measles occurred in Hastings, Devonport, Walsall, Liverpool, Salford, Tynemouth, Newport (Mon), and Cardiff, from scarlet fever in Great Yarmouth, King s Norton, Coventry, and St. Helens, from diphtheria in Hastings, Hanley, Smethwick, Bury, and Preston, from whooping cough in Tottenham, West Ham, Oldham, and Cardiff, and from diarrhœa in Wolverhampton. The mortality from "fever" showed no marked excess in any of the large towns. Of the 10 fatal cases of small pox in these towns six were registered in Liverpool and one each in London, Derby, Oldham, and Preston The Metropolitan Asylums hospitals contained 10 small pox patients on Saturday, Jan 10th, against 21, 17, and 14 on the three preceding Saturdays, four new cases were admitted during last week, against five, none, and one in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 2487, 2528, and 2378 at the end of the three preceding weeks, had further declined to 2219 at the end of last week, 223 new cases were admitted during the week, against 279, 205, and 214 in the three preceding weeks The deaths referred to diseases of the respiratory organs in London which had been 408 343, and 415 in the three preceding weeks, declined again last week to 354, and were 203 below the corrected average number Influenza was returned as the primary cause of 39 deaths in London last week, against 37 28, and 37 in the three preceding weeks The causes of 74, or 1 4 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner The causes of all the deaths were certified in West Ham, Bristol, Leicester, Salford, Leeds, Newcastle-on-Tyne, and 42 other smaller towns, the largest proportions of uncertified deaths were registered in Hanley, Birmingham, Smethwick, Liverpool, Warrington, Sheffield, and Sunderland

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 21 1, 21 3, and 21 6 per 1000 in the three preceding weeks, further rose to 22 6 per 1000 during the week ending Jan. 10th, and was 3 8 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 17 0 in Perth and 17 3 in Greenock to 24 2 in Leith and 24 4 in Glasgow The 740 deaths in these towns included 24 which were referred to whooping cough, 22 to diarrhœa, 15 to measles, seven to diphtheria, seven to "fever," and three to scarlet fever, but not one to small pox. In all 78 deaths resulted from these principal infectious diseases last week, against 68 59, and 77 in the three preceding weeks. These 73 deaths were equal to an annual rate of 2 4 per 1000 which was 0 8 per 1000 above the mean rate last week from the same diseases in the 76 large English towns The fatal cases of whooping cough, which had been 20 and 33 in the two preceding weeks, declined again last week to 24, of which 17 were registered in Glasgow, two in Edinburgh and two in Dundee. The deaths from diarrhœa, which had been 18 and 14 in the two preceding weeks, rose again to 22 last week, and included 14 in Glasgow, two in Edinburgh two in Aberdeen, and two in Greenock The fatal cases of measles, which had been five, six, and 10 in the three preceding weeks, further increased last week to 15, of which 10 occurred in Aberdeen, two in Glasgow, and two in Edinburgh The deaths from diphtheria which had been four, six, and 13 in the three preceding weeks, declined again to seven last week, and included three in Glasgow, two in Edinburgh and two in Dundee The fatal cases of "fever," which had been six, six, and four in the three preceding weeks rose again last week to seven, of which four were recorded in Glasgow The three deaths from scarlet fever corresponded with the number in each of the two preceding weeks and included two in Paisley The deaths referred to diseases of the respiratory organs in these towns which had been 193 and 158 in the two preceding weeks, further declined last week to 152, but slightly exceeded the number in the corresponding period of last year The causes of 31, or more than 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN

The death rate in Dublin, which had been 30 8, 24 6, and 29 4 per 1000 in the three preceding weeks, declined again to 26 8 per 1000 during the week ending Jan. 10th During the past four weeks the death rate has averaged 27 7 per 1000, the rates during the same period being 19 0 in London and 19 8 in Edinburgh. The 195 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 19 from the number in the preceding week, and included 14 which were referred to the principal infectious diseases, against 20, 21, and 23 in the three preceding weeks , of these, three resulted from diphtheria, three from diarrhœa, two from measles two from scarlet fever, two from whooping cough, and two from "fever" These 14 deaths were equal to an annual rate of 1 9 per 1000, the death rates last week from the same diseases being 1 7 in London and 1 4 in Edinburgh The fatal cases of measles, which had been nine, seven, and nine in the three preceding weeks, declined again last week to three. The deaths from diarrhœa, which had been three, four, and three in the three preceding weeks, were again three last week. The mortality both from scarlet fever and from diphtheria showed a decline from that recorded in the preceding week The 195 deaths in Dublin last week included 37 of children under one year of age and 57 of persons aged 60 years and upwards , the deaths of infants and those of elderly persons corresponded with the respective numbers in the preceding week Six inquest cases and six deaths from violence were registered, and 62, or nearly a third, of the deaths occurred in public institutions The causes of 19, or nearly 10 per cent., of the deaths in Dublin last week were not certified.

VITAL STATISTICS OF LONDON DURING DECEMBER, 1902.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of cases reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 7 4 per 1000 of the population, estimated at 4,579,107 persons in the middle of last year In the three preceding months the rates had been 9 1, 10 0, and 9 1 per 1000 respectively The rates were considerably below the average in Paddington, Kensington, Chelsea, Stoke Newington, the City of London and Shoreditch, while they showed the largest excess in Hackney, Southwark, Battersea, Wandsworth Deptford, and Lewisham The prevalence of small pox showed a slight decline from that recorded in the preceding month , of the 12 cases notified during December four belonged to Islington, two to Fulham, two to Hackney, two to Finsbury, one to Stepney, and one to Poplar The Metropolitan Asylums hospitals contained 14 small pox patients at the end of last month, against 42, 19, and 17 at the end of the three preceding months , the weekly admissions averaged three, having also been three in each of the two preceding months. Scarlet fever was considerably less prevalent during December than in either of the two preceding months , this disease showed the highest proportional prevalence in St. Pancras, Hackney, Lambeth, Battersea, Wandsworth, Deptford, and Lewisham The number of scarlet fever patients under treatment in the Metropolitan Asylums hospitals, which had been 2656 2820, and 2705 at the end of the three preceding months, had further declined to 2327 at the end of last month , the weekly admissions averaged 236, against 327, 358, and 301 in the three preceding months. The prevalence of diphtheria showed a slight decline from that recorded during November last , among the various metropolitan boroughs this disease was proportionally most prevalent in Fulham, Hackney, Wandsworth, Lewisham, and Woolwich There were 927 diphtheria patients under treatment in the Metropolitan Asylums hospitals at the end of December, against 961, 941, and 1019 at the end of the three preceding months, the weekly admissions averaged 136 last month, against 142, 149, and 157 in the three preceding months. Enteric fever showed a considerably diminished prevalence last month as compared with recent months, the greatest proportional prevalence of this disease occurred in Kensington, Finsbury, Shoreditch, Stepney, and Wandsworth The number of enteric fever patients in the Metropolitan Asylums hospitals, which had been 359, 401, and 339 at the end of the three preceding months, had further declined to 210 at the end of December, the weekly admissions averaged 30 last month, against 63, 59, and 37 in the three preceding months Erysipelas was proportionally most prevalent in St. Marylebone, Holborn, Bethnal Green Southwark, Camberwell, and Greenwich. The 33 cases of puerperal fever notified during the month included four in Wandsworth, three each in Battersea, Lambeth, and Camberwell and two each in St. Marylebone, Islington, Hackney, Stepney, and Woolwich

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in public institutions having been distributed among the various boroughs in which the deceased persons had previously resided. During the five weeks ending Jan. 3rd the deaths of 7974 persons belonging to London were registered, equal to an annual rate of 18 2 per 1000 living, against 16 4, 16 0, and 17 4 per 1000 in the three preceding months. The lowest death rates last month in the several metropolitan boroughs were 11 7 in Hampstead, 14 1 in Stoke Newington, 14 4 in Paddington 14 7 in Hackney 14 9 in Woolwich, and 15 1 in Wandsworth , the highest rates were 20 7 in Bermondsey, 20 8 in Stepney, 21 0 in Poplar, 21 9 in Holborn 22 0 in the City of London, and 25 4 in Finsbury The 7974 deaths from all causes included 764 which were referred to the principal infectious diseases , of these, 261 resulted from measles 52 from scarlet fever, 116 from diphtheria, 204 from whooping cough, 55 from enteric fever, one from simple continued fever, 75 from diarrhœa, and not one from small pox or typhus The lowest death rates from these diseases were recorded in Kensington, Hampstead, Stoke Newington, Holborn, and Woolwich , and the highest rates in Fulham, St. Pancras, Finsbury, Stepney, Bermondsey, and Deptford The 261 fatal cases of measles were 28 below the corrected average number, among the various metropolitan boroughs this disease showed the highest proportional mortality in St. Pancras, Stepney, Bermondsey Camberwell, Deptford, Greenwich, and Lewisham. The 52 deaths from scarlet fever showed a decline of 32 from the number in the corresponding periods of the ten preceding years , this disease was proportionally most fatal in Islington, Hackney, Bethnal Green, Lambeth, and Deptford. The 116 fatal cases of diphtheria were less than one half of the corrected average number , among the various metropolitan boroughs this disease showed the greatest proportional mortality in Fulham, Chelsea, St. Marylebone, St. Pancras, Southwark, and Lewisham. The 204 deaths from whooping cough were 39 in excess of the average number in the corresponding periods of the ten preceding years. This disease was proportionally most fatal in Fulham, City of Westminster, St. Marylebone, Islington, Finsbury, and the City of London The 56 fatal cases of "fever" showed a decline of 34 from the corrected average number , among the various metropolitan boroughs the highest "fever" death rates were recorded in Kensington, St. Pancras, Islington Hackney, Lambeth, and Camberwell. The 75 deaths from diarrhœa slightly exceded the number in the corresponding periods of the ten preceding years , this disease was proportionally most fatal in Fulham, Chelsea, Stoke Newington Holborn, and Southwark In conclusion, it may be stated that the aggregate mortality in London last month from these principal infectious diseases was more than 22 per cent. below the average.

Infant mortality in London during December, measured by the proportion of deaths among children under one year of age to registered births, was equal to 155 per 1000. The lowest rates of infant mortality were recorded in Kensington, St. Marylebone, Hampstead, Hackney, the City of London, and Shoreditch , while the highest rates occurred in Chelsea, City of Westminster, Finsbury, Camberwell, Deptford, Greenwich, and Lewisham

VITAL STATISTICS OF LONDON DURING DECEMBER, 1902.

(Specially compiled for THE LANCET *)*

CITIES AND BOROUGHS.	Estimated population in the middle of 1902.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES											Deaths from all causes.	Death rate per 1000 living	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever	Diphtheria *	Typhus fever	Enteric fever	Other continued fevers.	Puerperal fever	Erysipelas	Cholera.	Total.	Annual rate per 1000 persons living	Small pox.	Measles	Scarlet fever	Diphtheria.*	Whooping cough.	Typhus fever	Enteric fever	Other continued fevers	Diarrhœa.	Total	Annual rate per 1000 persons living			
LONDON	4,579,107	12	1441	910	—	280	4	33	561	—	3241	7·4	—	261	52	116	204	—	55	1		764	1·7	7974	18·2	155
West Districts.																										
Paddington	145 107	—	28	17	—	6	—	1	15	—	67	4·8	—	—	2	3	8	—	—	—	2	16	1·1	200	14·4	128
Kensington	177 605	—	26	15	—	16	—	1	23	—	81	4·8	—	1	2	2	3	—	3	—	2	13	0·8	280	15·4	124
Hammersmith	114,210	—	39	15	—	2	—	1	12	—	69	6·3	—	—	1	3	6	—	1	—	2	13	1·2	188	17·2	144
Fulham	143 102	2	46	43	—	8	—	1	13	—	113	8·2	—	7	—	7	10	—	1	—	6	31	2·3	245	17·9	146
Chelsea	74,018	—	12	15	—	3	—	—	6	—	36	5·1	—	3	—	4	2	—	—	—	3	12	1·7	131	18·5	210
City of Westminster ..	180,800	—	33	28	—	13	1	1	17	—	93	5·4	—	1	2	4	14	—	1	1	1	24	1·4	298	17·2	185
North Districts																										
St. Marylebone ..	132,069	—	26	21	—	6	—	2	29	—	84	6·6	—	1	—	5	12	—	—	—	4	22	1·7	246	19·4	101
Hampstead	83,743	—	25	11	—	2	—	—	5	—	43	5·4	—	1	—	1	4	—	1	—	—	7	0·9	94	11·7	83
St. Pancras	235 596	—	90	49	—	17	—	—	27	—	183	8·1	—	21	2	9	8	—	5	—	3	48	2·1	452	20·0	147
Islington	337,268	4	103	69	—	19	—	2	38	—	225	7·0	—	10	6	5	31	—	7	—	4	63	1·9	571	17·7	163
Stoke Newington .. .	51,700	—	15	4	—	—	—	—	7	—	26	5·2	—	—	—	—	—	—	—	—	2	2	0·4	70	14·1	135
Hackney ..	221 926	2	93	78	—	14	—	2	31	—	220	10·3	—	6	4	7	4	—	5	—	1	27	1·3	313	14·7	116
Central Districts																										
Holborn	68 535	—	16	7	—	3	—	—	9	—	35	6·2	—	—	—	1	1	—	1	—	2	5	0·9	123	21·9	180
Finsbury	100 487	2	17	14	—	9	2	—	16	—	60	6·2	—	1	1	2	14	—	1	—	2	21	2·2	245	25·4	198
City of London	25 698	—	5	2	—	2	—	—	3	—	12	4·9	—	1	—	—	2	—	—	—	—	3	1·2	54	22·0	125
East Districts																										
Shoreditch ..	117 980	—	12	16	—	17	—	—	15	—	60	6·3	—	6	1	2	2	—	2	—	1	14	1·2	191	16·9	96
Bethnal Green	129 809	—	35	25	—	2	—	—	25	—	87	7·0	—	9	3	1	—	—	—	—	1	14	1·1	249	20·0	138
Stepney ..	300 551	1	66	62	—	32	—	2	40	—	203	7·0	—	27	2	8	13	—	5	—	9	64	2·2	600	20·8	149
Poplar ..	169 214	1	38	42	—	10	—	1	8	—	100	6·2	—	12	—	5	8	—	1	—	2	28	1·7	340	21·0	160
South Districts																										
Southwark	206 825	—	74	45	—	13	—	1	34	—	167	8·4	—	9	3	8	9	—	2	—	8	39	2·0	408	20·6	162
Bermondsey ..	130 218	—	36	19	—	3	—	1	16	—	74	5·9	—	31	2	3	2	—	1	—	1	40	3·2	258	20·7	181
Lambeth	305 102	—	118	40	—	21	1	3	34	—	217	7·4	—	19	8	3	18	—	6	—	4	58	2·0	583	19·9	164
Battersea	171 401	—	89	42	—	8	—	3	13	—	155	9·4	—	6	3	4	7	—	2	—	1	23	1·4	267	16·2	158
Wandsworth	241 810	—	112	87	—	23	—	4	32	—	258	11·1	—	2	2	8	8	—	3	—	2	25	1·1	350	15·1	174
Camberwell	262 775	—	93	45	—	14	—	3	41	—	198	7·8	—	23	3	6	4	—	6	—	5	47	1·9	476	18·9	186
Deptford	111 677	—	65	16	—	4	—	1	15	—	101	9·4	—	41	3	3	5	—	1	—	3	56	5·2	216	20·2	218
Greenwich	93 013	—	34	21	—	6	—	—	14	—	76	8·0	—	12	—	2	—	—	—	—	2	16	1·7	151	16·1	193
Lewisham	132 432	—	68	34	—	4	—	1	18	—	125	9·8	—	11	2	6	4	—	—	—	2	25	2·0	204	16·1	195
Woolwich	119,656	—	27	36	—	2	—	2	6	—	73	6·4	—	—	—	4	6	—	—	—	—	9	0·8	171	14·9	129
Port of London	—	—	—	2	—	1	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup

that the urine from two cases of tuberculosis of the bladder and diabetes respectively had many points in common probably resides in the fact that the subjects of the disease in question are either constitutional "hyperacids" or the subjects of retarded nutrition—Bouchard's "ralentis." In the first case the low specific gravity, the rising chlorides, and the pale colour of the urine indicate amongst other signs that the defences of the organism are breaking down and that the tuberculous affection of the bladder of twelve months' standing is threatening to become generalised. The organism, as Dr Gilchrist says, is becoming demineralised the chlorides now following an earlier excessive excretion of phosphates The supposition that this specimen of urine is taken from the subject of a gouty or atonic scrofulous diathesis, where such a resistance to infection is likely to occur, is rendered probable by the low figure of the phosphates (0 84 gramme) given by Mr Clayton. If here the solid residue is calculated by densimetry, as Dr Gilchrist did in his paper, the proportion of phosphoric acid stands at 1 in 33, precisely the same proportion is also found by taking the average of the three specimens of Mr Clayton's case of glycosuria. It would be instructive to know the diet prescribed in this case of glycosuria, the relatively high urea and phosphates found in specimen C lead to the conclusion that meat was a liberal item in the patient's dietetic treatment.

Judging by Dr S Vere Pearson's[3] and Mr A. W Pereira's[4] clinical observations on the apparent uselessness of urea in the treatment of tuberculosis, Dr Gilchrist's theoretical objections seem to be justified. Concerning the one point on which Dr H Harper and Dr Gilchrist agree with most modern opinion—that is, on the necessity for a highly nitrogenous diet in the treatment and prophylaxis of tuberculosis —I should feel inclined to follow the suggestion of Dr Gautrelet and to draw the supply of nitrogen at intervals from the leguminous plants, we know in fact that peas and lentils contain more nitrogen than meat in the proportion of about 46 to 42. I am, Sirs, yours faithfully,

J O B STATHAM,
Captain R.A M C

Nice Dec. 22nd 1902.

SIR THOMAS BROWNE'S EVENING HYMN

To the Editors of THE LANCET

SIRS,—In THE LANCET of Dec 20th, 1902, p 1702, the reviewer of a new edition of the "Religio Medici" states that he cannot call to mind any editor who has pointed out the similarity between Bishop Ken's Evening Hymn and the dormitive which Sir Thomas says he took "to bedward" In Gardiner's edition (1845) there is the following note 'Compare this with the beautiful and well known 'Evening Hymn' of Bishop Ken, and these again with several of the Hymni Ecclesiæ, especially that beginning 'Salvator Mundi, Domine,' with which Ken and Browne, both Wyckhamists, must have been familiar"

I am, Sirs, yours faithfully,

Baltimore Jan. 2nd 1903
WM OSLER.

THE DISCHARGE OF LARVÆ FROM THE STOMACH

To the Editors of THE LANCET

SIRS —The references in THE LANCET of Sept. 27th (p 891) and Nov 29th (p 1487), 1902 to the vomiting of the larvæ of dipterous insects, remind me that in the summer of 1900 I met with such a case. This was of an infant in arms, fed by the bottle who was said to have vomited maggots. The mother was directed to preserve the maggots if the vomiting was repeated, and some days afterwards a cluster of about 35 or 40 larvæ was produced. These were alive and being placed in water lived till the next day They were 'club shaped," tapering regularly from head to tail, and measured from four to eight millimetres in length, one was much longer, being about 11 millimetres. They had distinct red eyes A number were sent to the Clinical Research Association, which said it was unable to identify them. It was necessary to take the mother's word that they were actually vomited by the infant, but there could be no reasonable doubt about it. They were only noticed twice and were probably not sought for in the motions Beyond some slight gastro intestinal disturbance common in bottle fed infants in summer, there was little the matter with the child —I am, Sirs, yours faithfully,

Edgeworthstown
J F KEENAN, M.B. R.U.I.

RIGHT-HANDEDNESS AND LEFT BRAINEDNESS

To the Editors of THE LANCET

SIRS,—With all due deference to a master in science like Sir Samuel Wilks I would like to observe that in this, as with many other rather obscure physico mental acts, we should never lose sight of the three great fundamental modes and methods of reflex cerebral activity—reason, sensation, and will. Sensation inclines us to adopt modes of action most agreeable to the present comfort and pleasure of the individual, reason suggests what ought to be the mode, and will, or more properly speaking volition (for I suppose there must be a faculty of this nature), determines what the mode shall be The determination of a preferential right handedness is one of these modes due to a cerebro-spinal *functional* activity A subject of this kind, not easily susceptible of scientific demonstration, is very apt to make one drift into a form of physiological transcendentalism, but what I mean to urge is that there is no satisfactory and decided clinical evidence that right handedness has a structural foundation but that all such manifestations depend on outside influences acting on the brain centres—the combined result of education and necessity Let it be understood, however, that that centre is not preferential but a centre common to both the left and right side of the system How otherwise explain the philosophy of habit and, indeed, of many of the well recognised instincts of our nature? That the left hand should by no means hold a subservient position in reference to the right may readily be accepted if we consider the dual functional activity as seen in many handicrafts. In the days of a less exalted civilisation, before steam was so universally accepted as the great motor power, I have watched with interest and admiration the deftness with which the hand loom weaver used both hands in his daily occupation. His was an ambidexterity illustrating not only the aristocratic position of the left hand but the fact of left-handedness being not only a possibility—a desideratum—but a necessity of his workaday existence No one can deny that right-handedness is *preferential* and, indeed, almost a physical necessity because it appeals to the present, and often urgent, necessities of the individual. Left-handedness is *potential* and takes the position of a *reserve* force, a power which can be called into action under conditions of necessity when the other is in abeyance. This is all I claim for it. As Sir Samuel Wilks observes in his criticism, man is a two sided animal with an inequality as to functional power on one side as compared with the other. No doubt about this, but like many functional processes under the direct dominion of brain man's nature is amenable to outside influences and the conditions, as before remarked, of his environment. He can adapt himself to circumstances and make his left hand serve his needs if the right cannot. Hence education, hence training of children, hence the necessity of what we know as professional teaching—in short, of any kind or description of cult whatever Apologising for the length and prosiness of this letter I trust that though I may, like Mr Kipling's orang outang "Bimi," seem to have "too much ego in my cosmos," you will give me credit for the desire to give an all important point like this all the careful consideration it deserves.

I am Sirs, yours faithfully,

Rothwell Northamptonshire
JAMES MORE, M D Edin.

INTRAVASCULAR ANTISEPSIS

To the Editors of THE LANCET

SIRS,—Due importance will be attached by clinical observers to the results published in THE LANCET of Jan. 10th, p 98, of Dr J M. Fortescue Brickdale's able investigations into the subject of intravenous antisepsis, which conclusively demonstrate the inefficacy for direct germicidal purposes of our antiseptics of the day, used in the shape of intravenous injections Intravenous medication, however, is a distinct and much wider subject to which it may be premature to apply the same sweeping conclusions. Indeed, the proof that the injections are inert as germicides favours the impression, which for my part I have long entertained, that their beneficial effects are due to some other mode of action which it would be important to investigate and opens up the question as to the nature and the range of their usefulness. Internal therapeutics have not yet been reduced to the exclusive administration of antiseptics only, and if other remedies are still worth administering by the mouth for the treatment of intravascular conditions such as atheroma, aneurysm, endocarditis, and blood diseases in general, it may not be unreasonable to keep an open mind as to the possible advantages of the shorter route. This also applies to the treatment of pulmonary affections, because of the directness of the road of access. In the case of acute pneumonia the effects I have obtained with injections of protargol have appeared to me to be sufficiently striking to deserve further consideration from the pathological, as well as from the clinical, standpoint. I am not prepared to say whether the rapid reduction in temperature and the manifest general improvement in the clinical condition of the patients were due to the minute dose of protargol (from one half to one grain) or to the bulk (from 20 to 40 cubic centimetres) of the saline solution injected. Possibly the normal saline solution alone might have acted as well. At any rate the successful employment of collargol in two cases of pneumonia has quite recently been reported by M. R. Moutard Martin and M. P Thaon,[1] and at the same meeting M. Netter[2] referred to his successful treatment of a very bad case of infective endocarditis by the same agent The discovery of better remedies than the salts of silver may be hoped for in the future, but the results hitherto obtained with the help of the latter indicate that our study of the intravenous method should not be considered as closed but as barely opened as yet. I would be the last to advocate the indiscriminate use of this form of treatment I have myself often refrained from using it because I consider that it should not be undertaken except by skilful and highly-trained operators. The procedure is difficult and not free from anxiety These are also the limitations inherent to most of our life-saving surgical operations, but they have not been urged as arguments for depriving us of the benefit attaching to the risk.

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[3] THE LANCET Nov 22nd 1902 p 1383

[4] THE LANCET Nov 29th, 1902 p 1486

I am Sirs yours faithfully

Curzon-street, Mayfair Jan. 12th, 1903. WM EWART.

THE THORNTON HEATH SLATE CLUB AND DR W B ADDISON

To the Editors of THE LANCET

SIRS,—By the kindness of a fellow practitioner my attention has been drawn to a paragraph in THE LANCET of Jan. 10th p 143 coupling my name with the word ' advertisement.' I enclose a letter from the secretary of the North Croydon Benefit Society showing that I was completely ignorant of the existence of the handbills you mention. I knew nothing of them , the possibility of the existence of such things had never even entered my mind. I have now severed my connexion with the club, which contains only 53 members, and is the only club appointment I have held during the seven years I have been in practice here By putting the word Advertisement" over your paragraph you distinctly accuse me of advertising As I knew nothing of the handbills it is obvious that I have not been advertising and it is equally obvious that it is a scandalous thing that I should be accused by a paper of the supposed high standing of THE LANCET of doing a disgraceful act without a shred of proof that I knew anything of the matter at all Your advice to me to withdraw my connexion with such clubs is quite unnecessary , my standard of medical etiquette is not only as high as any advocated by THE LANCET, but in view of the paragraph mentioned is really higher Fortunately, my reputation among those of my fellow practitioners in this neighbourhood who are most anxious to uphold the dignity of the medical profession is such that I can honestly say they are more annoyed by your paragraph than I am.

If you have any wish at all that I should not be prejudged you will publish this letter in its entirety

I am, Sirs, yours faithfully,

W B. ADDISON.

Parchmore-road, Thornton Heath, Jan. 12th, 1903.

[INCLOSURE.]

" Fernlea," Westbrook road Thornton Heath,
Jan 11th, 1903.

SIR,—It having come to my knowledge that a paragraph appeared in your paper condemning Dr Addison for allowing his name to be issued on handbills distributed in this neighbourhood I wish most emphatically to state that it was done without any consent being obtained from Dr Addison the bills were all distributed before he knew anything about it. I sincerely hope, in justice to Dr Addison and in order to allay anything I may have done to injure his reputation, you will publish this letter I remain, yours truly

F J RUNDLE.

Secretary North Croydon Benefit Slate Club.

⁂ We are glad to learn that Dr W B Addison's name has been taken in vain by the club from which he has severed his connexion.—ED L.

THE MEDICAL MAN, THE CORONER, AND THE PATHOLOGIST

To the Editors of THE LANCET

SIRS,—On Jan. 2nd I was called at 9 30 A.M. to see an infant at 76, Speke-road. On arriving at the house I found that the child had been dead some time, the hands were clenched, the thumbs were turned in, the toes were drawn up, the tongue protruded slightly through the gums, and there was some mucus on the nostrils , the sides of the face were a deep purple. The child had been sleeping in bed with the parents who were in very poor circumstances I sent the usual communication to the coroner s officer and the only acknowledgement I received from the coroner was a verbal message that Dr Freyberger would let me know when he was going to make the post-mortem examination

I inclose a report of the case and you will observe that Mr Troutbeck delivered a little homily to the jury in which he pointed out the importance of employing a pathologist of special skill in these cases. Now I have been making post-mortem examinations in this neighbourhood for 18 years and I have given evidence before all the coroners who have held inquests in south-west London during that time. I have reported scores of similar cases in which the question always arises as to whether the convulsion, if any, which might have caused death arose from partial asphyxia due to overlaying or otherwise, and it stands to reason that the medical man who sees the child lying in the bed and who knows the people and their surroundings is in a far better position to judge of the case than a stranger who does not make a post-mortem examination until three clear days afterwards I may mention here that the child was washed and laid out after I saw it thus removing most of the external diagnostic signs, and there was nothing revealed by the post-mortem examination which could not be seen by any medical man who knew his work. In the circumstances I am utterly at a loss to understand the coroner's remarks, for there was nothing in the case calling for a special pathologist, while there was every reason to call in the medical man who first saw it.

I am, Sirs, yours faithfully,

LEONARD S MCMANUS, M.D., M.Ch R.U I.

St. John s Hill, S W Jan. 12th, 1902.

⁂ We cannot attempt to explain what cases Mr Troutbeck considers " special. Of course, the only medical witness who could help the jury in any practical way in such a case as the one detailed above was the practitioner who first saw the body —ED L.

MEDICAL FOLKLORE—Recently at Luffincott, a little village in Cornwall, an unusual event took place. An agricultural labourer sat in the church porch on Sunday and collected half a-crown in pennies from the congregation, the thirtieth donor giving a half crown and taking up the 29 pence as change. A ring is to be made from the silver coin and by this ring the collector expects to be cured of fits. This is one of the relics of witchcraft which is still to be found in the remote parts of Devon and Cornwall.

THE THERAPEUTICAL SOCIETY—The object of this new society as stated in the rules' which have just been issued, is the advancement of knowledge in pharmacology and therapeutics by the holding of meetings, the reading of papers, the exhibition of drugs and specimens, and such other means as the council may determine." All duly qualified medical practitioners of either sex are eligible for fellowship, and the subscription is 10s. 6*d* a year Ordinary meetings will be held on one Tuesday afternoon in each winter month, from January, 1903, at 4 P M.

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[1] Bulletin et Mémoire de la Société Médicale des Hôpitaux de Paris Dec. 25th, 1902, p. 1151.

[2] Ibid.

BRISTOL AND THE NON-VENTILATION OF SEWERS

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

WHILE, on the one hand, strenuous efforts are being made to discover and to apply really effective methods of ventilating sewers, on the other a reaction has taken place and an impression is gaining ground that this is all a mistake. We are told that it is not necessary to take any trouble whatsoever about ventilating sewers, that such efforts do more harm than good , that ventilators do not remove but create a nuisance , that instead of purifying the sewers we contaminate the air which we draw into them for purposes of ventilation and that then this befouled atmosphere is discharged through grids into the street and under the feet of the pedestrian Better by far close up these grids and let sleeping dogs lie , that is, avoid disturbing the mephitic emanations that may be forming in the sewers below Finally, and to clinch these arguments, the favourable vital statistics of Bristol are given, and we are told that in this town there is no ventilation of any kind for the sewers. All this seems somewhat startling and disturbs the generally accepted principle that sewers should, on the contrary, be very carefully and thoroughly ventilated At first sight, also, the assertion sounds as if some persons believed in what is obviously a physical impossibility It stands to reason that an air tight sewer is an impossibility If the air could not get out of the sewer it would be so compressed by an inrush of storm water that the sewer would explode. Still the statement is repeated over and over again that the sewers of Bristol are not ventilated This is a mischievous assertion, for it provides supine local authorities with an excuse for neglecting altogether a very important part of their duties Complaints may be made that the ventilation of the sewers in some town or part of a town is very unsatisfactory and occasions many inconveniences Thereupon the local authority, instead of attempting to find a remedy, replies that it is thinking of imitating the example of Bristol and of closing all the ventilators, so as to solve the problem by doing away altogether with any sort of ventilation It will easily be seen to what dangerous lengths such a policy of "masterly inactivity' may be carried

In these circumstances it seemed necessary to ascertain on the spot what really had been done at Bristol. The result of these investigations is just what it was natural to anticipate—namely, that there is no brief or simple answer to a very intricate problem that varies in its practical application as the aspects of nature vary It is true that at Bristol there are no grids ventilating the sewers on the street levels , it is even true that there are no ventilating shafts purposely constructed to discharge sewer air at some higher altitude than the road surface but it is not true that there is no ventilation for the sewers Not only is this assertion false, but it is beyond human power to render it true. A sewer must be ventilated more or less or it must burst All that can be said is that it is the "less" rather than the "more" which obtains at Bristol and the only question that can be discussed is whether this is an advantage or not. Then, again, if it is an advantage, would the same principle be equally beneficial if applied to other towns ? These are all questions which are greatly modified by local conditions and what is possible at Bristol may be utterly impracticable elsewhere.

First it must be borne in mind that some of the sewers of Bristol are nearly 100 years old. This the late Mr Frederick Ashmead, engineer of the city, explained in 1877 to the Association of Sanitary Engineers Formerly the ships that came up to Bristol with the high tide were left on the mud as the tide receded The ships built for the Bristol merchants were so constructed as to stand this, but it damaged other vessels The latter consequently avoided the port and Bristol merchants thus secured a sort of monopoly for their ships. From the health point of view the receding tide was an advantage as it helped to carry away what little sewage then reached the river It was not till 1803 that, the Bristol Dock Company having been formed, a new water channel was cut, the rivers Avon and Frome were dammed up, and locks and basins were constructed so that water might be retained when the tide went out and the ships thus be kept afloat. This great work was completed in 1809. But soon complaints began to arise, as bad odours came from the stagnant water of the floating docks or harbour These continued till 1825 and by that time sewers of the length of five and a half miles emptied themselves into the floating harbour, where there was no tide to clear the sewage away To abate this nuisance what is known as Mylne's Culvert was constructed to conduct the sewage directly into the Avon This sewer measures five feet six inches by five feet and has a gradient of 1 in 247 Then another sewer was built which falls into the river above the Tottenham Lock and measures three feet six inches by three feet and has a gradient of 1 in 300 These with older sewers made in all 41 miles of sewers existing at the time of the adoption of the Public Health Act. In 1851 the outlying districts joined to form with the old town the new city and county of Bristol, which had a special committee to deal with health questions It was then decided that the different districts should be drained separately In describing all this Mr Ashmead said, for instance, that the Bedminster district got a sewer four and a quarter by four feet which, going down 40 feet to Nelson terrace, there fell into another sewer six feet by five feet six inches which he describes as "a containing sewer reservoir" with a gradient of only 1 in 300 Then he went on to say that "the sizes of the several sewers in each district are calculated to carry five cubic feet or 31 5 gallons per head per diem for a variable population of from 30 000 to 50,000 per square mile according to the district and a quarter of an inch of rainfall in 24 hours, storm overflows being formed in all cases where possible to provide for a greater rainfall " The several districts have for the most part separate outlets into the tidal river The sewers were not provided with ventilators, but in the high level district of Clifton at low water when the mouth of the sewers was exposed the draught blew up into the houses and an air valve had to be inserted. Thus, in this case instead of there being no ventilation, the ventilation was so extremely violent that it had to be checked The whole of the other sewers—by which presumedly is meant the main collectors—being, Mr Ashmead stated, low level sewers, have double tidal valves fixed at their outlets These valves are self acting, of cast iron, and oval or circular in form They are hung with chains and bedded in indiarubber At low tide they retain the sewage which, gradually filling the up sewer, forces the air back till such time as the accumulated sewage can be let out into the river This constitutes a sort of artificial breathing or pumping, and as it occurs twice in the 24 hours it naturally helps to ventilate the sewers. At the time when this paper was read there were five separate sewer outfalls into the tidal river The cost of building the sewers amounted to £168 071 and the population of Bristol was 202 950 The average death rate before these works were carried out was 28 per 1000 of the population and for the year ending January, 1877, it was 22 7 per 1000 In answer to questions Mr Ashmead professed the greatest ignorance as to the condition of the atmosphere within the sewers. They were all made of bricks—no main sewers were made of pipes—and they were never flushed. 'We never flush them," he declared, ' and have never had occasion to spend a penny for water for flushing purposes in any shape or form, the flow of water is always sufficient." On inquiry I found that this assertion still applied to-day and that no efforts were made to flush the main sewers Nor had anything been done to ascertain the rate at which the air travelled in the sewers In some sewers in the old part of the city what is called sewer gas had been noticed, and in those cases two manholes instead of one were opened so as to set up a thorough draught before allowing anyone to enter

From all this it will be seen that several of the main sewers of Bristol are low level sewers built half a century or more ago and at a time when the necessity of ventilation had not been recognised Then the town began to extend rapidly and outlying districts were annexed to the old historical borough Such extension necessitated the going uphill This is a great fundamental fact Old Bristol lies at the bottom of a basin. There are hills, not on one side, but all round, and these hills rise to a height of 350 feet and are all covered with habitations. Therefore it is not a mixed but a uniform problem. From all points of the compass the topography is the same—namely, the sides of the basin rising up from the flat centre. Consequently one and the same system serves equally well for all districts, this cannot be said of most other towns. In these circumstances it was to be expected that the sewers coming down from the high levels would act as ventilating shafts for the main and large sewers that serve as collectors and are situated on the low levels But this, we are told, is prevented by air valves which open to let the sewage out but close against a pressure of air travelling upwards. Apart from this protection the sewers coming from the high levels are many of them of recent and excellent construction Then they have such precipitous falls that they are not only self cleansing but the sewage travels along them so rapidly that it has not time to decompose and to create a nuisance. Mr. T H. Yabbican, M I C E, the present city engineer of Bristol, reporting on the subject in October, 1898, said —

> *Where sewers are properly constructed with rapid falls* the sewage is not retained sufficiently long for decomposition to set in and no sewer-gas is evolved. I have made experiments to ascertain the rate of flow in the Clifton high level main sewer which has a gradient of 1 in 300 and find that with the dry weather flow the speed is one mile in an hour Most of the branch sewers have much steeper gradients so that any sewage discharged from houses in Clifton or Redland probably finds its way into the tidal river within two hours. When any rainfall occurs the speed of the flow in the sewer is very greatly increased The velocity of a sewer three feet in diameter in a gradient *of 1 in 300 running full is 355 feet per minute.*

Consequently the sewers that run down the many hills on which Bristol stands are not likely to occasion much nuisance, and therefore, *even if not efficiently ventilated, would not cause much inconvenience* But it is a gross error to maintain that the sewers are not ventilated Mr W J Steele assistant engineer of the city, read a paper before the Bristol Association of Engineers on Dec 14th, 1901, and he then said —

> It is not claimed that air cannot enter or emerge *from* the sewers of Bristol because it is practically impossible for any sewerage system to be constructed so that this condition can be obtained nor is it desirable that it should because every *rain storm* would possibly cause the manhole covers to be blown from their *seatings* but it has not yet been proved that any special means for *ventilating the sewers* is necessary

Here, then, we have an admission, an *official* admission, that there is and that there must be some sort of ventilation, but Dr D S Davies, medical *officer of* health of Bristol speaking at the Congress of the Sanitary Institute held at Southampton in 1899 gave *some indication as to* how this ventilation takes place. *He* said —

> *If* any *shafts at all* are required an occasional upcast here and there would suffice to equalise pressure caused by unequal flow admission of *storm* water &c. but even these appear *to* be *superfluous* for should the *sewer-air pressure* increase so as to pass the water seal of the intercepting trap it finds immediate vent up the open soil pipe ventilator and *cannot enter the house* And where the street gullies admit storm water to the sewers, as in *Bristol* a further safety valve through the water seal of these gullies is *afforded with this* advantage, that the escaping air is washed as it bubbles *through and* causes no offence on its escape into the street air The only time indeed, when in *Bristol* we get *smells* or complaints from the sewers is after prolonged drought when the gullies dry and our system approximates to that of a ventilated town this is easily set right by *sending* a water cart round to fill up the gullies.

In regard to the latter point the fact that a gully when dry gives off bad odours would imply either that the gully itself was in a *dirty condition or that* the sewer below was not self cleansing and that the gully was doing more than its share of ventilation but it does not mean that ventilation is an evil or that it would cause nuisance if properly managed The really important point is the admission that the drainage of Bristol is based on a widespread dispersion of safety valves. Many years ago I believe, at Leeds, midden privies were abolished and the houses of one of the best high level districts were *connected* with the sewers The result was an outbreak of typhoid fever in this district Sir William Rawlinson was called in to advise. He found that the street gullies, like those in use at Bristol to-day were all trapped. He *forthwith* ordered the water seals to be broken and thus at once converted the gullies into sewer *ventilators. Thereupon* the typhoid fever epidemic ceased. The position was not unlike that at Bristol. There was a low lying and comparatively unhealthy district with big main sewers that had slight gradients A high level healthy district was invaded by typhoid fever when it was connected by unventilated sewers with the main sewers below As a *matter of fact, it* is incorrect in both cases to say that the sewers were not ventilated—it is only correct to say that no *special means* of ventilation were provided. In both cases the sewers as admitted by Dr Davies in regard to Bristol were ventilated through the syphon water traps. This had a disastrous result at Leeds because in those days the *forcing of* the water seal meant the admission of sewer air into the houses The safety of Bristol to-day is based on the *fact* that when the sewer air has forced its way through the water trap it does not enter into the house. It is the interceptor trap, situated at the foot of the house drain and near the point of its junction with the sewer, that is forced The sewer air then enters the domestic drain, but great care is taken to continue the soil pipe up to, and above, the roof of the house. Of course, it is easier for the sewer air to escape over the roof of the houses than to force its way through a second series *of water traps that are under the sinks or the* pans of the closets But for this modern method of continuing the soil pipe to the roof of the houses the result of not ventilating the sewers into the streets would probably have been as disastrous at *Bristol as it has* been elsewhere. As matters now stand we find a somewhat restricted system of sewer *ventilation* through the house drains, for such ventilation, instead of being constant, only occurs when there is extra pressure in the sewers But by the side of this restricted ventilation there is also some constant ventilation, especially where it is most needed, namely, in the larger sewers, the older sewers and those that have but slight gradients and are therefore not self cleansing These are for the most part on the low level, they approach the water-courses and this is where the storm overflows are situated. Naturally, every *storm* overflow, *though not built for that purpose,* is a sewer ventilator Even if it is provided with a flap valve this must open to let out the overflow, that is to say, it opens just at the moment when the air within the sewer is compressed by the inrush of rain water and there is most need of apertures to act as ventilators and to relieve this pressure Then these old sewers leak in several places, and each leak serves as a ventilator not to mention numerous rat holes Finally—and this applies to all parts of the town—there are a certain number of houses that have *no interceptor* trap whatsoever Their *soil-pipes* plunge directly into the sewers and allow the sewer air to travel up to the roof of the houses without let or hindrance. This is especially the case with all old houses unless the drains have been purposely dug up so as to introduce interceptors, and it is precisely where the older houses exist that the need of sewer ventilation is likely to be the most urgent. Thus at Bristol there prevails a system of ventilating the sewers through the house drains and on to the roof of the houses. Where this is done openly, as for instance at Leicester, many of the householders resist, at Bristol it is done "unconsciously" This, indeed, is the *word* that on several occasions has been used to describe the *method* in vogue at Bristol, and it is claimed that the "unconscious" system of ventilation gives results that are as good as and even better than, those obtained by the deliberate or "conscious" provision of *openings* for the purpose of ventilation.

A statement to which great publicity has been given was made by the medical officer of health comparing Bristol with *Brighton and Croydon.* The average general death rate for the 10 years from 1887 to 1896 was 20 6 per 1000 for the 33 great towns 19 9 for London, 18 9 for *Bristol* including Clifton, 17 7 for Brighton, 14 5 for Croydon, and 13 8, according to local *returns,* for the district of Clifton. The deaths due to fever were 11 per 100 000 for each of the three towns, but the deaths due to diphtheria were 13 for Bristol, 18 for Brighton, and 32 for Croydon, and to diarrhœa 49 for Bristol, 66 for Brighton, and 46 for Croydon This was the annual average during the ten years per 100 000 The fever *mortality,* therefore, was exactly the same whether the sewers were purposely ventilated as at Brighton and Croydon, or only accidentally ventilated as at Bristol, but there was not so high a mortality from diphtheria and diarrhœa at Bristol These figures are given in a report on the non ventilation of Bristol sewers presented to the city council in November, 1898 and *there* it is also stated that the average annual zymotic death rate for 10 years 1881 to 1890 was 2 16 per 1000 at Brighton and 2 12 per 1000 at Bristol, and that that for diphtheria, diarrhœa, and fever combined was 0·98 at Brighton and 0 77 at Bristol Therefore the report concludes that —

> There is no *reason to expect* any improvement in the present satisfactory returns as to the sickness and mortality There is no reasonable hope of improvement but rather the reverse.

This report urges that there is *no risk* of sewer air entering houses as it would be carried to the *roof* of the houses on forcing the interceptor Thus we find here another admission that this probably occurs, and, indeed, there is no attempt to conceal the fact that the interceptor traps are looked upon as safety valves, that is to say, they are not traps to prevent the passage of sewer air, but on the contrary valves to allow the air to escape when there is a pressure strong enough. Thus the ventilation is not prevented, it accidentally occurs in many places and where there is extra pressure it can take place everywhere, for every soil-pipe can then become a sewer ventilator But supposing that other ventilators than the house soil pipes were provided —ventilators that would enable a constant current of air to pass through the sewers, that would prevent the possibility of any pressure capable of forcing the water seal of the house interceptors—what would such an undertaking imply? It has been calculated that some thousand or more such ventilators would be needed and this might cost, it is stated, some £40,000 Why it is urged, spend this large sum to imitate other towns which though they thus ventilate their sewers, obtain inferior rather than better results in regard to their vital statistics It is true that during the last two or three years there has been some increase in the prevalence of typhoid fever and diphtheria in Bristol, still it must be acknowledged that so far as statistics are concerned they supply no evidence to show that the "unconscious" ventilation prevalent at Bristol gives worse results than the "conscious" ventilation applied in other towns The example of Bristol seems to indicate that the ventilation of sewers has been so badly managed in some towns that Bristol without any management at all and trusting simply to the chapter of accidents has obtained results which are quite as good if not better This does not mean that therefore every town authority may as well shut up its ventilating grids and likewise trust to a chapter of accidents Every town has not got a tidal river to occasion the pumping of air in and out of the sewers twice a day Nor is every town built at the bottom and up the sides of a basin as is Bristol Every town has not the same proportion of newly built self-cleansing sewers running down precipitous hills Every town has not got the same proportion of soil pipes prolonged over the roof of the houses ready to act as sewer ventilators as in Bristol, and, above all every town is not constantly swept and purified by the pure sea winds from the Bristol Channel. Therefore it would be very dangerous and unwise to conclude that what obtains at Bristol can be indiscriminately applied elsewhere.

MANCHESTER

(FROM OUR OWN CORRESPONDENT)

Exemptions from Vaccination.

THERE are considerable differences in the reasons given by magistrates for exemption or non exemption from vaccination. Recently Mr Makinson, the Salford stipendiary, is reported to have "very unwillingly" granted a vaccination exemption certificate to a young man who thought vaccination detrimental to health and said that a relative was short-sighted as a result of it. The magistrate spoke of the folly and danger of neglecting it but said— ' It would not matter if we could put such cranks in some isolated place but we cannot. However, you appear to have some conscientious objections and you can have the certificate" Here the existence of a general conscientious objection is held to be a sufficient reason for granting exemption. In refusing two applications for exemption certificates at Altrincham in September last Judge Bradbury, who presided on the bench, said that his view of the law was "that an applicant must satisfy two magistrates that his own child was liable to suffer from vaccination and he must bring evidence to that effect. A general objection to vaccination was no good It would be a boon to the country if all magistrates took Judge Bradbury s view In the vaccination returns issued recently it is stated that in 1901 in Lancashire alone there were 5270 exemptions granted and 97,556 vaccination certificates, the births being 126,638 In the meantime small pox spreads apace

The Oyster Scare

Manchester has so far happily escaped any ill effects as regards health from sewage carrying oysters, but the "barrel business' at Christmas is said to have been 25 per cent. less than usual. Many, probably most, of the oysters used in Manchester are American and deep sea oysters, which are, it is believed, safe from sewage pollution which has chiefly prevailed on the south coast. The "Old Shambles" in Manchester are very much given up to oyster bars and shops and the consumption there is said to have been as large as ever and most people have not troubled themselves about the scare. But the crowd may know that the oysters do not come from the south coast Alderman Stanley, "whose firm virtually supplies all Manchester," thinks that the Government ought to insist on the fisheries being registered and that there should be a Minister for Fisheries. Another large firm considers that the scare has injured the "native" and barrel trade nearly 50 per cent, but that it will ultimately benefit trade, "for it was right that more care and discretion should be taken in choosing oyster beds"

Small pox in Salford

At the meeting of the Salford council on Jan. 7th Mr Pinder asked how it was that ten cases of small pox had occurred at the Hope Hospital, which is under the control of the Poor law guardians, "seeing that small pox was a disease against the attack of which every person could make himself secure by vaccination and revaccination." The answer of the chairman of the health committee was that revaccination did not take place in the cases referred to until after exposure to the disease, and he "regretted that people who knew nothing about the disease should set themselves up as authorities on it as against medical men." This, no doubt, is a very proper sentiment, but it implied that blame attached to the guardians, indeed, it was further stated that one of the guardians said it was a shame that "poor old daddies" should be vaccinated and yet the first case was that of a man, 72 years of age. A day or two after, on Jan. 9th, a meeting of the Salford guardians took place and a motion was of course proposed deprecating the tone of the discussion at the council meeting and condemning the action of the chairman of the health committee. This was carried, but about half of the guardians did not vote. Indeed, the lady guardian who proposed the motion, though saying that the board had done all in its power to prevent small pox from entering the hospital or spreading in it, acknowledged that some laxity had occurred. The moral of it all seems to be that the various authorities should work cordially together, that too much vigilance cannot be exercised, and that even ' poor old daddies" aged 70 years and over should have the safeguard of revaccination. However, Salford is to be congratulated on the fact that the chairman of the health committee was able to announce that the death rate in the borough for 1902 was only 19 per 1000 which is a "record" for Salford. Indeed, in regard to small pox it has fared better than many of its Lancashire neighbours, as there have been only about 20 cases.

Joint Hospital for Cheshire

At the meeting of the Northwich rural, Northwich, Winsford, and Middlewich urban joint hospital committee, held on Jan 9th, a communication was read from the Cheshire county council stating that the Local Government Board had sanctioned the borrowing of £2000 for the purchase by the committee of the site for an isolation hospital on the understanding that neither the site nor any building upon it shall be used for small pox.

Baguley Sanatorium.

There are now 28 fever patients in the Baguley Sanatorium belonging to the Withington urban district council. It was opened a few weeks ago Patients are received from the urban districts of Withington, Moss Side, and Levenshulme, and from the districts within the authority of the Bucklow joint hospital board So far the arrangement seems to work well. The patients are brought from their homes in charge of hospital nurses in a large brougham ambulance and when discharged will be taken back in a smaller brougham At Newall Green, about a mile from the sanatorium, corrugated iron buildings have been erected for small pox patients from Withington and Moss Side, which are nearly ready for occupation, should the necessity arise

Jan 13th

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT)

Professor Adolf Lorenz in Liverpool and Birkenhead

Interesting Demonstrations

ON Jan 10th Professor Adolf Lorenz of Vienna visited the Royal Southern Hospital, Liverpool, for the purpose of ionstrating some of his methods of treatment A large ience of medical men filled the clinical theatre. 17 cases congenital dislocation of the hip had been collected by Robert Jones one of the surgeons to the hospital, ether with seven cases of club-foot and some cases of disease with marked deformity Professor Lorenz first nonstrated his bloodless method of reduction in a case of lateral dislocation of the hip in a girl, aged eight years age limit beyond which cases are generally unfavoure. After thoroughly stretching and tearing the tense luctors and extensors and rendering the parts about hip "flail" he reduced the dislocation by causing upper end of the femur to rotate around the lower rgin of the acetabulum and to enter the socket By ced manipulation the socket was made more like an mary acetabulum and he was able to demonstrate arly the slipping in and out of the bone. The thigh was n incased in plaster-of-Paris by Dr Müller in the most shed and perfect manner, the position being that of luction, rotation and extension at a right angle to the ly so as to jam the head of the bone against the anterior t of the acetabulum. Dr Lorenz next proceeded to lace the dislocated heads of the femur in a case of double igenital dislocation in a child, aged three years this being uitable age for his method, the reduction only occupied ew minutes and the patient was fixed in plaster-of-Paris the same manner as in the former case. A demon ation was next given of his modelling *redressement* talipes equino-varus the foot being afterwards placed in ster-of-Paris. The apparatus which he uses for correctg "short leg" in hip disease was next explained. The dience, which consisted of well known surgeons from ndon Birmingham, Liverpool, Wales, &c., was a most thusiastic one, and Professor Lorenz's demonstrations were ceived with great applause, everyone agreeing that in ndity and completeness they could not be surpassed On n. 11th Professor Lorenz paid a visit, among other places ar Birkenhead, to Heswall, for the purpose of viewing the e for the hospital for chronic diseases of children, in hich he took a great interest, and said he hoped that before ng Austria would follow the example of France, Germany, d England by founding similar institutions. He also pressed himself pleased with the arrangements in the cal hospital.

Liverpool Medical Institution.

At the annual meeting of the Liverpool Medical stitution held on Jan. 8th the following list of fice-bearers members of council, and committees was dopted.—President Mr Rushton Parker. Vice-Presidents r J E Gemmell, Dr W Permewan, Mr H Briggs, and r. G W Steeves. Honorary treasurer Mr T H ickerton Honorary general secretary Dr J R. Logan. onorary secretary to ordinary meetings Dr. J Hill bram. Honorary librarian Dr F H. Barendt. Council Ir. E. A. Browne, Dr W Murray Cairns Mr D Douglasrawford, Dr J E. Nevins, Dr W B. Warrington, Mr C. Larkin, Mr W J R. Dunn, Mr F T Paul, r J Pinkerton Dr A. Fisher Mr. C. T Street, nd Dr. A. S. F Grünbaum. Auditors Mr Douglasrawford and Mr G Westby Pathological and Microcopical Committee Professor R. W Boyce, Dr R J M. Buchanan, Mr Douglas-Crawford, Dr R. J Ewart, Dr E. Glynn, Dr Grünbaum, Dr. J Hay Mr R W Monsarrat, Professor C S. Sherrington, and Dr. Warrington ournal Committee Dr Abram. Mr Monsarrat, Dr Barendt, Ir Larkin, Mr G P. Newbolt, Professor A. M. Paterson, Mr W Thelwall Thomas Dr A. J Wallace, and Dr Permewan.

Jan 14th.

SCOTLAND

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Royal Infirmary

THE annual meeting of the contributors to the Edinburgh Royal Infirmary was held on Jan. 5th in the city chambers. In the absence of the Lord Provost the chair was taken by Lord Pearson The annual report stated that 9961 in patients had received treatment during the year as against 9552 in the previous year The average daily number of patients was 725 as against 701, the average daily number of children under treatment was 62 as against 61, the average time each patient was under treatment was 26 6 days as against 26 8 days, and the largest number of patients on any one date was 770 against 759 and the lowest number 601 against 591 Of the cases admitted 4878 came from Edinburgh, 553 from Leith, and 3914 from the country The percentage of deaths to cases treated was 8 3 as against 7 8 last year This increase was almost entirely due to the fact that 218 deaths—an unusually large number—had taken place within 48 hours of the patients admission, occurring for the most part in cases of severe injury or in cases of a hopeless nature. The out-patients during the year had numbered 29 765. The ordinary income for the year amounted to £32,621 6s 4d as compared with £33,522 14s 8d. in the previous year, a decrease of £901 8s 4d Voluntary contributions showed a slight net increase as well as the contributions from churches and donations and legacies under £100 The revenue from interest, dividends &c., showed a decrease of £892 6s 8d The receipts from students' fees and income-tax recovered showed increases of £194 14s and £190 7s 1d respectively The ordinary expenditure amounted to £47,193 11s 1d or £2351 3s 2d less than in the previous year The principal increases in expenditure had been in the matter of lights, salaries, and miscellaneous expenses, £106, £321, and £101 respectively The most notable reductions had been £307 in articles of maintenance, £89 in medical expenditure, £1822 in coals £452 in outlay on buildings and £495 in furnishing and repairs. There had been a reduction of £1 2s 8½d. in maintenance and 6s 9½d in medical expenditure for each occupied bed The entire ordinary expenditure during the year including the out-patient department had been £65 1s 10¼d per occupied bed, a decrease of £5 19s 10½d per bed on the previous year During the year legacies and donations of £100 and upwards amounted to £21,007 7s The capital expenditure had again been heavy amounting to £21,248 3s. 1d The leading items of this were £13,618 7s 4d from the extension fund for the new pavilions, £2558 19s 6d from the general fund for drainage reconstruction works, and £3602 11s 4d for the overhauling and renewing of the heating system The total free income for the general fund fell short of the total expenditure under that account by £10 451 10s 5d and the managers had to meet that deficiency by drawing on the accumulated surplus from the revenue of former years. The average number of nurses and probationers during the year was 199, being the same as in the preceding year The number of applications for admission to the nursing staff was 656 as against 627 in the previous year Blair House continued to prove of increasing value as a health resort and home of rest for the nurses It was expected that the new ear and throat pavilion and the ophthalmological pavilion would be ready for furnishing in January and March respectively The total number of patients admitted to the Corstorphine convalescent home had been 1237, a decrease of 21 on the numbers for the previous year The daily average in the convalescent home had been 63 2 as compared with 64 4 last year Of the total number 865 had enjoyed a full three weeks' residence in the home. The managers regretted to state that the total income of the convalescent home had again failed to meet the outlays, the deficit this year being £1047 8s 8d They strongly press the claims of the convalescent home as worthy of a much larger share of support from the public. The managers recorded their grateful appreciation of the unwearied services of the medical and surgical staff and of the scientific skill and professional ability displayed by them. In conclusion, while gratefully acknowledging the response made by the people of Scotland to the claims of the infirmary on their liberality, the managers emphasised the fact that the ordinary expenditure was far in excess of the ordinary income and that this condition became each year more serious. If it were not for occasional contributions and legacies of considerable magnitude the infirmary might be placed in a state of financial embarrassment. They earnestly appealed for increased financial support so that the ordinary income might be sufficient to meet the ordinary expenditure The chairman, in moving the adoption of the report, drew attention especially to the reduction in the ordinary expenditure and emphasised the fact that though the closest attention was paid to economy the greatest care was taken that nothing should be done which would in any way interfere with the efficiency of the work. The motion for the adoption of the report was then unanimously agreed to and it was remitted to a committee of contributors to consider and to report upon to a future meeting

Resignation of Sir W Muir, Principal of the University of Edinburgh

At a meeting of the Senatus Academicus of the University of Edinburgh which was held on Jan. 10th the following minute was adopted —

The Senatus having been apprised of Sir William Muir's resignation of the principalship of the University and of its acceptance by the university court resolved to give permanent expression to their deep sense of respect and affection for one who has so long presided over them and to the great regret with which they bid him farewell The Senatus were proud to receive Sir William Muir 18 years ago after he had passed through a distinguished administrative career in India and had attained a high reputation as an Oriental scholar and historian and they now desire to record that during his tenure of office by his unfailing kindness and nobility of heart he has greatly endeared himself to all connected with the university and that by his courtesy in intercourse and by the exercise of a generous hospitality he has maintained and promoted relations of amity and friendship between the University and all sections of society The Senatus recall with appreciation Sir William Muir s exemplary and assiduous discharge of the many duties of his position his warm interest in all that concerned the welfare of the University and the open handed munificence which characterised his tenure of the principalship It is the earnest desire of the members of the Senatus that he may be long spared to his many friends and that the remaining years of his life may be rich with blessings

The Principalship of the University of Edinburgh

The question of who is to succeed Sir William Muir as Principal of the University of Edinburgh is causing some interest and some talk. Various names have been mentioned, but the one which receives most attention is that of Sir William Turner, the present professor of anatomy in the University Sir William Turner has been for many years a strong University personality, his scientific position is acknowledged and his election to the chairmanship of the General Medical Council may be taken as the proof of the opinion formed of him by his colleagues on an important board It is natural, therefore, that university and medical interest should look to him as a possible and a suitable candidate. It is, however, understood that there are technical difficulties in the way It seems that a university professor is not at liberty to retire from his chair when he likes and at the same time to claim his retiring allowance, and it is not suggested that Sir William Turner should forego the pension to which he may be entitled, to take on the duties of principal on a scale of remuneration below what his professional pension might be This somewhat difficult point has, it is understood, to be settled by the University court, and it is expected that matters may be practically settled before the end of the current month

Jan 13th

IRELAND

(FROM OUR OWN CORRESPONDENTS.)

Royal Victoria Hospital, Belfast

AT a meeting of the construction committee held on Jan 8th it was announced that all the subscriptions promised, with the exception of about £3000, had been paid and that the remainder (less about £500 which owing to deaths &c., would be uncollectable) was expected to be available before the building was opened It is hoped that the hospital will be opened by the King

Rainfall in Ulster in 1902

The total rainfall in Ulster for 1902 was 40 07 inches, which is below the average (41 12) for the previous 27 years 1902 was an erratic year, the rainfall in the first six months being under the average, only 16 85 inches, in the other part of the year 23 22 inches were recorded In the wettest part of the year—July, August, and September—13 85 inches fell.

Ulster Medical Society

A meeting of this society was held on Jan 8th, the President, Dr John Campbell being in the chair Professor J A. Lindsay opened a discussion upon Difficulties of the Medical Examiner in Life Assurance Work. He condemned the excessively elaborate inquiry forms adopted by some assurance companies as tending to diminish the sense of responsibility on the part of the medical examiner and by harassing him with a multitude of irrelevant details his attention was apt to be diverted from those outstanding facts upon which the eligibility of an applicant for a life assurance policy really depended. It was vexatious to be expected to inquire into the cause of death of grandparents, to record the colour of the applicant's hair and eyes, or to put such pointless questions as "What is the applicant's temperament?" "Is there any danger of lack of acclimation?" In the long run the companies must trust their medical examiner, but they might fairly require him to write down that he had inquired into the leading facts in the family and personal history, examined the principal organs of the body and tested the urine. The examination of an applicant should be thorough and systematic but not harassing or over elaborate, and an attitude of suspicion should be avoided. It should be remembered that an applicant was not a patient and that examination for life assurance was a different matter from making a diagnosis in a difficult case. The interpretation of the applicant's history was often a difficult matter Wrong statements were often made by applicants, not usually, perhaps, from any conscious attempt to deceive but rather from the unconscious play of self interest. Deaths from phthisis were often concealed under such expressions as "died from the effects of a chill," or "as the result of a wetting," or "from hæmorrhage from the throat." Deaths from cancer and from delirium tremens were often veiled under various periphrases Long life or short life as a family trait was a fact of the first importance Of all the factors relating to longevity none was so important as the applicant's inherited tendency As Heine had remarked, "We can't be too careful in the choice of our parents." Several deaths in one family possessed a very different significance at different ages. In childhood one of the infective diseases was usually the cause, in adolescence tuberculosis, and at middle life premature vascular degeneration These facts had a very different degree of value as bearing upon life prospects. A family history of phthisis was not so seriously viewed now as formerly but its importance was not to be denied. Members of consumptive stocks, however, who had passed the dangerous age (from 15 to 3 years), who had well developed chests, and who were i vigorous health might be safely accepted with a moderate "load," which might be remitted after the age of 4 years, if all was satisfactory A history of pleurisy wa important as many pleurisies were tuberculous in origin, but an acute pleurisy, fully recovered from and leaving neither local signs nor constitutional impairment, did not call for any addition. A history of an attack of hæmoptysis without signs or symptoms warranted a moderate "load" which might be remitted after the age of 45 years A history of syphilis called for a careful scrutiny of all the organs, especially the arteries and the nervous system If the applicant had received adequate treatment and had been free from all symptoms for four or five years a small addition would meet the case. The possibility of some of the late effects of syphilis (e g , loqomotor ataxia) should be borne in mind. The applicant's occupation was very important. The speaker dealt at length with the mortality and life prospects of the various trades and professions. Obesity and underweight should receive careful attention. Obese persons bore acute diseases badly, they were sometimes, though by no means always, free livers, and were prone to gout. Spare persons were often good lives but tuberculosis, diabetes, and other causes of wasting should be borne in mind. An unduly frequent pulse if not due to obvious nervousness, should cause watchfulness It might be the only sign of concealed alcoholism. Tremor of the tongue might have a similar significance Many applicants were untrustworthy on the subject of alcohol In a doubtful case they might get valuable hint from (1) undue frequency of the pulse, (2 tremor of the tongue, and (3) dyspepsia, especially morning sickness The relation of piles hernia varicose veins, atheromatous arteries, emphysema, diabetes, asthma, albuminuria and heart disease to life assurance was fully dealt with. small quantity of sugar in the urine of an applicant over years of age without thirst, wasting or other proof o diabetes, should lead to the postponement, not the rejection of the case. Many of these patients got well. Albuminuria was as a general rule, a bar to acceptance The cases o so called "cyclical" or "functional" albuminuria were very difficult. Such cases could not be safely taken a ordinary rates but much depended on the applicant's age. He was inclined to be suspicious of these cases and to hold that a substantial proportion of them ultimately developed organic renal disease. The question of heart disease i its relation to life assurance raised many interesting questions Aortic cases and cases of mitral stenosis were probably uninsurable. Mitral regurgitation was the difficult point Many of these cases went on indefinitely If mitral regurgitation could be shown to have existed for four o five years without giving rise to symptoms or producing ecognisable hypertrophy or dilatation, if the arteries were ound and the pulse was normal, if the applicant's general ealth was good, his habits were regular and his occupa ion was suitable, the assurance companies would do well to onsider the propriety of admitting such cases to the advan ages of a limited or 'tontine' policy. In the discussion which followed Dr. Calwell, Dr. W. B. McQuitty, Dr. Nelson, and Sir William Whitla took part.

Irish Education.

The Royal Commission on University Education has con- luded its work and the report it is said will be ready next onth. On Jan. 12th Lord Londonderry (Minister of Educa- on) and Mr. G. Wyndham (Chief Secretary for Ireland) ad a private conference in Belfast with members of the oint committee of the Chamber of Commerce and the echnical committee of the Belfast Corporation and repre- entatives from Queen's College in reference to the scheme or the establishment of a system of commercial education in onnexion with Queen's College. It is hoped that this will be arried through and that the Government will make a special nancial grant.

Jan. 14th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

A Medical Information Bureau.

IN my letter which appeared in THE LANCET of Jan. 10th . 137) I mentioned the new bureau of medical information hich has recently been started in Paris. The bureau is under e municipal council of Paris and will prove of great value foreign or provincial medical practitioners who come to ursue their medical studies in Paris. The former are often uite at sea on arriving in Paris, especially if they do not now French. Even if they have a letter of introduction to ome eminent Parisian practitioner—who for the very reason hat he is eminent is correspondingly busy and cannot act s a cicerone—they have infinite trouble in getting the nformation which they require as to what course of ectures to attend, what medical men eminent in par- icular lines to see, what hospitals to go to and he days and hours at which certain lectures and lemonstrations take place, so that they waste their time nnecessarily. Besides the purely professional establish- ents, such as hospitals there are plenty of organisations nteresting to medical men about which even Parisians them- elves know little or nothing, such as infirmaries con- alescent homes, the water-supply department, the sewage lepartment, crematoriums, prison infirmaries, the municipal aboratory for identifying adulterations, the Morgue, and various matters connected with forensic medicine. Dr. Blondel, the secretary general of the International Medical Press Association, who made an expedition throughout Europe for the purpose of study in 1900, was greatly struck with the accounts which he received from foreign medical men of the difficulties which they encountered when they went to Paris. The idea of the information bureau came into his head and he accordingly urged M. Brouardel, who was then Dean of the Faculty of Medicine, to set aside a small room and one attendant in the buildings of the Faculty so as to make a beginning with this bureau. This seemed a simple plan, only unfortunately the Faculty had no attendant whom they could spare and no funds wherewith to pay a new man for the post. Dr. Blondel then approached the municipal council with a view to a grant. M. Brouardel, however, preferred that the money should be procured from the Government and he obtained from M. Liard a promise of a grant of 1000 francs to which sum the Faculty promised to add 500 francs. Neither the 1000 francs nor the 500 francs were ever paid in, and so, after waiting for six months, Dr. Blondel again approached M. Brouardel. He, however, said that as he was just on the point of resigning he did not wish to undertake any new scheme but would leave the matter to his successor to initiate. Six months more went by, but when the new dean, M. Debove, was nominated Dr. Blondel laid the matter before him and met with a gratifying response. M. Debove then, not considering that he had the power to decide the question himself, called together the council of professors. M. Pozzy, to whom the question was submitted for considera- tion, reported in its favour, the council approved, and the dean was charged with the duty of preparing a detailed scheme. The dean in his turn introduced some modifica- tions into the original scheme of Dr. Blondel which had been approved by M. Pozzy and the Faculty in that he wished instead of having a special employé acquainted with foreign languages and sitting in a special room to make use of one of the attendants of the Faculty who was but little of a linguist. As for the necessary expenses they must con- tinue to rely on the generosity of the municipal council. Finally, Dr. Blondel appealed to two municipal councillors, M. Dausset and M. Felix Roussel, who laid his petition before their council. The petition was granted and at the meeting of the council held on Dec. 31st a grant was made of 3000 francs for the creation of a bureau of medical information on condition that it should be installed in rooms in the Hôtel de Ville, the Assistance Publique, the Sorbonne, or the Faculty of Medicine according to which appeared the most convenient situation. It is hoped that the bureau will be in working order within the next two or three months. The employés will all be able to speak other languages than their own and will be well versed in the information which they will have to give. They will also have on hand reference cards contain- ing information kept regularly up-to-date (*fiches tenues régulièrement à jour*).[1] A list of foreign medical men residing in Paris, of whom there are some 500, will also be kept, classified according to nationalities, and among them there will be established a community of *camaraderie* so that their compatriots will always be sure of a welcome and will be able to get the most complete information.

Obituary.

Dr. Panas, formerly President of the Academy of Medicine, died on Jan. 5th. He was 71 years of age but his intellectual faculties were in no way abated. He was a Greek and was born at Cephalonia in the Ionian Islands on Jan. 30th, 1831, but when quite young he came to France to study medi- cine in Paris. In 1854 he was elected an *interne*, later he became assistant demonstrator in anatomy and finally prosector. The remarkable success which attended him in the various competitive examinations drew the attention of Nélaton who took him under his wing. In 1863 Panas was nominated *agrégé* of the Faculty and soon afterwards he was elected surgeon to the hospitals. He served as surgeon to the following hospitals in succession: the Bicêtre, Lourcine, Saint Antoine, and Saint Louis. During this period of his career he was naturalised. He had already written much upon general surgery and had contributed to Dechambre's Dictionary articles on the pathology of diseases of the joints, which still remain as authoritative utterances. He then devoted his attention to ophthalmology, in which department of science he had a long and brilliant career and his "Anatomy of the Nasal Fossæ and the Lacrymal Canals," his book on "Strabismus and Ocular Paralysis," his treatises on the "Pathological Anatomy of the Eye" and on "Inflammatory Affections of the Internal Tissues of the Eye" still rank as classics. In 1879 he was appointed to the chair of clinical ophthalmology at the Faculty of Medicine, a post which had been specially created for him. This post he resigned last year being worn out by the painful and lingering malady to which he at length succumbed. He was a member of the Society of Surgery and held the presidential chair in 1877. He was also Officer of the Legion of Honour.

Jan. 13th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Supposed Discovery of the Germ of Rabies.

THE resemblance of hydrophobia in its clinical and anatomical characters to other infectious diseases the specific germs of which are now known is so complete that little doubt of its microbic origin has been entertained not- withstanding the failure of the many efforts which have been made to isolate the germ. Its transmissibility by inocula- tion, the presence of a period of incubation after the inocula- tion, the possibility of stamping out the disease by certain precautions, and its resemblance in many details to tetanus, have all pointed strongly to such an origin. But although many organisms have been described from time to time as holding a causal relationship with rabies no single one of them has stood the test of a rigid proof Memmo, for example, described a blastomyces in this connexion, while Bruschettini demonstrated an organism holding an intermediate position between a saccharomyces and an oidium. Others, as Pasteur, Chamberland, and Roux, ascribed the same rôle to micrococci of different sizes with cultural and staining peculiarities of various kinds A remarkable fact in regard to many of these organisms was that they appeared when inoculated into animals to produce symptoms very similar to, if not identical with, those of rabies. It has now been claimed by Dr Sormani, professor of hygiene in the University of Pavia, who has devoted many years of study to the subject, that he has succeeded in isolating a microbe which responds to all the tests and which he is confident is the true causal organism of the disease. The previous failures to identify this germ as the specific one Professor Sormani ascribes to its polymorphism, and he believes that certain of its forms and stages have been seen and described by other observers who, however, missed the connecting links and so failed to establish the unity which he asserts exists between them These phases depend upon the mode of development and the cultural medium, according to which the microbe takes the forms sometimes of micrococci, sometimes of bacilli, or very rarely of blastomycetes, its colonies on the medium having a cloudy or fleecy, or at times a branching aspect. The microbe though often to be found in microscopic preparations of the tissues, is best studied in pure cultures Being one of the smallest of known organisms it can be seen only with the higher powers of the microscope (1200 diameters) and for its minute detailed study requires the highest magnification obtainable If Professor Sormani s observations and inferences be confirmed his discovery will doubtless lead to the modification and simplification of the present complicated technique for inoculation against rabies. It may also point the way to the recognition of the specific cause of other diseases the causal organisms of which may have escaped observation hitherto only on account of their minute size or their polymorphism. After the many disappointments of the past, however, it is necessary to be cautious in accepting the discovery as an established fact until confirmatory observations can be made.

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[1] "Fiches" is an untranslatable word. It means among other things something analogous to the "card catalogues" which are to be found in public libraries.—ED. L.

The Death rate of Italy

Statistical records of the mortality amongst the whole population of Italy have been available since 1885 They are always carefully and clearly arranged, but it is unfortunate that they are published so late that at the beginning of the year 1903 we know nothing officially of the returns of 1902 or even of those of 1901. Indeed, it is not more than two months ago since the death statistics of 1900 were published In that year the mean general rate of mortality was 23 8 per 1000 of population, an excessive amount when compared with that of other countries (excepting Russia, Austria Hungary, and Spain), and also excessive when contrasted with that of the previous triennium 1897–99 in Italy itself, which was only from 21 to 22 per 1000 This latter figure denoted a reduction of the death roll of the triennium 1885–87 (when the rate was from 26 to 28 per 1000) of some 200,000 persons per annum and that thus not less than 4 000,000 persons have been saved by improved hygiene from disease and its concomitant and consequent economic loss Professor Celli, in commenting upon these statistics adds that he understands from official sources that the rate of mortality for 1901 shows a diminution on that of 1900 being only 21 95 per 1000 He points out that even this figure leaves an immense amount to be desired before the hygienic ideal can be said to have been reached since in Norway and Sweden, which countries have the lowest mortality, the rate has been reduced to about 15 per 1000 Comparing the death rates in different parts of Italy with one another it is found that all the provinces with a death rate above the mean belong to Southern Italy and the islands, whilst the provinces with a mortality below the mean belong to Northern and Central Italy Of the former Foggia and Potenza come out worst with a rate of 30 4 and 30 per 1000 respectively, while of the latter Pisa and Treviso come out best with a rate of 19 5 and 19 2 respectively Of the principal towns the worst are Catanzaro and Siena with a rate of 41 and 39 respectively, whilst Sondrio and Porto Maurizio stand best with rates of 18 8 and 19 5 respectively But in general it is found that as regards the towns the majority of those with a less mortality belong to Central or Southern Italy, whilst those with a larger mortality belong to the northern provinces. Of the larger cities Naples has a mortality of 25 8, Venice 24 9, Bologna 24 3, Genoa 23 8, Milan 22 4, Turin 22 3, and Rome 21 7 per 1000. The preeminence of Rome for salubrity amongst the larger Italian cities is now generally recognised in Italy itself, but deserves to be more widely known abroad where the impression still prevails that it is unhealthy It is unfortunately still very common for patients and even ordinary visitors to Italy to be cautioned by medical men in England and America against Rome on account of its supposed unhealthiness and the danger, which is quite imaginary, of falling a victim to malarial fever there. The above statistics are a sufficient answer to the charge of general unhealthiness and as regards malarial fever the disease is practically unknown in the city and is never contracted there by the foreign visitor

Jan 11th

NEW YORK.

(FROM OUR OWN CORRESPONDENT)

Tent Life for the Tuberculous Insane.

IT has long been recognised that pulmonary tuberculosis spreads with great rapidity among the insane. This is not due to any special predisposition on the part of those who are mentally unbalanced to contract the disease but is owing to their dirty personal habits. Therefore, in every asylum for the insane there should be ample and efficient means of isolation. Dr A. E Macdonald, superintendent of the Manhattan State Hospital, Ward's Island, New York City, inaugurated in 1901 a system of "tent care" for the tuberculous insane which is said to have been attended with excellent results. The tents used were large and airy with boarded floors and fitted with every convenience. They were pitched on elevated ground and surrounded by abundant shade. Each tent contained 20 beds. During the year 81 patients were thus treated, and in that time 19 deaths occurred among them, a percentage of 23 45 out of the total number of cases treated. When, however, all the deaths which occurred in the hospital during the same period are taken into account these figures make the percentage of those succumbing to tuberculosis as low as 8 8. Ten ye ago the death rate from pulmonary tuberculosis at the M hattan State Hospital was 17 8 per cent. of the total deat and one year ago 9 8 per cent. of the total deaths resul from this disease , but under the "tent care" of these ca the percentage of 8 8 has been established, the lowest in t history of the institution Dr Macdonald is so satisf with the success of the system that he has provided for extension of it

Overcrowding of Street and Elevated Railway Cars in New York.

Dissatisfaction with the manner in which the street c and elevated railway service of New York is managed b prevailed for a long time. At certain hours of the day wh persons are going to and from their business the cars a crowded to an almost incredible extent. Men, women, a children are jammed together like sardines in a box, a it is a common sight to witness a car so full that would be an impossibility to get another person in. T matter has been discussed for years and many remedi have been suggested to relieve the congestion Nothin however, has been done and at the present time the sit tion is more intolerable than ever Recently some of t leading women of the city have taken the matter up a have entered a vigorous protest against a continuance the existing state of affairs. The Merchants' Association New York has followed suit and through its Committee Franchises and Transportation has issued a manifesto which an urgent appeal is made to ministers of all denomin tions and to all members of the medical profession to u their influence to save women from the unhealthy a demoralising effects of travelling on crowded cars T manifesto in question declares that public decency is o raged, public morality assailed, and public health endanger by the promiscuous personal contact with others forced up all members of this community who use street and elevat railway cars The document ends with an appeal to the 60 physicians of the city to further the movement against t present abuse of the system by making clear to their patien the physical harm that comes from this abuse The major of the lay papers of New York have entered into the fr with zest and are attacking the corporations which contr the street railway system with energy The *Medical Record* and other New York medical journals have commented on the subject editorially and have pointed out that the excessive overcrowding permitted on all the street railways is highly prejudicial to health in every way

Dr Lorenz in New York.

Professor Lorenz of Vienna, who came to this country some weeks ago to operate upon a child of Philip Armour of Chicago for congenital dislocation of the hip has made something of a triumphal progress through whatever part of the United States he has travelled. In New York he was received by the medical profession generally with the same amount of enthusiasm as elsewhere and he demonstrated his skill at different hospitals of the city before a large audience of its foremost surgeons. At a meeting of the section of orthopædic surgery of the New York Academy of Medicine held on Dec. 19th the whole time was taken up by an address by Dr Lorenz and by a discussion of his methods. The address was brief, merely giving a description of some of the principles of orthopædic surgery upon which Dr Lorenz has founded his bloodless operation for reducing congenital dislocations of the hip and for dealing with club-foot and wry neck He also claimed that this method is to be preferred to the open method, and whenever possible far in advance of mechanical measures. In the discussion which followed, and in which the leading orthopædic surgeons of New York took part, there was displayed a remarkable unanimity of opinion as to the extraordinary skill of Dr Lorenz as an operator and the belief was expressed that, given the necessary manipulative dexterity, his principles were correct

Jan. 6th.

AUSTRALIA

(FROM OUR OWN CORRESPONDENT)

Plague in Queensland

THE bubonic plague has broken out again in Queensland, the first case being in a Chinaman at Bundaberg The State has been declared infected so far as quarantine and plague regulations are concerned.

Ptomaine Poisoning

Two instances of serious ptomaine poisoning have occurred recently one in Victoria and the other in New South Wales In the first case over 100 people at a picnic were attacked with thirst, abdominal cramps and pains nausea, and extreme prostration. All the affected persons had partaken of sandwiches of minced ham. In the second instance nearly a dozen people at Randevick were attacked in somewhat similar fashion after eating some cooked meat purchased at a ham and-beef shop In the Legislative Assembly of New South Wales the Premier was asked if he would cause inquiries to be made into these cases for the protection of the public The Premier replied that the subject was being investigated and would be considered by the Board of Health with a view to take such action as might seem necessary in the general public interest.

Concentrated Milk

A milk company was recently convicted for selling what is known as concentrated milk. An analysis showed that it contained boric acid and formalin in the proportion of 1 part in 10 000 Expert evidence was given that concentrated milk would not keep without the addition of preservatives The magistrate said that if customers asked for condensed milk they expected to get it pure and not mixed with preservatives He inflicted a fine of £2, with costs. The milk company does a large business both in Sydney and in Melbourne

Adulterated "Raspberry Vinegar'

At the last meeting of the Board of Public Health of Victoria a report was submitted by the Government analyst on his examination of 44 samples of so-called 'pure raspberry vinegar" Only one was found to be free from poisonous adulteration. The principal ingredients were coal tar dyes chemical preservatives salicylic acid, saccharin, dulcin, and cochineal. The Board simply said that it was desirable that the Government should take steps to lessen the use of such adulteration.'

Hospital Affairs

The finances of the various Melbourne hospitals have been seriously disturbed by the reduction of the Government grant and a meeting of representatives of the institutions concerned was held recently to consider the position It was pointed out that the reduction came with great harshness at the present time, when the institutions could not pay their way even with the unreduced grant. It was resolved—

> That a deputation be appointed to wait upon the Treasurer to point out to the Government the difficulty of retrenching to the extent proposed and to discuss the best method of obtaining a revenue from amusements and other sources for the purposes of the charities

—At the Melbourne Hospital the deficiency in the finances is estimated at £6000 for the year and the committee says that it is impossible to reduce expenditure The question of imposing a special charity tax is being seriously considered as the only way out of the difficulty At the last meeting of the committee of the Melbourne Hospital a letter was read from the Faculty of Medicine offering to advise the committee prior to any appointment by the committee of new members of the honorary medical staff. It was resolved to reply, thanking the faculty for the offer and stating that should any occasion for a conference arise the faculty would be advised of it.—The board of management of the Hospital for Sick Children, Sydney, has leased from the committee of the Carrington Convalescent Home a cottage for the reception of children to be under the sole control of the authorities of the Children s Hospital. Two wards, each containing seven cots, will be fitted up one for girls and the other for boys This will relieve the hospital of many chronic cases where the patients are yet not well enough to be taken into the regular convalescent homes The new buildings for the out-patient department of the Children's Hospital in Valentine-street will soon be completed.

Obituary

Dr Alexander K Morson, a well known practitioner of North Sydney, died at his residence, Kirrivilli Point, on Nov 15th He received his medical education at Edinburgh, where he took the diploma of Licentiate of the Royal Colleges of Physicians and Surgeons in 1863 and graduated as M.D the following year He practised for many years at West Maitland, but had latterly retired from active work, though he was greatly interested in benevolent institutions and was for a long time a member of the committee and trustee of the North Shore Hospital

Dec. 1st 1902.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON —At the Primary Examination the following candidates passed in the subjects indicated —

PART I

Biology—T Bickers Leeds, and M Rathbone Royal Free Hospital.
Chemistry—R P Wylde Manchester
Materia Medica and Pharmacy—T P Cox, Glasgow and H. D. O Donnell Westminster Hospital.

PART II.

Anatomy—G E Austin Royal Free Hospital H. D H. W Bund St. Bartholomew s Hospital H. S Burnell-Jones Cardiff W G H. Cable, London Hospital C W De Morgan, St. Mary s Hospital C H. J Fagan St. George s Hospital F C M. Gabites Edinburgh J W Rollings University College Hospital E Sutcliffe, Leeds and R. M. Wingent Guy s Hospital
Physiology—G E Austin Royal Free Hospital J M. Burke, Cork and Middlesex Hospital C W De Morgan St. Mary s Hospital C H J Fagan St George s Hospital G W Hassall, Birmingham H. T Roberts St. Mary s Hospital E F Skinner Cambridge and E. Sutcliffe Leeds.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE.—At a recent meeting of the Liverpool School of Tropical Medicine, at which Sir Alfred Jones K.C M G, the chairman, presided Major Ronald Ross C B. F R.S. was heartily congratulated on the high distinction that he had attained by winning the Nobel Prize. It was announced that since the last meeting of the committee the sum of £10 600 had been collected or promised towards the foundation of a chair of Tropical Medicine in University College, Liverpool which had been offered to the University authorities and accepted, also that Major Ross had been unanimously elected to the Professorship, and that in future his title in connexion with the school would be The Sir Alfred Jones Professor of Tropical Medicine ' The Walter Myers Lectureship in Tropical Medicine having become vacant Dr J W W Stephens who recently joined the staff of the school, was unanimously elected to fill that position. Dr Stephens was until recently a member of the

Commission of the Royal Society on Malaria and has been closely identified with research in tropical medicine A letter was read which had been received by the chairman from Lord Lansdowne offering his congratulations to Major Ross, to the Liverpool School of Tropical Medicine, and to all those who contributed to the establishment of the institution

Medical Magistrate —Mr John Lynn Thomas, C B., F R.C S Eng , L.R.C P Lond , has been appointed on the commission of the peace for Cardiganshire, his native county

Bristol Dispensary —The annual meeting of the subscribers of the Bristol Dispensary was held on Jan. 9th The medical report stated that 11,264 fresh cases had been treated during 1902, exclusive of 483 midwifery cases The financial statement was satisfactory and showed a considerable increase in subscriptions

Cardiff Infirmary —The annual meeting of the ladies' committee of the women's ward in the Cardiff Infirmary was held on Jan. 3rd. The statement of accounts for 1902 showed that a favourable balance of £411 remained. The number of beds maintained by the committee is now 15 The women's ward contains 16 beds and it is hoped that before long the whole of the beds will be supported by the ladies' committee.

Infringement of Burial Regulations —At the Bristol police court on Jan 9th a firm of undertakers were summoned for interring a stillborn child without informing the chaplain of the cemetery that there were two bodies in the coffin Evidence showed that a woman had died in childbirth and that the mother and child were placed in the same coffin. The magistrates imposed a penalty of £2 with £2 2*s* costs

Donations and Bequests —Under the will of Mr Abraham Samuel of Louth £5000 are bequeathed to the Louth Hospital and £200 to the Lincoln County Hospital. The Jews' hospital at West Norwood benefits by a sum of £100 —Messrs. G W and Charles Crompton have subscribed £1000 for the endowment of a bed in the Derbyshire Royal Infirmary in memory of their late brother, Mr E. A. Crompton, of Windley Hall, Derby

The League of Mercy —The honorary secretaries of the League of Mercy have received from the Prince of Wales Grand President of the League, and also President of King Edward's Hospital Fund, a letter conveying to the officials and members of the League his thanks for the sum of £8000 handed over by them to King Edward's Hospital Fund This substantial contribution is an increase of £1000 on the amount received last year

The London Association for the Prevention of Premature Burial has now appointed a medical secretary—viz., Dr J Stenson Hooker—having come to the conclusion that this step would add more weight when the various matters dealt with by the association are brought before the medical profession and Parliament. The offices of the association are at 44 Gloucester place, Portman square, W Annual subscribers of £1 1*s* are entitled to copies of all pamphlets and to death verification The minimum subscription is 5*s* per annum.

Folkestone Medical Society —The annual meeting of this society was held on Jan. 9th at the house of the President, Dr T Eastes 20 members were present, Dr W J Tyson being in the chair in the unavoidable absence of the President. The following officers were elected for 1903 —President (re-elected) Dr Eastes. Vice-Presidents Dr Hackney and Dr Tyson. Committee of Management Mr Gilbert, Mr Gore Mr Read, Mr Murdoch and Dr Sworder Library Committee Mr Madden, Mr Livington, and Dr A Gordon Wilson Honorary secretary and treasurer Dr Calverley

"Freeing Animals from Parasites"—An American inventor has patented a method of freeing animals from parasites. The process consists in completely immersing the animal in a bath and passing an alternating electric current of substantially low voltage through the animal and the parasite while so immersed The nature of the fluid in the bath is not stated The illustration shows a cow totally submerged in a tank of fluid. Electrodes are attached to the cow but there does not seem to be any provision for respiration or any means for bringing the animal's head to the surface of the fluid Full particulars are given in the *Official Gazette* of the United States Patent Office, published on Dec 23rd, 1902.

BOOKS, ETC , RECEIVED

Allen George, Ruskin House 156, Charing Cross-road, W C.
Ruskin on Pictures A Collection of Criticisms by John Ruskin not heretofore reprinted and now re-edited and re-arranged. Vol II —Academy Notes: Notes on Prout and Hunt. Price 7*s* 6*d* net

Baillière Tindall and Cox, 8 Henrietta-street, Covent Garden, W C
The Prize Essay on the Erection of a Sanatorium for the Treatment of Tuberculosis in England Together with a Preface by the Chairman of His Majesty's Advisory Committee, a number of Appendices Illustrative Plans and a Bibliography By Arthur Latham M A M.D Oxon M A. Cantab in association with A. William West Architect Honorary Deputy Treasurer of St. George's Hospital Price 5*s*
Constipation By G Sherman Bigg F.R C S Edin. Price 2*s* 6*d* net.

Churchill J & A 7 Great Marlborough street W
Guy's Hospital Reports Edited by J H. Bryant, M.D., and F J. Steward M.S Vol lvii being Vol xlii of the Third Series Price to subscribers 6*s* , to non subscribers 10*s*. 6*d*.
Transactions of the Otological Society of the United Kingdom Vol III Third Session, 1901–1902. With list of Officers, Members &c. Edited by Arthur H. Cheatle, F.R.C.S Price 10*s* net
The Student's Guide to Medical Diagnosis. By Samuel Fenwick, M D F R.C.P Consulting Physician to the London Hospital; and W Soltau Fenwick M D B S Lond M R.C.P, Senior Physician to the London Temperance Hospital. Price 9*s*. Ninth edition

John Bale, Sons and Danielsson, Limited 83 Great Titchfield street W
A Handbook of the Open air Treatment and Life in an Open-air Sanatorium. By Dr Charles Reinhardt of Wallingford and Dr. David Thomson of Bournemouth Second edition, enlarged Price not stated

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions and others possessing information suitable for this column, are invited to forward it to The Lancet *Office directed to the Sub-Editor not later than 9 o'clock on the Thursday morning of each week for publication in the next number*

Browne Ada M., L S A. has been appointed Anæsthetist to the New Hospital for Women Euston road
Grünbaum Otto M A M B B C Cantab. M R.C P Lond., D.Sc. Lond has been appointed Medical Registrar at the London Hospital
Lyster Robert Arthur, M.B B Ch Birm. B Sc. Lond., D.P.H. Birm has been appointed Assistant to the chair of Hygiene and Public Health in the University of Birmingham.
Moon R O M D M R C P has been appointed Physician to the Out-patient Department of the Infirmary for Consumption, Margaret-street London, W
Palmer Horace J L R C P L R.C S Edin L F.P S. Glas., has been appointed Medical Officer and Public Vaccinator of the Gamlingay District of the Caxton and Arrington Union, Cambridge
Stratford H M M R C S L.R C P Lond., has been appointed Senior Resident Surgeon to the Western General Dispensary Marylebone N W
Thomas J C M D M R C P has been appointed Physician to the Out-patient Department of the Infirmary for Consumption, Margaret-street London W
Tipper Ernest H M.R C S Eng L.R C P L.S.A. Lond., has been appointed Refractionist to the Royal Eye Hospital, London.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

Ayr District Asylum, Ayr —Two Assistant Medical Officers, unmarried Salary £150 and £120 with board lodging laundry and attendance.
Birkenhead Borough Hospital.—Senior Resident Male House Surgeon Salary £100 per annum with board.
Birmingham General Dispensary —Resident Surgeon, unmarried. Salary £150 per annum

x Infirmary and Dispensary —Senior and Junior House rgeons.—Salary for the senior £130 and for the junior £100 per num, with apartments board and attendance.

h Lying-in Hospital.—Physician to the Out patients

ester Infirmary —House Surgeon. Salary £100 per annum th board residence and washing

rshire Royal Infirmary —Two House Surgeons. Also House iysician. Salary in each instance £100 per annum, with apart ents board &c. Also Assistant House Surgeon for six months. alary at rate of £60 per annum, with apartments board, &c.

rton Asylum Salisbury —Assistant Medical Officer unmarried alary £150 per annum, with board lodging and washing

r Yarmouth Hospital.—House Surgeon. Salary £90 per nnum, with board, lodging and washing

venor Hospital for Women and Children Vincent square, estminster —Assistant Surgeon

stead Hospital.—Resident Medical Officer for six months. alary at rate of £120 per annum with rooms coal and gas

orn Union —Medical Officer Salary £100 per annum.

tal for Sick Children Great Ormond street, London, W C —ouse Surgeon unmarried, for six months. Salary £20 with ard and residence.

er Institute of Preventive Medicine.—Studentship of the alue of £150 for the purpose of Research in the Department of athological Chemistry

s College Hospital. London —Senior Medical Registrar and utor Also Clinical Pathologist. Salary £250 a year

hester Royal Infirmary —Resident Medical Officer un narried. Salary £150 per annum, with board and residence.

nt Vernon Hospital for Consumption Hampstead.—Four linical Assistants.

Hospital for Women —Pathologist (female) Also Anæs hetist.

h Riding Asylum Clifton. York —Senior Assistant Medical fficer unmarried. Salary £150 rising to £200 with apartments, oard washing and attendance

ton Lancashire, County Asylum Whittingham.—Assistant ledical Officer unmarried. Initial salary £150, with apartments oard, washing and attendance.

ar Hospital for Accidents Poplar E.—Assistant House urgeon for six months. Salary at rate of £50 per annum, with oard and residence

hill, Surrey Earlswood Asylum.—Two Assistant Medical fficers unmarried Salary of the senior £160 rising to £200 of he junior £130 rising to £150 with apartments board, and wash ng in each case.

hester, Saint Bartholomew's Hospital.—Assistant House urgeon. Salary £100 per annum, with board, lodging washing iring and light

al College of Surgeons of England.—Examiner in Dental urgery

al General Dispensary 25 and 26, Bartholomew-close E.C —Physician.

al Hants County Hospital, Winchester —House Physician, un narried Salary £65 per annum, rising to £75 with board esidence, &c.

al Isle of Wight County Hospital, Ryde.—Resident House Surgeon. Salary £90

al London Ophthalmic Hospital (Moorfields Eye Hospital) City road E C —Junior House Surgeon also Third House Surgeon. Salary £75 and £50 respectively with board and residence

al Victoria Hospital, Dover —House Surgeon, unmarried. Salary £100 a year increasing with board, lodging and washing

sbury General Infirmary —Assistant House Surgeon unmarried. Salary at rate of £75 per annum, with apartments board and lodging

George's Hospital Medical School.—Lecturer on Insanity

John's Hospital for Diseases of the Skin 49 Leicester-square, W C —Superintendent. Salary £200 per annum

Pancras and Northern Dispensary 125 Euston-road.—Physician Accoucheur

Paul's Hospital for Skin and Genito-urinary Diseases Red Lion-square, W C —Honorary Assistant Surgeon.

toria Hospital for Children Tite-street Chelsea, S W —House Surgeon for six months Honorarium of £25 with board and lodging

Births, Marriages, and Deaths.

BIRTHS.

awner.—On Jan. 2nd at Hill House, Clay Cross the wife of Alfred Chawner L.R.C.P Lond M R.C S., of a son.

ll.—On Jan 7th, at Elstowe House, Itchen, Southampton, the wife of Edmund S Hall M.B Lond. M.R.C.S., L.R.C.P Lond. of a son.

MARRIAGES.

lteel—Hassall.—On Jan. 10th at St. Alfege, Greenwich, Cecil Edward Bulteel, Indian Medical Service, to Minnie Margaret Janet, youngest daughter of the Hon T H Hassall.

rdon Cruden —On Jan 8th at St Mary Abbot's, Kensington, William Gordon, M.D Lond., M R C P Lond., to Dora Mary elder daughter of Maj r Cruden

orris—Cullum —On Jan. 6th at Durban Natal, Captain J I Morris R A.M C to Alice, second daughter of J E. Cullum, F R.Met.Soc., the Valencia Observatory

N P —A fee of 5s is charged for the insertion of Notices of Births Marriages and Deaths

Notes, Short Comments, and Answers to Correspondents

THE BRITISH VIAVI COMPANY

We have received from a correspondent two abominable dirty little pamphlets issued by that coöperation of quacks which calls itself the British Viavi Company We have on sundry previous occasions expressed our opinion of these quacks notably in The Lancet of March 10th, 1900 (p. 742) There we commented upon certain facts which came out at an inquest held upon Feb 25th, 1900 by the coroner for East Sussex upon the body of a woman who had died while under treatment by the Viavi system. The jury handed in the following verdict: We wish to return a verdict of Death from natural causes we also think that the life of the deceased might have been prolonged had she been placed under properly qualified medical treatment and from the evidence brought before us we consider the Viavi company a fraud " So do we In another case heard before His Honour Judge Parry in the Manchester county court on May 17th, 1901, the Viavi Company had to pay £50 with all costs for breach of contract—i.e. for failing to cure Judge Parry remarked that it was a peculiarly wicked thing to take money out of people who were suffering from some ailment. He regretted that there should be people going about selling worthless remedies to poor women who knew nothing about their physical condition and thereby making 50 per cent profit In our opinion the company is composed of persons trading upon ignorance and appealing mainly to those who are always thinking about the sexual organs but it also professes to cure burns lumbago cross rupture," neuralgia, gall-stones and, in addition a delightfully comprehensive disease called internal trouble." The company issues a book of instructions called Viavi Hygiene, by Hartland Law M.D and H. E. Law F C.S " Of what university Hartland Law may be M.D we do not know but his name is not on the current Medical Register Neither does the name of H. E. Law F C S appear among the list of Fellows of the Chemical Society We cannot but think that it is time that the legislature stepped in to prevent the wholesale mischief which is daily and hourly caused by companies of quacks and by vendors of patent medicines. If they cannot be prosecuted for fraud they should at least be made to pay for a licence As we have said upon previous occasions no one may sell either tobacco or spirits without a licence and the licence implies no guarantee of the purity of the article sold. If a licence to be a quack were made to cost £500 per annum the trade would soon languish.

THE DESECRATION OF THE AMERICAN FLAG

We have received a copy of a strongly worded pamphlet concerning the degraded uses to which the law of the United States permits their national emblem to be put. We sympathise with the writers and agree that it is a matter of national importance that the national colours should be treated with respect, but legislation ought not to be necessary to enforce so obvious a sentiment as affectionate regard for the flag But certainly the citizens of the great republic are not very delicate in their feelings on the matter The writers point out a circumstance with which we are quite familiar in this office that miniature reproductions of the American flag are freely used as wrappers for itch ointments pile remedies, and other undignified nostrums. The following use of the flag a description of which we quote from the pamphlet, is new to us Since the birth of the American flag no more basely degrading insult has ever been offered to our national emblem than the suggestion of Speaker Henderson that the flag be used as a wrapper for American hams to the end of better advertising the hind-quarters of American hogs to the people of the United States and foreign countries." As a matter of fact, it is a nobler fate for bunting to enswathe a ham than a remedy for leucorrhœa but we can quite understand that many good American citizens think that both uses are degrading

MEDICAL MISSIONARY WORK.

To the Editors of The Lancet

Sirs —If your correspondent E. B " in The Lancet of Jan. 10th, p 144 will write to me I may be able to help him to obtain the information which he seeks.—I am, Sirs, yours faithfully

James Cheese, L.R.C.P Lond. M.R.C S Eng
Honorary Mission Secretary the Guild of St. Luke
58, Cornwall-gardens South Kensington, S W Jan. 10th 1903.

THE GEM" PURE WATER STILL.

This handy little apparatus for domestic purposes is quite simple in construction and in action. It consists practically of three parts a boiling chamber a steam space immediately above, and over this a compartment at the top which contains cold water The apparatus may be placed on a gas or oil stove or on the kitchen range. On the water below boiling steam escapes and impinges against the cold water container at the top. This container is shaped like a funnel upside down so that the water condensed on the sides of the funnel trickles into a circular channel just beneath from which the distilled water may be drawn off by means of a tap As long as there is cold water in the upper container and water being boiled in the lower container the process of distillation steadily proceeds We have used the apparatus with success and have found that the distilled water is free from mineral impurities We further ascertained that the distilled water was free from metallic contaminations Of course the water so obtained is sterilised The apparatus in very handy and consequently would be of great service when any suspicion of the purity of the ordinary drinking supply is entertained The still we examined was sent to us by the Gem Supplies Co Limited, of 121 Newgate-street London E C

THE EUTHERMIC COVERLET

WE have received a specimen coverlet of the above designation lined with material known as pinool " which in appearance resembles the wood fibre used for packing purposes We have submitted the material to certain tests and have found it to be decidedly non-conducting while it is porous and light. Further it possesses another quality desirable in the lining material of a coverlet—it is elastic. Under pressure the fibre is readily compressed and on withdrawing the pressure it returns to its original bulk. The fibre is straw-coloured and we found that on extraction with ether a green oily residue was obtained which gave off an aromatic smell resembling that of freshly sawn pine wood The material is said to be composed of a graded combination of vegetable fibres of which pine wood is the basis It seems well adapted for the purpose of lining a coverlet is comfortable to the touch and keeps the bed warm Besides it is a wholesome material with a faint and not unpleasing aromatic odour Unlike many materials for the purpose it does not readily harbour dust while it may easily be cleaned or replaced The specimen coverlet we examined was sent to us by the Sanitary Economic Association Limited of Station road Gloucester and the material was designed by Dr Francis Bond of that city

WANTED—TRANSLATION WORK

DOES any member of the medical profession require to have his book translated into German? It is possible that a medical publisher may require the services that are offered below by a correspondent who writes as follows: After having practised as a physician in Berlin for many years I am now living in England having retired from the practice of my profession I wish to use my leisure in translating some new and important English medical work into German We shall be happy to forward to our correspondent any communications that may reach us, which can be addressed either to us or to Translator "

CONSUMPTION SANATORIUM.

To the Editors of THE LANCET

SIRS—In reply to the inquiry of R L. G " which appears in THE LANCET of Jan 3rd p 78 I beg to state that a limited number of beds are set apart in this hospital for paying patients" at the following rates weekly—viz 30*s* for men and 25*s* for women Application for admission must be made on the prescribed printed form which I shall be happy to send to any person requiring one and as the hospital has been founded for the treatment only of cases in the incipient or early stages of the disease patients are before being admitted required to attend here for medical examination as to their suitability

I may add that ordinary " patients are admitted at the minimum rate of 7*s* weekly I am, Sirs yours faithfully

JOHN R ORPEN
Honorary Secretary National Hospital
for Consumption for Ireland

5 Leinster-street Dublin Jan 5th 1903

To the Editors of THE LANCET

SIRS—Replying to R L G " in THE LANCET of Jan 3rd, p 78, he might apply to Dr E L Colebrook Maitland Cottage, Peppard Common Oxon. I am Sirs yours faithfully

St Leonards-on Sea, Jan 9th 1903. J W RAWSON

ASEPTIC TEMPERATURE-CHART HOLDER.

A SPECIMEN of the chart holders which Messrs Maw Son and Sons of Aldersgate-street London E C have made at the direction of Dr Marcus M Bowlan medical superintendent St George-in the-East Infirmary London E and which are used in the lying in ward at that infirmary has been sent to us for inspection It consists of a sheet of aluminium with slits near each angle to receive the corners of the chart and two holes at the top for suspension on the wall with silk or silver wire. Dr Bowlan states that they are readily kept bright and have the additional merit of being easily sterilised by boiling in plain water

WE shall be obliged if the correspondent who inquired concerning the Nobel prizes will kindly communicate his address which has been mislaid.

◆

M.B Cantab—Our correspondent's contribution to the controversy arrived at a time when our columns were very overcrowded He will see however that we in no way suggest that the reform in the preliminary examinations of the University of London should mean that the standard should be lowered It is hoped that the student's path will be made smoother by relieving him of a multiplicity of examinations and the necessity of obtaining a superficial knowledge of subjects which he will never pursue as genuine studies. It is not proposed that the degrees of the University shall be cheaper

J R T—(*a*) The M B degree of the University of Sydney is registrable in the Colonial List. (*b*) There are many holders of foreign or colonial degrees practising medicine in this country but their place on the Register is due to the fact that they possess British registrable titles Complete information on the point will be found in the tables prefixed to the Medical Register (*c*) As a rule the tests of one examining body are not accepted by other examining bodies but in any particular case it might be well to make inquiries from the Medical Registrar

M.B B C—Our opinion is much the same as our correspondent's. He will find in our columns and in the publication "The Battle of the Clubs " frequent examples of the system which he mentions and which he rightly reprobates. A recent decision of the General Medical Council strongly condemns the practice of house-to-house touting. No medical man should work for a club employing this method, and still less should any medical man employ it himself

H H B—We are obliged to our correspondent for forwarding the powder an examination of which will be made, and, if thought necessary the results will be published in our columns.

quator—' Diseases of the Lungs " by Dr Kingston Fowler and R. Rickman Godlee

ERRATUM.—The publisher of Practical Physiology " by Dr A P Beddard and other writers reviewed in THE LANCET of Dec. 2[illegible] should have been stated as Mr Edward Arnold not Edwin Arnold.

Medical Diary for the ensuing Week.

OPERATIONS

METROPOLITAN HOSPITALS

MONDAY (19th)—London (2 P M) St Bartholomew's (1.30 P.M), St. Thomas's (3 30 P.M) St George's (2 P M) St. Mary's (2.30 P.M) Middlesex (1.30 P M) Westminster (2 P M) Chelsea (2 P.M) Samaritan (Gynæcological by Physicians 2 P.M) Soho-square (2 P M) Royal Orthopædic (2 P M) City Orthopædic (4 P.M) Gt Northern Central (2.30 P M) West London (2.30 P.M), London Throat (9 30 A.M) Royal Free (2 P M), Guy's (1.30 P.M.)

TUESDAY (20th)—London (2 P M) St. Bartholomew's (1.30 P.M), St. Thomas's (3 30 P.M) Guy's (1 30 P.M), Middlesex (1.30 P.M), Westminster (2 P M) West London (2.30 P.M) University College (2 P M) St. George's (1 P M) St Mary's (1 P.M.) St. Mark's (2.30 P M) Cancer (2 P M) Metropolitan (2.30 P M) London Throat (9 30 A.M) Royal Ear (3 P M) Samaritan (9 30 A.M and 2.30 P.M) Throat Golden square (9.30 A.M.) Soho-square (2 P.M)

WEDNESDAY (21st)—St. Bartholomew's (1.30 P M) University College (2 P M) Royal Free (2 P M) Middlesex (1 30 P M) Charing Cross (3 P M) St. Thomas's (2 P M), London (2 P M) King's College (2 P M) St. George's (Ophthalmic 1 P.M) St Mary's (2 P.M) National Orthopædic (10 A.M) St Peter's (2 P.M), Samaritan (9 30 A.M and 2.30 P M) Gt. Ormond-street (9 30 A.M) Gt. [illegible] Central (2.30 P M), Westminster (2 P M) Metropolitan (2.30 P.M) London Throat (9.30 A.M), Cancer (2 P.M) Throat Golden-square (9 30 A.M) Guy's (1 30 P M)

THURSDAY (22nd)—St. Bartholomew's (1 30 P.M) St. Thomas's (3.30 P.M.) University College (2 P.M) Charing Cross (3 P.M) St. George's (1 P M), London (2 P M) King's College (2 P M.) Middlesex (1 30 P M) St. Mary's (2.30 P M) Soho-square (2 P.M) North-West London (2 P.M) Chelsea (2 P M) Gt. Northern Central (Gynæcological 2.30 P M) Metropolitan (2 30 P.M) London Throat (9 30 A M) St. Mark's (2 P M.) Samaritan (9 30 A.M. and 2.30 P.M) Throat Golden-square (9.30 A M) Guy's (1 30 P M)

FRIDAY (23rd)—London (2 P M) St. Bartholomew's (1.30 P.M), St. Thomas's (3.30 P M) Guy's (1.30 P M) Middlesex (1.30 P.M.) Charing Cross (3 P.M) St George's (1 P M) King's College (2 P.M), St Mary's (2 P M) Ophthalmic (10 A.M) Cancer (2 P M) Chelsea (2 P.M), Gt. Northern Central (2.30 P M) West London (2.30 P.M), London Throat (9 30 A.M.) Samaritan (9.30 A.M and 2.30 P.M), Throat Golden square (9 30 A.M) City Orthopædic (2.30 P.M.) Soho-square (2 P M)

SATURDAY (24th)—Royal Free (9 A.M.) London (2 P.M.) Middlesex (1.30 P M) St. Thomas's (2 P M) University College (9.15 A.M.) Charing Cross (2 P M) St. George's (1 P M) St. Mary's (10 A.M) Throat Golden square (9.30 A.M.) Guy's (1.30 P M)

At the Royal Eye Hospital (2 P.M) the Royal London Ophthalmic (10 A M) the Royal Westminster Ophthalmic (1.30 P.M) and the Central London Ophthalmic Hospitals operations are performed daily

SOCIETIES

TUESDAY (20th).—CHELSEA CLINICAL SOCIETY (Jenner Institute of Preventive Medicine Chelsea gardens Grosvenor road, S.W.).—8.30 P.M Discussion on the President's Opening Address on Child-bearing in Chronic Heart Disease

PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P M Bacteriological Section Dr Klein: A New Pathogenic Diphtheroid Bacillus.—Mr A Foulerton and Dr V Bonney: A Diphtheroid Bacillus isolated from Two Cases of Puerperal Fever.—Dr L Barlow A Higher Mould Fungus isolated from a Case of Multiple Granulamatous Tumours.—Mr A Foulerton and Dr A. M Kellas: The Action on Bacteria of Currents or Discharges of High Tension and Rapid Frequency.—Dr C G Seligmann: The

Inhibitory Effect on Bacterial Growth of the Viscid Exudate from Tabetic Joints &c.—Dr Klein: Demonstration of Specimens from Plague in Rats.

DNESDAY (21st).—ROYAL METEOROLOGICAL SOCIETY (Institution of Civil Engineers, Great George-street, S W.).—7.30 P.M. Ordinary Meeting 7.30 P.M. Report of the Council. Election of Officers and Council for the ensuing year Address:—Mr W H. Dines (President) The Method of Kite-Flying from a Steam Vessel and Meteorological Observations obtained thereby off the West Coast of Scotland

OYAL MICROSCOPICAL SOCIETY (20 Hanover-square, W)—8 P.M. The President will deliver his Annual Address.

URSDAY (22nd).—NEUROLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W).—8.30 P.M. Annual Meeting Dr J N Langley The Autonomic Nervous System (Presidential Address)

IDAY (23rd).—CLINICAL SOCIETY OF LONDON (20 Hanover-square, W)—8 P.M. Exhibition of Clinical Cases followed by Discussion. Patients will be in attendance from 8 P.M. to 9 P.M.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c

NDAY (19th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W C.)—4 P.M. Dr A. Whitfield: Clinique. (Skin.) 5.15 P.M. Dr K. Grube Hydro-therapeutics and Balneo-therapeutics.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W.)—5 P.M. Dr A. Saunders: Broncho-pneumonia and its Treatment in Children.

ESDAY (20th).—MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22, Chenies-street, W C.)—4 P.M. Sir W H. Broadbent: Clinique. (Medical.) 5.15 P.M. Dr P Stewart Cranial Nerve Paralysis.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road W)—5 P.M. Mr. A. Baldwin: Treatment of Some Injuries and Emergencies.

UNIVERSITY OF LONDON (Physiological Laboratory)—5 P.M. Dr W D Halliburton On the Chemistry of Muscle and Nerve. (Lecture on Advanced Physiology)

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen square, Bloomsbury)—3.30 P.M. Dr R. Russell: Anatomy of the Spinal Cord.

EDNESDAY (21st).—MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22, Chenies-street, W C)—4 P.M. Mr J Berry: Clinique. (Surgical.) 5.15 P.M. Mr H. Pinch Inflammation and Repair

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W)—5 P.M. Dr McAdam Eccles Surgical Anatomy

HURSDAY (22nd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W C)—4 P.M. Mr C B Keetley: Clinique. (Surgical.) 5.15 P.M. Dr W S Colman Infantile Scurvy

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W)—5 P.M. Mr Paget Surgical Cases.

UNIVERSITY OF LONDON (Physiological Laboratory)—5 P.M. Dr T G Brodie On the Circulation. (Lecture on Advanced Physiology)

CHARING CROSS HOSPITAL.—4 P.M. Dr W Hunter: Demonstration of Pathological Cases. (Post-Graduate Course.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W C)—4 P.M. Dr Baumann Pathological Demonstration.

RIDAY (23rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W C.)— P.M. Dr H. Tilley: Clinique. (Throat.) 5.15 P.M. Dr H. W G MacLeod House Ventilation and Drainage.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road W)—5 P.M. Dr Beddard Epilepsy

UNIVERSITY OF LONDON (Physiological Laboratory)—5 P.M. Dr A. D Waller: On the Action of Anæsthetics and Narcotics. (Lecture on Advanced Physiology)

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen square, Bloomsbury)—3.30 P.M. Sir V Horsley: Surgery of the Nervous System.

EDITORIAL NOTICES

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It is especially requested that early intelligence of local events having a medical interest or which it is desirable to bring under the notice of the profession, may be sent direct to this office

Lectures, original articles, and reports should be written on one side of the paper only AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed To the Sub Editor

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed To the Manager*

We cannot undertake to return MSS not used

MANAGER'S NOTICES

THE INDEX TO THE LANCET

THE Index to Vol. II. of 1902, which was completed with the issue of Dec 27th, and the Title-page to the Volume, were given in THE LANCET of Jan. 3rd.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1902 are now ready Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

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METEOROLOGICAL READINGS

(Taken daily at 8.30 a.m. by Steward's Instruments)

THE LANCET Office Jan. 15th, 1903

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rain-fall.	Solar Radia in Vacuo.	Maximum Temp. Shade	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Jan. 9	29·42	SSW	0·02	63	54	41	45	47	Cloudy
10	29·35	S W	0·01	70	50	47	46	48	Cloudy
11	29·67	N.E	...	57	45	34	39	42	Cloudy
12	30·11	N. E.	...	55	38	32	32	33	Cloudy
13	30·39	N.E.	...	50	38	23	Fzn.	30	Cloudy
14	30·55	E.	...	55	34	30	Fzn	31	Cloudy
15	30·45	E.	...	54	35	23	Fzn.	29	Cloudy

During the week marked copies of the following newspapers have been received *Surrey Advertiser Kerry News Coventry Herald Belfast News Birmingham Daily Mail, Municipal Reformer Yorkshire Mercury Liverpool Daily Post, Herts Advertiser Times of India Reading Mercury Mining Journal Local Government Chronicle, Hertfordshire Mercury Windsor and Eton Express Daily Telegraph, Pharmaceutical Journal, Manchester Guardian City Press Centralblatt für Allgemeine und Pathologische Anatomie Bulletin de l'Académie de Médecine Harrogate Advertiser Walsall Advertiser Liverpool Daily Post, &c.*

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A Clinical Lecture

ON

TUMOURS OF THE BLADDER

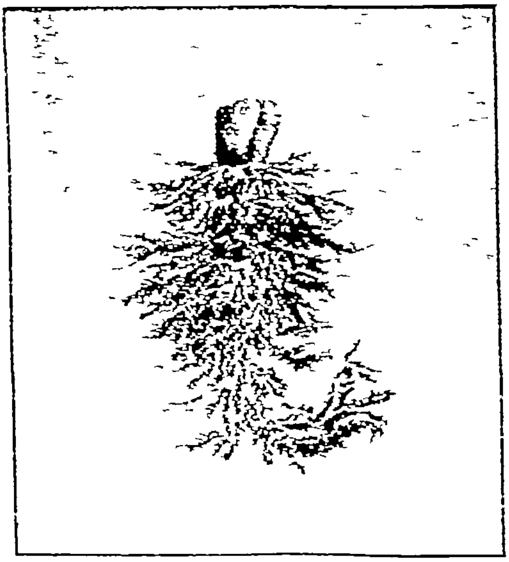
Delivered at the Medical Graduates College and Polyclinic on Sept 10th 1902,

BY P J FREYER, M.A., M.D, M.CH R.U.I.,
SURGEON TO ST PETER'S HOSPITAL EXAMINER IN SURGERY AT THE UNIVERSITY OF DURHAM.

GENTLEMEN,—Tumours of the bladder may occur either as *primary* or *secondary* growths. The former alone are of practical importance to the surgeon and in the following remarks I shall deal exclusively with them.

Tumours of the bladder, like tumours in any other region of the body, may be classified most conveniently according to the tissue from which they have their origin or of which they are composed (1) epithelial tumours, (2) connective tissue tumours, (3) dermoids, and (4) cysts. Those of the latter two groups are rarely found in the bladder and require merely passing notice. New growths of the first group are those most frequently encountered and they demand particular attention. Of these, the most important—as most common and most amenable to treatment—is the papilloma, of which there are two typical forms (1) villous papilloma and (2) fibro-papilloma.

FIG 1



Papillomata of the bladder have their origin apparently in an overgrowth of the normal mucous membrane and are analogous to the cutaneous warts The type of papilloma most frequently met with is the pedunculated "villous papilloma" (Figs 1, 2, 3, and 4) which consists of a fleshy mass, varying generally in size from that of a cherry to that of a walnut, attached to the bladder wall by means of a pedicle and covered partially or wholly by villous processes or papillæ, from which the tumour derives its designation If we immerse a typical specimen of this kind in water immediately after removal and examine it we find that the pedicle terminates in an expansion named the "core" or "framework" which is clothed by villi projecting from its surface and giving the whole a shaggy, flocculent appearance of greyish white colour If we then lift it out of the water and examine it in air we find that the villous processes have collapsed and adhere, the tumour resembling a mass of wet grey velvet or a miniature deck mop Viewed through the cystoscope in the bladder before removal the villi, or fimbriæ when long, influenced by the artificial currents set up by the movements of the instrument, are seen to wave about in the fluid, the growth as a whole presenting a bright pink appearance, of rare beauty sometimes, due to the blood circulating in the villi being visible through the almost translucent structure. Occasionally hæmorrhagic spots, or even ulcers, may be seen, the result of contusions

Directing attention now to the component parts of a papillomatous growth, we find that the pedicle may be either cylindrical or somewhat flattened. It varies in length, as a rule, from a quarter of an inch to one inch, but occasionally attains to several inches It varies in thickness from that of a slender thread to that of a cedar lead-pencil, the very fine variety being rare. This pedicle is composed mainly of connective tissue, interspersed with which are found unstriped muscular and elastic fibres derived from the submucosa, the surface being covered by epithelial cells similar to those found in the bladder Vessels and nerves pass through its axis. The pedicle is attached to the mucous covering of the bladder alone, and when pulled on the latter is raised off the muscular coat in pyramidal fashion. There is no infiltration of the adjacent mucous membrane or submucous tissue—a point of vital importance in distinguishing this growth from those of a malignant type.

The structure of the core, or body of the tumour, is similar to that of the pedicle, of which it is, indeed, merely an expansion Frequently the framework is merely a prolongation of the pedicle, covered with tufts of villi, and occasionally there is little or no body, the tufts of villi springing directly from the end of the pedicle, the whole resembling a pollard tree. The body, again may be lobulated, composed of several distinct, more or less rounded masses, each covered by short thick set villi, the whole presenting a cauliflower like appearance Indeed, innumerable varieties of this tumour, as regards shape, number, and attachment of the villi, are found.

The villosities covering the surface of the growth vary much in length and shape. Some are so short as to be recognisable only by a hand lens. These short, thick, compactly set villi may give the tumour a velvety appearance. Other long and slender fimbriæ may reach a length of one or two inches and are more sparsely arranged. Between these extremes all varieties of villi are found. They may spring from the tumour as simple thread-like cylinders or as miniature flattened blades of grass Some bifurcate, others digitate, or they may branch and rebranch like a tree Portions of the surface of the tumour may be devoid of villi, giving it a bald appearance in patches. Hæmorrhagic spots or ulcers may be present from traumatism, and deposits of phosphates may take place on its surface, particularly on, and in the vicinity of, the ulcers Microscopically an individual villus is found to be composed of delicate connective tissue, covered by layers of columnar epithelial cells, and traversed by a capillary loop

FIG. 2.

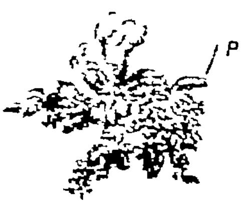


FIG 3.

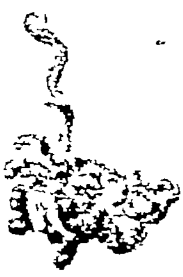
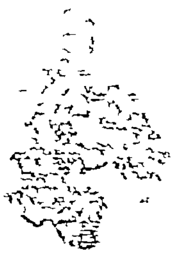


FIG 4



of blood vessel. Isolated fibres of unstriped muscle, continued from the core are sometimes found entering the base of the villus for a short distance.

When a tumour is attached to the bladder wall by means of a pedicle it is termed "pedunculated," and this is the most common variety It may, however, spring from the mucous membrane by a broad base, without the intervention of a pedicle, when it is termed "sessile." If the base or attachment of the tumour be contracted, forming a neck, the term "subsessile" is applied. Sometimes the simple villi spring directly from the mucous covering of the bladder, either in clumps or scattered broadcast over an extensive surface without the intervention of any body or core—a condition which may be described as "diffuse" papilloma. When the villi are arranged on ridges or crests of mucous membrane the term "coronoid" is sometimes employed

Though papillomata may arise from any portion of the mucous membrane of the bladder, except, perhaps, the trigone, they are most frequently found in the vicinity of the ureteral openings In my own practice I have found them most commonly attached to the bladder wall to the outside and in front of the ureteral orifices Instances of benign papillomata growing solely from the trigone are extremely rare, if ever found I have not met with an instance of this kind in my own practice But springing from the mucous membrane close to the trigone the base of the tumour not infrequently encroaches by growth on that area. The exemption of the trigone from growths of this nature is attributed to the fact that the mucous membrane of this area is firmly bound down to the subjacent muscular coat without the intervention of any loose areolar tissue. Laxity of the mucous membrane seems to be essential to the development of these soft villous tumours. Papillomata spring occasionally, though rarely, from the inner orifice of the urethra.

Papillomata, whether sessile or pedunculated, vary in size from that of a pea to an enormous mass almost filling the bladder The largest which I have removed was of the size of an orange and was attached to the outer edge of the left ureteral orifice by a pedicle an inch long and as thick as a goose quill. This was in a patient sent by Dr J W Erskine of Chelsea, who was present at the operation in June, 1897 The symptoms, which were not severe had existed for only two years. On the other hand, a papilloma may be of extremely slow growth and, though small in size, may give rise to very grave symptoms. On June 20th, 1899, I removed a pedunculated papilloma of the size of a cherry (Fig 3) from a patient, aged 36 years, sent by Dr J J C Constable of Kennington Park This gentleman had suffered from hæmaturia for 18 years, and at the time of operation was extremely anæmic from constant loss of blood There has been no recurrence and the patient is now in sound health.

Papillomatous tumours occur singly in the vast majority of cases When multiple the number, as a rule, does not exceed three or four Occasionally numerous growths are found scattered over the surface of the bladder In cases of multiple growth there is generally a largish tumour with one or more subsidiary growths It has been suggested—without any tangible proof, however—that the subsidiary growths are derived as seedlings from the main growth

There are instances on record of spontaneous detachment of a pedunculated papilloma. This accident probably occurs through spasmodic contraction of the bladder on the tumour, thus rupturing the pedicle, or through twisting of the pedicle on itself, giving rise to strangulation and death of the tumour owing to the cutting off of the blood supply Papilloma is most frequently found between the ages of 25 and 50 years, though it may occur in childhood or in old age Males are more frequently affected than females.

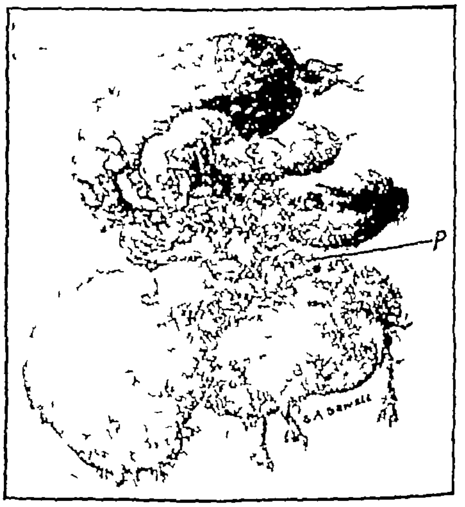
A pedunculated growth may from time to time be carried during the urinary flow against the neck of the bladder, or even into the prostatic portion of the urethra, and block the passage, thus giving rise at first to hypertrophy to overcome the resistance but eventually to atrophy and pouching of the walls of the bladder Cystitis is not an infrequent sequela of the presence of a tumour in the bladder A growth, whether pedunculated or sessile, growing close to, or from, the margins of a ureteral opening may block the canal and thus give rise to dilatation of the ureter with other backward pressure changes resulting in destruction of the corresponding kidney

Papillomata are occasionally found devoid of elongated fimbriæ, consisting of more or less dense fleshy masses covered by extremely short thick set papillæ, giving the general contour of the tumour a more or less smooth, though sometimes lobulated, appearance. These are termed "fibro-papillomata." Structurally they are composed of the same elements that enter into the villous papillomata but more densely arranged. Tumours of this type are, as a rule, sessile, slower in their growth, and do not attain the large size of the fimbriated papillomata.

When a growth is recognised by the cystoscope to be covered by villi we must not at once come to the conclusion that it is necessarily of a benign type, for malignant tumours are sometimes clothed with villi and these growths may occur as more or less pedunculated tumours. It is characteristic of a benign growth that there is no hardness about its base or pedicle and that the mucous membrane in its vicinity is soft and devoid of infiltration The existence of hardness of the base or infiltration in the adjacent mucous membrane at once arouses suspicions of malignancy

Intermediate between the typically benign papillomata and malignant tumours comes a type known as "transitional" Tumours of this nature on first removal present all the appearances of simple growths, both macroscopic and microscopic, save that the ground work is more dense and irregular, and the "presence in it of irregularly shaped cells which do not belong to normal tissue on the one hand, or to distinct new growths on the other" (Heneage Gibbes). Tumours of this type have a tendency to recur after removal, becoming more and more fleshy, with infiltration of the surrounding mucous membrane on each recurrence, the patient eventually dying from undoubted cancer A typical case of this kind occurred in a lady, aged 54 years, sent to me by Mr W Armstrong of Buxton The tumour (Fig. 5), which was sessile and of the size of a large walnut, showed no signs of malignancy on first removal but it recurred, and after being four times removed, together with the adjacent mucous membrane from the vicinity of the left ureteral opening, eventually recurred as carcinoma on the right side of the bladder, to which the patient succumbed

FIG 5.



Adenomata rarely if ever occur in the bladder, as might be expected, seeing that it is doubtful if true glands exist in its mucous membrane. In the few instances that have been placed on record by writers the tumours were found in the vicinity of the neck of the bladder There is nothing in the descriptions of these cases to indicate that they were other than adenomata of the prostate, projecting into the bladder. In my recent practice of total extirpation of the prostate I have found that barnacle like adenomatous outgrowths of the prostate may appear in the bladder at a considerable distance from that organ connected therewith by long, slender, fibrous pedicles, or 'runners," lying beneath the mucous membrane. These might easily be mistaken for adenomatous tumours of the bladder

Epithelioma, or squamous celled cancer, as a primary disease of the bladder is not uncommon, ranking next in frequency of occurrence after papilloma It occurs in the latter half of life, being extremely rare before the age of 40 years.

t has its origin in the mucous membrane and may commence as a warty outgrowth, a simple fissure, or an irregular lcer. In whatever form arising the disease advances rapidly, preading over an extensive area of mucous membrane and nvading the underlying tissues. Large, elevated, fungating masses and hard nodules soon project into the bladder, loughs are thrown off, accompanied by fœtid discharges, and life is rapidly destroyed through loss of blood, infection of the lymphatic system, as well as from the pain and constant distress due to frequency of micturition and perpetual straining, the bladder being unable to retain more than a small quantity of urine. The glands affected are the pelvic, retro-peritoneal, inguinal, and lumbar. Secondary deposits in other organs are, however, rare. As already stated, a cancer may have villi projecting from its surface; it is then termed a "villous carcinoma." In the later stages of the disease an epithelioma of the bladder may ulcerate into the bowel, a fistula being thus established and fæces passing through the urethra and urine by the rectum. Or it may appear in the groin, causing pressure on the nerves and vessels and giving rise to severe pain and œdema in the corresponding lower limb. It may make its way through the sacro-sciatic foramen and involve the sacral nerve.

Tumours of the connective-tissue type are of rare occurrence in the bladder.

1. *Fibroma.*—This tumour, though nearly allied in structure, must not be confounded with the fibro-papilloma already described. The latter has its origin in the mucous membrane, whereas the fibromata spring from the submucosa or fibrous tissues in the muscular coat and have the mucous membrane simply stretched over, but not involved in, the growths. The fibromata are rarely pedunculated, being usually sessile, or subsessile, polypoid outgrowths, and they are usually single. They are almost invariably found in adults. As a rule, they spring from the base of the bladder, but the only instance of this tumour that I have met with in my practice sprang from the summit of the bladder near the ifice. It was of the size and shape of the adult thumb d hung down over the neck of the bladder, obstructing the inary flow. Fibromata are composed of adult connective ssue, with a few elastic fibres and fusiform cells interspersed. They are smooth-surfaced and on section present a hite, glistening appearance.

2. *Myxoma.*—The myxoma, closely allied to the fibroma, the soft, gelatinous, mucous polypus, similar in structure the nasal polypus except that the covering epithelium is quamous. It is, as a rule, composed of a soft, gelatinous, roteid substance identical with that found in the umbilical rd, but some varieties are harder, containing a considerable admixture of normal fibrous tissue. Growths of this pe occur only in young children and may be either sessile pedunculated. They are generally multiple.

3. *Myomata.*—These are composed mainly of unstriped uscle fibres, interspersed with scanty fibrous tissue. They re of extremely rare occurrence. They have their origin in e muscular coat of the bladder and may project inwards rming "intra-vesical" sessile or pedunculated growths, ely covered by the mucous membrane. They may remain interstitial" or project outwards from the surface of the ladder, covered by the peritoneum, forming "para-vesical" umours. When growing inwards they rarely attain a large ze and are easily enucleated. The largest intra-vesical rowth of this kind on record, as far as I am aware, ccurred in my practice. The patient and tumour were hown at a clinique in the Medical Graduates' College and olyclinic on Jan. 15th, 1902. The details of the case have een already reported[1] and briefly are as follows.

A married female, aged 24 years, had suffered from hæmaturia, increased frequency of micturition, and stoppage of he flow of urine for four years, with a tumour gradually ncreasing in size and eventually projecting into the anterior ortion of the vagina. When she first came under observation in October, 1901, the tumour was as large as a cricket all. It projected into the vulva and was covered by the anterior wall of the vagina which was pushed down before it. With a finger in the vagina and a hand placed above the pubes the tumour could be rolled about a fixed point in the left half of the pelvis. The patient had to push it up from the vulva before micturition, which sometimes required the catheter. Cystoscopy revealed a large, smooth, globular sessile tumour of the bladder, with large veins coursing over it, springing from the trigone and left side of the base of the bladder and in front of the left ureteral opening. On Oct. 30th, 1901, I opened the bladder suprapubically and snipped the mucous membrane over the tumour which was rapidly and easily enucleated. The patient made a rapid recovery, leaving St. Peter's Hospital within a month. She is now in excellent health, untroubled by any urinary symptom. The tumour weighed nine ounces and was found on microscopic examination to be a pure myoma.

4. *Sarcoma.*—This is the most common of the tumours of the connective-tissue type found in the bladder, but even this is rare in comparison with epithelial growths. It may occur at any age, arise in any part of the bladder, and is invariably sessile. It occurs as a smooth, dense, rapidly growing tumour involving the entire thickness of the bladder wall. The round- and spindle-celled varieties are those most frequently found.

Other tumours of the connective-tissue type are of extreme rarity in the bladder.

SYMPTOMS AND DIAGNOSIS.

Hæmaturia is the most important, as it is almost invariably the earliest, symptom in all forms of tumour of the bladder. If a patient consults you for hæmaturia coming on spontaneously without apparent cause you should at once suspect the presence of a vesical growth, and if the hæmaturia be painless the growth will in all probability turn out to be benign. The hæmaturia is, as a rule, intermittent, the attacks lasting from one to several days and completely ceasing in the intervals. In the early history of the disease the intervals may be prolonged, weeks or even months elapsing before a recurrence of bleeding takes place, but as the disease progresses the attacks of hæmaturia increase in frequency and intensity. Eventually the urine may never be quite free from blood, though at times the bleeding will be more profuse than at others. The urine is not uniformly mixed with blood, as in hæmorrhage from the kidneys. During the act of micturition it will be noticed that the earlier portions of the urine will be clear and free from blood—at least, to the unaided eye—and that the stream gets gradually deeper in colour till eventually pure bright blood is passed. Occasionally the urine may be tinged with blood even at the commencement of micturition, but the tinge gradually deepens and some pure blood is invariably passed at the end. Clots are frequently present—dark and irregular masses contrasting with the worm-like clots found in connexion with renal hæmorrhage. The hæmaturia is generally independent of position and motion, occurring as frequently when the patient is sitting or lying down as when getting about, thus presenting a marked contrast with the bleeding attendant on stone, which is always worse when the patient takes exercise. Profuse hæmaturia is rare in connexion with stone, whereas with tumour it is the rule. The extent and frequency of the bleeding do not bear any proportion to the size of the tumour. A growth may attain a very large size before it is attended by hæmaturia and quite a small growth, as in the case of Fig. 3, may involve profuse and constant bleeding endangering life. Soft growths, and particularly those clothed with villi, bleed more freely than the dense and bald varieties, and pedunculated more than sessile growths.

Increased frequency of micturition occurs sooner or later with all vesical growths, and once it sets in it never disappears till the tumour is removed. It is most marked in cases of growth situated near the neck of the bladder. Exceptionally it is the initial symptom and may exist for lengthened periods before hæmaturia supervenes. In the case of a lady aged 53 years whom I attended in consultation with Dr. W. H. Bourke of South Kensington, increased frequency of micturition (attended latterly by some scalding) had existed for two years, but there had never been any hæmaturia. The cystoscope at once revealed a pedunculated villous growth of the size of a large strawberry springing from near the right ureteral opening, which I successfully removed suprapubically. Two symptoms—viz., increased frequency and pain—are not uncommon in women who have passed middle life, and are, as a rule, due to pressure of the womb on the bladder. I was inclined to attribute the symptoms in this case to this cause, and it was only after Dr. Bourke had assured me that he had satisfied himself that this was not the case that I consented to examine the patient cystoscopically. This and other cases in my practice have taught me a lesson—viz., that when these symptoms are due to no apparent cause the cystoscope should be employed, even when hæmaturia is absent. The hæmaturia and frequency of micturition due to non malignant growths are in the earlier stages of the disease, as a rule, unattended by pain, but in malignant growths pain is present almost from the beginning

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[1] Journal of the British Gynæcological Society, vol. i., 1902.

Pain is nearly always present in the later stages of all kinds of tumour, due to a variety of causes, such as cystitis, passage of clots, blockage of the urethra by the growth, or pressure of the growth as it enlarges on the nerves Sessile and infiltrating growths are more painful than pedunculated ones The pain will, as a rule, be referred to the perineum, or as shooting along the whole urethra, in contrast with the pain of stone which is referred to the end of the penis and that of prostatic disease which is usually felt supra pubically

Retention of urine, partial as a rule but occasionally complete, may occur, due to clots, fragments of tumour tissue, or even a pendulous growth itself blocking the urethra.

With these symptoms we may find detached *shreds of tumour tissue* in the urine, microscopic examination of which may give a clue to its nature, always bearing in mind that benign villosities may grow on a malignant base.

Pus in the urine will be present when cystitis occurs. This is rare in benign growths, particularly in the earlier stages, unless from septic instrumentation It frequently occurs early in malignant growths and is always present in their later stages as a terribly painful and distressing complication.

Not infrequently the inflammation from cystitis extends along the ureters to the kidneys, giving rise to pyelitis, nephritis, and suppuration of the kidneys. Blockage of a ureter by the tumour may give rise to hydronephrosis, blockage of both ureters may cause anuria and uræmic symptoms. Rectal examination in the male and vaginal in the female will aid us in forming a diagnosis, but only in cases of malignant growths in which the base of the bladder may be felt nodulated and unyielding from infiltration of its walls, or in the case of large fibrous or myomatous growths arising in this position A papillomatous benign growth, whether sessile or pedunculated, will not be felt per rectum. When the tumour attains a large size, whether malignant, fibrous, or myomatous it may be felt bimanually by placing one hand above the pubes and a finger of the other hand in the rectum or vagina

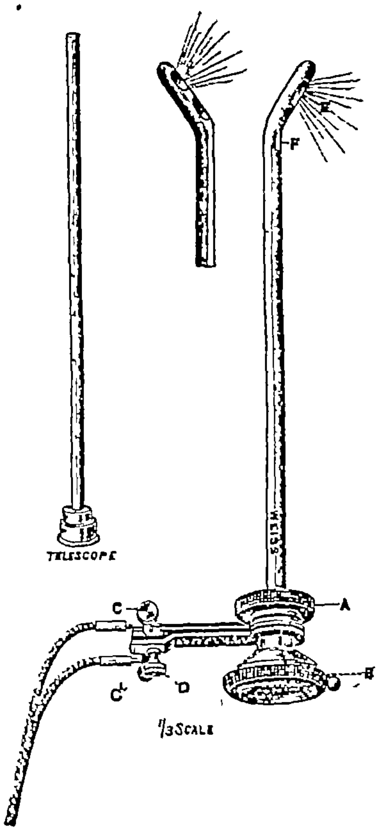
With the presence of the symptoms described a sound will probably be employed to ascertain if a stone be present in the bladder No definite information as to the presence of a growth can be obtained by this means, though a sensation as of the existence of an undefined soft, or even tough mass in the bladder, and limitations of the movements of the instrument, may lead us to suspect the presence of a tumour

Washing out the bladder by means of an evacuator and catheter and the introduction of a lithotrite with a view to detaching and bringing away portions of the tumour for examination were formerly employed, but such methods have now been abandoned since the introduction of the electric cystoscope, which provides us with a scientific and accurate means of arriving at a definite diagnosis as to the presence of a tumour as well as to its size physical characters position, and form of attachment to the bladder wall, as also to a fairly accurate forecast as to its nature.

CYSTOSCOPY

Leiter's cystoscope (Fig 6), which is the instrument now almost universally employed for illumination of the bladder, consists of a metal tube, bent near the end at an obtuse angle, resembling somewhat a bladder sound in shape. The bent portion, or beak, consists of a cylindrical cap which can be screwed on and off the shaft at the elbow of the instrument and is furnished with an oval rock crystal window (E) on the upper or concave aspect. Encased in this metal cap and situated opposite the window is a miniature electric lamp connected with the end of the shaft, through which, inside the metal tube run insulated wires to the connecting screws (C, C′) By the detachable nature of the beak the lamp when defective, can be replaced by a new one in a few seconds. The arrangement as a whole forms a water tight compartment for the lamp which illuminates the bladder through the glass window without coming in contact with the fluid in which it must necessarily burn, in order to protect the bladder walls from injury In the shaft, just above the elbow, is inserted a glass prism (F) by which the rays of light from the bladder are refracted along a telescope inserted in the shaft and capable of being removed for the purpose of being cleaned or for use in another instrument. The rim of the ocular end (B) through which the observer looks is covered by a thin plate of ebonite to prevent shock in case of contact of the eyebrows with the cystoscope. A knob (B) on the edge of the ocular end indicates the aspect of the bladder towards which the beak and prism are directed from time to time. By means of a screw (D) the circuit can be closed and opened. This screw, together with the connecting screws, are carried on a rotatory plate, or swivel, so that with the finger and thumb of one hand placed on the cylinder (A) the beak of the instrument can be revolved so as to bring any part of the bladder into view, while the connecting cords remain in position, being held downwards by the other hand.

FIG 6



The standard cystoscope employed for adult males is in size 22 of the French scale and with this a surface of three or four inches in diameter can be seen at one time. Cystoscopes are specially made larger, up to 40 of the French scale, for employment in females, giving a more brilliant illumination and bringing a larger surface into view at the same time They are also constructed smaller for children, but the diminution in thickness of the instrument involves a rapid narrowing of the field of vision, as well as a darkening of the picture presented to the eye. Formerly, a second instrument was employed, with the window on the under aspect of the beak and a simple pane of glass in the convexity of the elbow, for the purpose of viewing the base of the bladder, and particularly the trigone, but this is now little used, as since the introduction of the swivel arrangement referred to all portions of the bladder can be brought into view by the instrument already described.

In cystoscopy the patient is most conveniently examined in the supine position on an ordinary operating table, with his buttocks raised on a hard cushion and his legs slightly separated. The lithotomy position may also be employed and is, perhaps, best for females. As a rule a male requires an anæsthetic for careful and thorough examination, though sometimes this may be dispensed with, the urethra being locally anæsthetised by means of cocaine. An anæsthetic is rarely required for females who, as a rule, feel no pain or inconvenience from the examination.

A clear fluid medium is, of course, necessary to obtain a satisfactory view of the bladder and its contents. The best medium is the patient's urine, provided this be sufficiently clear, and this can frequently be attained by keeping the patient in bed for a few days previously to examination and directing him to retain his urine for three or four hour beforehand if possible But if the urine be clouded with blood, pus, or muco-pus it will be necessary to wash out the bladder through a soft catheter by means of warm boric lotion or boiled water This should be done very slowly and gently so as not to excite fresh bleeding When the fluid flows quite clear from six to eight ounces should be introduced and left in the bladder Glycerine should be employed for lubricating the catheter instead of oily substances which would adhere to the windows of the cystoscope and obscure the view Some diseased bladders resent the introduction of more than three or four ounces of fluid even under deep anæsthesia but even this quantity may suffice to give us important information.

The cystoscope should be examined beforehand to ascertain that it is in working order and that the illumination is of the proper strength It is rendered aseptic by thorough washing with soap and warm water and immersion in warm carbolic lotion. It is then smeared with glycerine and introduced like an ordinary sound, very slowly and gently, to avoid even the slightest bleeding if possible, and pushed as far into the bladder as the rim will permit. Care should be taken that the light is well switched off before introduction of the cystoscope. The observer's eye is now applied to the ocular end and the light is switched on, when the bladder will suddenly appear illuminated. The beak being directed upwards, the first portion of the bladder that comes into view is the apex, and if a growth has its origin in this position, which is rare, it will be observed at once. If the medium be quite translucent the surface of the bladder will be seen as clearly as if it were exposed to broad daylight, corrugated more or less according to the quantity of fluid introduced, greyish white, with the minute blood vessels visible the general appearance recalling that of the retina as seen through the ophthalmoscope.

A methodical survey of the bladder is now made. It is best in the first instance to bring the ureteral opening on one side into view and then that on the other side—small slit-like openings, placed obliquely, directed downwards and inwards, at the extremities of the inter ureteral bar These objects afford landmarks from which we take our bearings in surveying the bladder In the vast majority of instances tumours if present will be found in their vicinity The cystoscope should then be withdrawn till the prism approaches the neck of the bladder, the collar of which will be recognised by its dark crimson colour and smooth rounded edge, and a complete revolution of the beak slowly made in this position. Similarly the fundus is examined by pushing the cystoscope in as far as the rim will permit and revolving it in this position The beak must not be allowed to remain in contact with the bladder wall at one point for more than a few seconds, for fear of scorching the mucous membrane, but kept constantly on the move, the light being periodically switched off for a few seconds to cool the lamp Before withdrawal of the cystoscope from the bladder the light should be switched off for half a minute to avoid burning the urethra. To make assurance doubly sure in this respect I always detach the connecting cords from the instrument before its withdrawal The fluid is then drawn off by a catheter when the examination is completed

It is impossible in a lecture of this kind to teach all the details necessary for a successful cystoscopic examination and a correct appreciation of the appearances observed These can only be acquired by practice and are best learnt under the guidance of an experienced cystoscopist It must be remembered that objects are observed reversed in position, and greatly magnified when close to the prism. The current is supplied from a small battery an accumulator, or from the main through the medium of a transformer

Should there be bleeding during the examination we may be unable to obtain a clear view or merely for a short time, so that it may be necessary to withdraw the cystoscope and to wash out the bladder once more till the fluid runs clear Should the bleeding still continue it will be necessary to postpone the examination to a future date, the patient being kept quiet in bed in the meantime and the re-examination undertaken when bleeding has quite ceased

Apart from the diagnosis of tumours of the bladder, which may be regarded as the chief function of the cystoscope, it may be well to state here that this instrument is now employed in clearing up the nature of many other obscure diseases of the urinary track—viz., (1) hypertrophy of the prostate to ascertain the extent and nature of the outgrowth in the bladder, (2) encysted calculus of the bladder (3) tuberculosis of the bladder, (4) chronic ulcer of the bladder, (5) foreign bodies in the bladder, (6) hæmorrhage or discharge of pus from one or both ureters in various diseases of the kidneys, (7) stone impacted in the lower end of the ureter in its descent from the kidney, and (8) to ascertain the conformation of the ureteral openings in certain diseases of the kidneys, &c.

TREATMENT

Though the hæmorrhage, pain, and other symptoms attendant on tumours of the bladder may be temporarily held in check by astringents and narcotics, administered internally or locally applied, the only line of treatment that offers a prospect of permanent relief consists in complete removal of the growth. Following the lead of Sir Henry Thompson, for some years after 1880 surgeons generally accomplished this by means of perineal cystotomy I myself have removed several tumours through this route with considerable success But this method has now for several years been practically abandoned in favour of operation through the suprapubic route, which possesses the advantages that not only can a more thorough survey of the bladder be made in this way by the finger, but by means of an electric forehead light and appliances that will presently be described the interior of this viscus and its contents can be brought into view so that the tumour can be removed with greater precision than by the perineal route.

Suprapubic cystotomy—The patient, previously prepared by shaving the pubes and applying an antiseptic compress over the pubes and hypogastrium, is placed on his back on the operating table The Trendelenburg position advocated by some surgeons is quite unnecessary A rubber catheter is introduced the urine is drawn off, and the bladder is thoroughly washed out with warm boric lotion by means of a six or eight-ounce syringe. Petersen's bag for inflating the rectum previously to distending the bladder with a view to raising the peritoneum out of the way was formerly much in vogue I constantly employed it for some years after its introduction, but have now entirely abandoned this adjunct to the operation as unnecessary for the purpose for which it was introduced and attended by inconvenience and considerable danger It distorts the bladder out of shape is liable to lacerate the mucous membrane of the bowel and cases are on record where rupture of the bladder attended its employment. The bladder is simply distended with from 10 to 14 ounces of warm boric lotion and the catheter is left *in situ* with a clip forceps applied to prevent the lotion flowing out.

An incision of from two to three inches in length, according to the stoutness of the patient, is now made in the median line of the abdominal wall terminating at the symphysis pubis This incision is carried at once through the skin and subcutaneous tissues as far as the muscles Any bleeding vessels are clamped and the incision is continued either between the recti muscles or through one of them till the prevesical fat comes into view The point of the forefinger is then introduced through the wound and passed down close behind the symphysis, the prevesical fat is scraped through by the finger nail till the bladder is reached, and is drawn upwards off the bladder for the whole length of the wound—the peritoneum if extending low down being pushed up before it. As a rule, the peritoneum is not seen, being covered by the fat

The bladder will now have come into view presenting a greyish glistening appearance, with purple gorged, tortuous veins coursing in its wall and visible on its surface. The scalpel is at once plunged through the bladder wall in the middle line, with its edge directed downwards towards the symphysis and an incision an inch or one and a half inches long is made in this direction Neither a sharp hook nor sutures inserted in the bladder, to hold it up in position, is necessary, but if the patient be stout retractors may be required to separate the edges of the wound in order to bring the bladder into view before incising it.

The knife is now withdrawn and laid aside and as the fluid rushes out the forefinger is introduced into the bladder, plugging the opening If a tumour of considerable size be present it will be felt at once projecting into the fluid in the distended bladder The fluid is allowed to trickle away slowly by the catheter and the finger makes a methodical survey of the bladder, ascertaining the size consistency, position, and mode of attachment of the growth many of which particulars will have previously been recognised by the cystoscope

Removal of the tumour —A suitable tumour forceps (Figs 7, 8, 9, and 10) is now introduced beside the finger, but before doing so the bladder is distended with lotion through the catheter, which should be withdrawn till its end just reaches the inner orifice of the urethra, so as to be out of the way of the forceps Keeping the point of the finger in contact with the tumour, the blades of the forceps are opened and the pedicle of the growth—if it be pedunculated—is grasped as near to the bladder wall as possible and the growth is twisted off. If the tumour be sessile forceps with broad serrated jaws (Fig 7) will be necessary, by which the growth can be grasped flush with the mucous membrane of the bladder and removed partly by biting it away and partly by torsion. If the sessile growth be a large one it will have to be removed piecemeal, the forceps being introduced over and over again, the bladder being kept distended by an assistant throughout the manipulations, otherwise there would be danger of the rugose folds of the bladder getting nipped between the jaws of the forceps and thus injured.

FIG 7

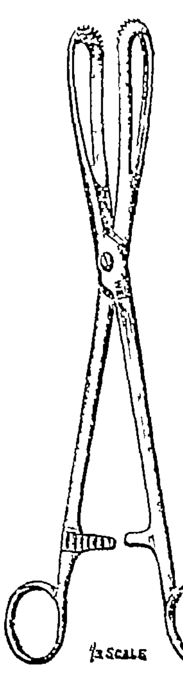


FIG 8

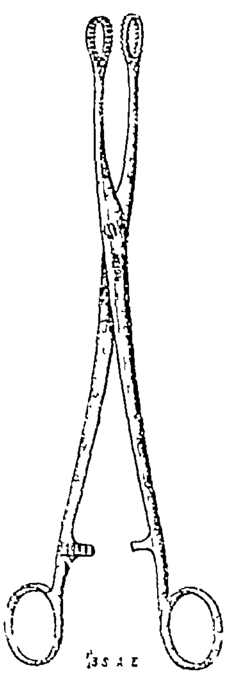


FIG 9

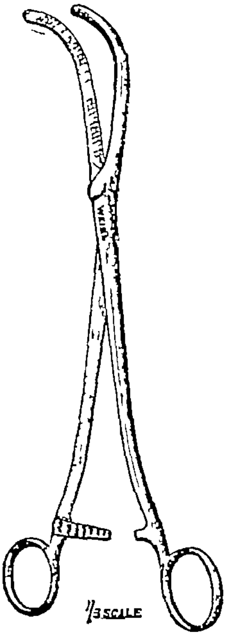
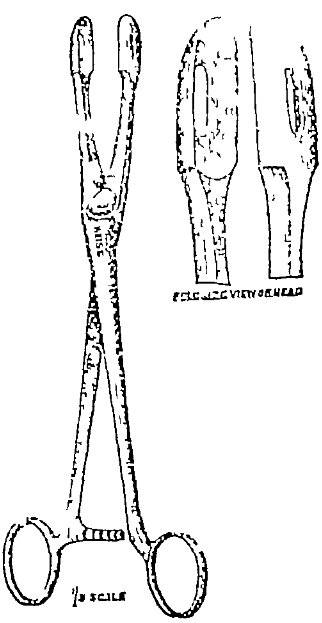


FIG 10



When the tumour has been excised as far as possible in the manner indicated an ordinary glass Fergusson's vaginal speculum is introduced—the largest size that will readily pass through the incision in the bladder being employed—and directed on to the site of attachment of the growth The lotion is allowed to flow away and any remaining fluid is mopped up by sponges introduced on holders through the speculum An electric forehead lamp is employed to illuminate the bladder through the speculum. The distal end of the speculum being pressed firmly against the site of attachment of the growth and the fluid being thoroughly mopped up by sponges, the site of the growth is brought clearly into view by means of the electric forehead lamp Any shreds of growth or nodules left behind will be observed in this manner and can be removed by forceps introduced through the speculum. The electric, or Paquelin's, cautery can also be introduced through the speculum to burn away the roots of the growth or to arrest hæmorrhage. Tincture of perchloride of iron can also be introduced on a sponge for the latter purpose If the growth be sessile and particularly if there be any doubt as to infiltration of the adjacent mucous membrane, the tumour may be grasped boldly by forceps and brought well up into the wound This will be facilitated by an assistant placing his finger in the rectum and pushing the base of the bladder up towards the suprapubic wound. The mucous membrane of the bladder is incised all round the base of the growth but quite clear of it, and this together with the tumour is removed by broad serrated or cutting forceps (Figs. 7 and 10). It is unnecessary and, indeed, inadvisable to attempt to bring the edges of the mucous membrane together over the site of the tumour by sutures It is difficult to introduce sutures at the base of the bladder It is inadvisable to employ other than catgut sutures and they are absorbed too rapidly to be of any practical use, silk sutures should never be used as they form nuclei for the formation of calculi. The tissues are so crushed by the forceps in the removal of the growth that it is doubtful if direct union could take place in any case. Healing of the wound takes place by granulation

The bladder is now thoroughly irrigated by warm boric lotion through the catheter and out by the suprapubic wound till all clots are removed and the fluid flows away clear A drainage tube with two eyes cut in it on opposite sides at distances of about half an inch and one inch respectively from the end is introduced by means of forceps so as to reach the base of the bladder This should be sufficiently thick to fill the wound in the bladder, so that the whole of the urine may flow by this route and thus avoid its trickling beside the tube and entering the prevesical space No object is gained by employing a narrow tube, as in practice it is found that the suprapubic wound heals as rapidly when a large tube is used, and a narrow tube has the disadvantage of allowing the urine to flow beside it, thus infecting the loose areolar tissue in the prevesical space, which in consequence would slough away in gangrenous masses, and of preventing clots from passing out of the bladder

The abdominal wound is now brought together round the tube by means of three or four silkworm gut sutures, which are passed through skin and muscle, and, finally the drainage-tube is fixed in position by means of a superficial suture. Buried sutures should not be employed in suprapubic cystotomy, as they almost invariably get infected by urine and lead to suppuration I never entirely close the bladder wound, invariably introducing a drainage-tube but when for any reason the incision in the bladder is extensive I bring the wound partly together by catgut before introducing the tube. The drainage-tube is cut short half an inch from the superficial wound, cyanised gauze, well wrung out of boric lotion, is applied, and the front and sides of the abdomen are covered by large pads of cotton or wood wool The dressings are changed every three or four hours as they become saturated with urine I have tried appliances of all kinds for conducting the urine directly from the bladder to a receptacle beneath the bed, but have found them one and all unsatisfactory, and I now employ only the simple method above described. The skin sometimes has a tendency to get irritated by the saturated dressings, at the earliest indication of this it should be protected by rubbing in lanolin or oxide of zinc ointment at each dressing after thoroughly washing and drying the surface The drainage-tube is removed in three or four days, when plastic lymph will have been thrown out along its track and the tissues thus protected from infiltration of urine. The bladder should be irrigated through the drainage tube daily or more frequently if the tube gets blocked by clots, by warm boric lotion. After the tube is removed a soft catheter is introduced daily and the bladder is irrigated through this and out by the fistula. The sutures are removed on the seventh or eighth day, but should the temperature rise and the wound appear "angry" one or more sutures should at once be removed to give vent to pent-up fluids in the prevesical space. The fistula takes from a fortnight to a month to close as a rule

When a malignant growth is so extensive that no attempt at its removal is desirable or practicable it may be necessary to open the bladder and to establish permanent drainage for the purpose of ameliorating the terrible pain and strangury that exist, particularly when general infective cystitis sets in and so to allow the patient to pass away in comparative comfort. The perineal or suprapubic route is chosen, according to the nature and position of the growth, so as to afford free drainage and at the same time to avoid pressure of the tube on the growth

Resection of that portion of the bladder wall involved in a malignant growth, and even of the entire viscus, has been undertaken—the ureters in the latter case being implanted in the rectum in the male or in the vagina in the female—hitherto, however, with but poor success. When the growth is confined to the apex of the bladder, where the resection can be performed extra peritoneally by stripping off the peritoneum over an extensive area, I consider that the operation is not only justifiable but advisable. Unfortunately, however, these growths are rarely confined to this region. When involving the base of the bladder I consider any attempt at resection futile, and that if the patient does not succumb immediately to the shock and hæmorrhage attending the operation life is materially shortened thereby

ON REFLEX CONVULSIONS IN GROWING BOYS AND GIRLS

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THE convulsive attacks so often seen in rickety or highly neurotic infants as a result of teething or other form of flex irritation are familiar to everyone, but it is not so ell known that similar nervous seizures, due also to pure eflex worry *may be found in children* beyond the period of nfancy and even as late as the eleventh or twelfth year he children thus affected are usually *members of families* hich show distinct neurotic tendencies although, perhaps, hey may be free from the graver signs of nervous instability he children themselves are highly strung, excitable and asily moved to tears, but by no means necessarily spiritless r timid. They may have suffered from convulsions during nfancy, but often their special nervous susceptibility is of ater origin and seems to be quite independent of the rickety tate in early childhood.

Occasional convulsive attacks in a child who has passed he period of infancy, and especially in one who is of an age o take regular lessons and to play at boisterous games are ften classed at once as "epileptic and treated accordingly, ut before labeling such a case as one of epilepsy it is wise o consider carefully all the circumstances of the attack with a view to discover some exciting cause to which the eizures may be referred. On inquiry we can often detect remonitory symptoms common to all the attacks and find hat on each occasion the patient for some hours or days efore the seizure had shown very obvious signs of ill health. The seat of trouble is usually the alimentary canal and the irritation appears to be excited by the presence in the stomach and bowels of undigested and fermenting food. The children suffer almost invariably from languid circulation and cold feet. In consequence they have but little resisting power against the evil effects of damp and cold and sudden changes of temperature When exposed to these influences they are liable to contract a more or less severe gastric or gastro-intestinal catarrh and the digestive turmoil thus engendered is often sufficient to throw the unstable nervous system off its balance.

As a rule the nervous attacks are separated by long intervals during which the health, although not, perhaps, quite satisfactory, for the nutrition is rarely good, yet presents no unusual features which seem to call for medical notice. In most cases they are single convulsive seizures which occur once and are not repeated in the same bout of illness, but sometimes they fall into groups or batches, the child having two or three in the 24 hours for several consecutive days. In other cases, again, the convulsive seizures are repeated frequently over a period of weeks. They then cease for a time to return in the same way after a longer or shorter interval In the common case where the fits whenever they occur are preceded or accompanied by gastro intestinal derangement the inference that there must be some connexion between the digestive trouble and the nervous commotion is obvious The isolated attacks are probably purely reflex, as in the case of a teething fit, but when the seizures are repeated frequently day after day for weeks together the mechanism is probably less simple The urine at these times is always very acid and I have thought that the absorption of acid formed in large quantity in the alimentary canal as a result of fermentation of food might tend to keep up the irritation of the nervous system or that the same result might be brought about by microbic infection from the bowel

The special feature of these attacks lies in the fact that they invariably coincide either with a digestive disturbance or with some other form of local irritant and cease at once when the local condition is relieved. To produce its effect the local irritant need not be violent, but if mild its action must be sustained, indeed, the continued working of a mild irritant seems to produce a more striking effect than that of a more powerful stimulus which operates only for a short time. It would appear as if the endurance of the nervous system was gradually weakened more and more until the breaking point was reached and the fit occurred This result is arrived at more quickly when the stimulus acts upon a system already in a state of disquiet. This is well seen in the case of adenoid growths in the naso pharynx. Children who suffer from these vegetations often show symptoms of nervous unrest, and the addition of a post-nasal catarrh may be enough to determine the onset of convulsions The irritation of hard scybalous masses acting upon a mucous membrane already in a state of catarrh may have the same effect, and even the strain upon the eye set up by hypermetropia and astigmatism will sometimes, I have reason to believe, under favourable conditions prove a cause of convulsive fits in neurotic subjects The irritation of worms in the alimentary canal has been often said to be a cause of convulsions, but in my experience this consequence of parasitic irritation is rarely seen The nervous breakdown is said to be more likely to occur in the case of lumbrici than in that of ascarides, but when it is found I am disposed to attribute the commotion less to the creatures themselves than to the gastro-intestinal disturbance which is always associated with them and by means of which they breed and develop *In all these cases* the nervous seizure no doubt is as purely reflex as are the fits which arise from similar causes in susceptible infants, for such disorderly response to reflex stimuli may long outlast the period of babyhood and the rickety state We may find it in schoolboys and schoolgirls and even in young *adults* for there can I think, be little doubt that many of the so-called hysterical' attacks in young unmarried women are of this nature. In the common case where the fits are the outcome of a gastro-intestinal disturbance the account we generally get is that the child every few months has an attack of illness in which he lies about looking dull and listless, is perhaps feverish loses his appetite, and may complain of nausea or try to vomit The bowels are disordered—loose or constipated—and the tongue is thickly furred. In the midst of these signs of digestive derangement the child is suddenly taken with a *mild* fit, he loses consciousness and either twitches or lies with his body stiff in a tonic spasm.

The seizure may be repeated several times. After a few days the indisposition passes off and as the child regains his usual health the irritability of the nervous system also subsides.

In the year 1889 I saw with Dr G J Crawford Thomson a little boy, aged five years I was told that he had had fits ever since his first year and that for the last two years they had recurred every two months or so The mother explained that as a rule the boy's health was fairly good but that for a week before the attack his complexion would turn ash coloured and he would have dark lines under the eyes He would be fretful in the day and restless at night, his bowels would be confined and his feet noticeably cold The fits themselves were immediately preceded by a pain in the epigastrium and a rise of temperature In the fit the boy lay perfectly motionless and quite unconscious. He usually had two or three in succession Before the attacks the stools were clay coloured, afterwards greenish and offensive There was never any vomiting or diarrhœa. In this case the seizures were apparently the result of attacks of gastric catarrh. Treatment was conducted upon this assumption and measures taken to improve the circulation, combined with a careful diet and attention to the digestive organs, soon restored the child to a better state of health. Five years later I heard from Dr Crawford Thomson that the boy was at school doing well and had had no relapse.

A little boy, six years of age, was brought to me in 1889 as he was said to suffer from convulsive fits According to the mother's account the boy had had his first fit at the age of six months, when 12 months old, after an illness which was called "blood poisoning," he had had a second and similar seizure, and since that time the convulsions had been liable to return whenever the child's digestion was upset. At these times he became very irritable and cried a great deal and showed a patch of red on each cheek, his temperature rose, he slept badly, and his bowels were relaxed, then in the course of a day or two he would often become convulsed. In this way he was said to have had quite a dozen convulsive seizures. When in his ordinary health the boy was reported to be bright and active and very intelligent. When I saw him he was bright-looking enough, but his feet were very cold and his flesh was flabby, his colour, however, was good and careful examination could discover no sign of local mischief In this case the attacks of gastro-intestinal derangement were put a stop to by diet and attention to the warmth of the boy's feet, combined with a regular morning douche of 70° F following directly upon a hot sponging The boy was seen 18 months later and there had been no return of the fits although he had had one mild attack of diarrhœa

In the early part of 1901 I saw with Dr E J Moore a boy, aged 10 years, who came of a highly neurotic family and was himself very fanciful and nervous The boy had had adenoid growths removed in 1897 At that time he had been very anæmic and was subject to attacks of gastric catarrh, but by management and careful diet he had overcome this tendency in a great measure and was getting stronger and gaining colour In February, 1901, the boy was much worried by a tender tooth and a few nights later, after a visit to a theatre, was taken in his sleep with a convulsive fit. For some weeks afterwards he remained in a highly nervous state suffering greatly from night terrors In October of the same year he woke up suddenly one morning at 6 A M gasping for breath and fell into a fit in which he foamed at the mouth and was quite unconscious. The previous afternoon he had played football for two hours at his school and had seemed perfectly well on going to bed In April, 1902, he had another fit which occurred like the last in the early morning and roused him from his sleep His digestion at this time was disturbed for he complained of nausea soon after the fit and said that "his inside felt all bubbling up" He continued to suffer from bad dreams and would often wake up at night crying out that he was choking I examined this boy carefully on several occasions with Dr Moore, but beyond a certain amount of indigestion and a tendency to constipation could find nothing amiss. Something, however, led us to suspect that he was straining his eyes, and this suspicion was confirmed by Mr Ernest Clarke who ordered the patient glasses for hypermetropia and astigmatism The boy began to use the spectacles in April, 1902, soon after the last fit. From that time he improved greatly in health and became, as they said, "a different boy" Nine months afterwards he was reported to be lively and merry, absolutely free from all terrors or nervous apprehensions, and sleeping soundly all the night through.

I cannot help thinking that in this case the relief from the strain upon the eyes is answerable in great measure for the improvement which happily occurred, and the boy's mother who watched him with the utmost care is convinced that it is so The boy was evidently living in a state of extreme unrest and I could find nothing else to account for the flustered state of his nerves. It is, of course, too early as yet to say that the tendency to convulsive attacks has been overcome, but the improvement in the general health is so marked and the boy's nervous excitement has so completely disappeared that I shall be surprised if the seizures return. The boy was always bright and intellectually active and never had difficulty with his lessons He had had no fits in infancy At the time that the glasses were ordered he began to take a dose of strychnia solution (two minims) and liquid extract of ergot (20 minims) three times a day but the improvement was in my opinion too rapid to be attributed to the drugs

A little boy, aged four years and eight months, was sent to me by Dr Robert Allan. There was a neurotic family history on one side but the boy had not shown any definite sign of nervous disorder until March 5th 1900, when without any warning he suddenly fell off his chair in a fit Since that time the seizures had been repeated frequently The attacks were of two kinds. He had regular fits in which the whole body was convulsed on both sides These were of varying severity and occurred not only in the day but also at night and often took him in his sleep. As a rule he lost consciousness, but in the milder attacks he was sometimes thought to be conscious although his eyes had a fixed stare. The regular fits were mixed with others which were mere occasional and transient muscular contractions. They called these "jerks" In them a spoon or other object would be tossed suddenly from his hand, or his legs would give way beneath him and he would fall to the ground, but would rise again at once without any difficulty When the boy was nervous or excited the "jerks" were almost incessant. They generally occurred every day, sometimes only once or twice, but often more frequently One peculiarity of the case was that the attacks, both fits and "jerks," occurred in batches—so many days affected, so many free. Thus, no "jerks" occurred between the end of March and June, 1900, he then had them almost constantly for four days. Afterwards he was free again until September when he suffered in the same way for ten days. During all this time the severer attacks were occurring at intervals. Since October, 1900, all the attacks, both fits and "jerks," had occurred in groups, being present for two or three weeks and then absent for about the same period. When free during this time he had been free both from fits and "jerks."

I saw the boy for the first time on April 23rd, 1901. He was in fair condition with a good colour and his heart, lungs, and other organs were healthy He suffered greatly from constipation and his stools consisted of very hard lumps covered with stringy mucus They were evacuated with great difficulty and much jerking of muscles This condition of the bowels had dated from the time of the first fit, since which event he was said never to have had a natural stool although before the fit the bowels had always been perfectly normal. Not long before his visit to me the boy had passed a quantity of lumbrici and ascarides but without any relief to his symptoms He had never complained of abdominal pains or other kind of discomfort but since his illness, although perfectly intelligent and rational, he had from a cheerful, contented boy become peevish and irritable in his temper and very difficult to please. His feet were very cold and his circulation was said to be habitually languid As the boy lay on the couch while I examined his abdomen he had frequent little jerks of his head towards the right side and slight twitching movements of his right hand Now and again he would have a stronger jerk and occasionally he heaved a deep sigh. His pupils were normal and there was no nystagmus. The jerking movements were not at all like the irregular muscular contractions of chorea. As a rule they were isolated jerks and occurred only once or twice in the day or were even absent altogether for weeks at a time. It was only when the boy was at his worst, especially when nervous or excited, that the movements were repeated with any frequency Sometimes, however they were almost continuous and then his articulation would be difficult. The boy had already been put upon a diet in which acids and acid making foods were carefully restricted in amount and he was taking bromide with an occasional aperient.

In suggesting a remedy for this state of things I cannot say that I felt very hopeful of success, especially as the boy had been treated with so much judgment from the very beginning It appeared to me, however, that the profuse mucous secretion from the bowels denoted a high degree of intestinal irritability and that the passage along it of hard scybalous masses could not but be a source of extreme irritation. I therefore advised that we should try to improve the circulation by a course of morning douches of the temperature of 75° *F* given immediately after a hot bath, for if by this means we could reduce the boy's susceptibility to chills there would be a prospect of curing the intestinal catarrh and removing the worry from the bowels by a rigid diet and a succession of mild aperients *For medicine* I suggested giving the liquid extract of ergot (20 minims) with liquor strychniæ (one minim) three times a day after food. I regard this combination as one of singular value in all forms of nervous irritability in the child. The bowels were to be kept regular by a nightly dose of liquorice powder This treatment was carried out perseveringly by Dr Allan The boy got a good reaction after his douche and his feet became warmer Very soon he began to put on flesh and his nervous symptoms diminished The fits and 'jerks" still recurred at intervals but in a less severe form and the boy's spirits became brighter and his temper more placid. On Dec. 30th, 1901, Dr Allan reported 'The boy has had no regular convulsion since July and no 'jerks' since September, he has gained weight and is happy and cheerful instead of irritable and cross The bowels are kept regular by mild doses of liquorice *powder, but still a little mucus* passes occasionally" The last report, in December, 1902, stated that no further fits or "jerks" had been noticed that mucus had ceased to appear in the stools, and that the boy attended school regularly and seemed to have completely regained his *former good health*

In this case the results of treatment seem to leave little doubt that the nervous derangement was the direct result of intestinal worry As the bowels had been perfectly normal up to the time of the first fit, but never afterwards, it seems probable that at that date the boy had suffered from an attack of acute gastric catarrh. This derangement is not only a common cause of convulsive seizures in neurotic subjects but is apt to leave behind it a susceptibility to chills which, if disregarded, may be a fruitful source of mischief In consequence of this susceptibility the boy *seems to have suffered* from repeated attacks of mild catarrh of the colon which led to a continuous over secretion of mucus ('mucous disease") and started the constipation which was the cause of so much of his trouble. The happy result I attribute entirely to the energetic and painstaking way in which the treatment was carried out by Dr Allan. The *gradual weakening* and final stoppage of the fits and the return of the boy's normal placidity of disposition seemed to go hand in hand with the reduction of the catarrh and the improvement in the state of the bowels, and when the mucous discharge ceased to be *noticed* the nervous irritability also came to an end. Whether the ergot and strychnia had any part in the improvement I cannot say, but it is likely that the sedative and tonic effect of these remedies helped the nervous system to recover its tone directly the primary irritation had been put a stop to

I might bring forward more instances to illustrate the subject of this paper, but the above are sufficient examples of a condition which is far from being an uncommon one. If a child whether he be or not of known neurotic tendencies, begins to suffer from periodical fits we must not too hastily assume that the case is a serious one or *that the* patient is, or is likely to become, epileptic. If we are able to connect the seizures with a local irritant or passing derangement of organs we have reason to hope, and even to anticipate, that the removal of the disturbing influence may restore quiet to the nervous system. *Our* treatment should be directed to this end and instead of flying at once to bromides and other nervine sedatives we should search without delay for the exciting cause and adopt prompt measures for its removal

I desire to insist upon the fact that it is not only in children who suffer from some obvious and *definite local* worry that reflex convulsions are observed, indeed, if such a condition be present it is not necessarily the cause of the attacks. Thus, in the case last recorded, the boy passed some long worms and a quantity of thread worms, but nevertheless the turmoil of the nervous system was in no way allayed by their expulsion. It is evident from the cases narrated that where the nervous system is impressionable and unstable a moderate irritation, *if long sustained*, may keep the system in a state of continual unrest so that any further provocation even a very slight one, may increase the irritation to an unbearable degree.

It will be noticed that in the instances quoted above there is one common symptom upon which some stress has been laid—viz, that the feet have been habitually cold ' The symptom is one to which little importance is usually attached but it betokens a condition which, if disregarded, may thwart our best efforts to treat with success the more chronic complaints of childhood. With cold feet a child's susceptibility to chills is so heightened that he can no longer offer an effectual *resistance to sudden changes of temperature*, and a chill in a young subject in whom the metabolic processes are maintained at high pressure in order to respond to the urgent demands of growth and development almost always means a digestive upset Nutrition suffers at once and any weakness or injurious tendency is aggravated. That the nervous system *should* be *thrown so readily off its balance* argues, no doubt, a high degree of nerve instability, but this is far removed from the epileptic state and need not necessarily be permanent. If such impressibility can subside under favourable conditions in an infant it seems not unreasonable to hope for equally good results in an older child. As a rule, indeed, *nervous seizures of this character* are as harmless to the older children as they are to the infant, the storm passes off and leaves the patient no worse than before. *It may happen, it is true, that attacks* which are apparently of this nature persist and become a permanent source of weakness. Thus I have known the seizures to continue to recur in spite of treatment, each time with less and less provocation, until at last they arose apparently spontaneously without any detectable exciting cause. But even *in these cases, as far as I* have been able to follow them out, the general health seems to suffer little if at all from the attacks, the intellect remains unaffected and the child, if a boy, can go to school and hold his own with his fellows It is *probable that these cases* are not true cases of reflex convulsions even at the beginning, but as long as they remain *definite convulsive seizures coming* on only when the health of the patient is disturbed I do not know how they are to be distinguished. The main *point is* that such cases are really exceptional In the large majority of instances where the fit occurs in a child who is the *subject* of a temporary digestive upset we may reasonably expect that by judicious treatment the seizures may be put a complete stop to and the patient's health permanently restored. Many observed cases warrant me in saying that young persons who have been subject to such seizures to a period as late as 12 years old may grow up into perfectly healthy adults without showing any sign of having suffered in mind or body from a weakness which has long become a thing of the past

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THE PREVENTION OF SEA-BORNE PLAGUE

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I HAVE recently spent 12 months as surgeon on steamers trading mainly with Bombay and the Far East *During* that period I took the opportunity of making observations, as occasion offered, on the methods adopted to prevent the spread of plague and on the manner in which they were carried out I hope this account may prove of use to those who, while taking an interest in the subject, have not had the opportunity of becoming personally acquainted with the routine employed and whose knowledge of the subject is mainly derived from Blue-books and Parliamentary reports

By the Venice Convention certain regulations were recommended to be carried out by the sanitary authorities of ports infected with plague, these regulations especially applying to Bombay These consisted mainly of the examination of the crew and passengers on shore and the disinfection of the clothes, effects, and bedding of natives on shore.

At Bombay the following methods are adopted At an early hour on the morning of leaving the port the native crew are assembled with their belongings in a large building about a quarter of a mile from the docks. There they strip and the clothes they were wearing, together with their bedding, &c., are sterilised by steam. Their shoes are sprayed with a solution of perchloride of mercury and the boxes in which they keep their belongings are scrubbed by themselves at water taps provided for the purpose. They then take their boxes to a native who sprays the interior with a very small quantity of some disinfecting solution The men in the meanwhile have arrayed themselves in clean clothes which are not disinfected.

The disinfection of the clothes was very inadequately carried out on the two occasions when I witnessed it. The clothes came out of the steriliser like boiled puddings, wet and sodden I mentioned this to one of the port medical officers who explained that the fault did not lie with the machines used, but that they were worked by natives who could not be relied upon to get up a sufficient pressure of steam—a result which was due to an ill advised economy often met with in the East. The disinfection of the shoes was very superficial. The average native shoe or slipper is a dirty object, especially that of the fireman and coal trimmer It is full of nooks and crannies in which any germ would flourish exceedingly, being made of soft leather and usually embroidered A mere spraying with any disinfectant, however strong, could not possibly sterilise the whole of the shoe. The scrubbing of the boxes and subsequent spraying is a most farcical proceeding The man holds his box under the tap, gives it half a dozen scrubs on the top and as many on the bottom, holds it open before the spraying machine for a few seconds, and then trots off to the steriliser for his clothes The native also brings in his box household goods in variety—tins, wooden boxes, looking-glasses, and pots of grease, besides many others of an unknown nature. These are laid out for inspection but are not disinfected, though why they should be considered less likely to be infected than the clothes it would be hard to say The crew are then examined in a shed in the docks, and this examination, as a rule, is thorough. The primary object is to detect rise of temperature and enlarged glands And here I may enter a protest against the method of detecting the latter by means of a sharp prod in the groin and armpit. This is a most dangerous procedure for obvious reasons and if the person examined were of a stoical nature it would reveal nothing

Rats are well known as disseminators of plague. I have personal knowledge of one ship on which dead rats were found lying about some days before an outbreak of plague took place. It is therefore very important to prevent rats from boarding a ship in an infected port. This is, of course, recognised at Bombay but the means employed are very ineffective. Funnels are provided which are attached to the ship's cables with the large aperture downwards To these, as at present employed, there is the objection that rats will jump from the cable to the edge of the funnel and so get on board ship—this I have learnt from several credible eye-witnesses. Three or four lengths of wire rope are generally used to moor a large sized vessel and the funnels cannot possibly be fastened on all of them as the different lengths of rope lie too close together The usual plan is to place the funnel on any length of cable which lies far enough from its fellows to allow the funnel to fit in between, letting the other lengths take their luck. Manila cables are frequently used. These are large ropes three or four inches in diameter, much too big to allow the funnels provided to be placed on them, although they offer a most obvious and safe pathway for rats. Rats will frequently come up the gangway ladder and nothing is done to hinder them. Lighters, native boats, &c , are fastened alongside often in great numbers , some of these must harbour rats yet nothing is done to prevent them from coming on board. When a ship is loading at an infected port the object should be to prevent rats from coming on the ship When the same ship reaches a healthy port the rats should, as far as possible, be prevented from leaving the ship I have never seen the funnels reversed—they are always placed with a view to prevent the rats from coming on board. This I have seen in a ship lying in the port of London and newly arrived from Bombay The use of funnels at Bombay appears to be entirely optional, as I saw a good many ships lying in the port without them. And when they are used it seems to be considered sufficient to place them anyhow on the rope I have seen funnels so attached to the cables that a large hole was left in the mouth of each one, this being due to the careless way in which they were put on. It is impossible in some circumstances, such as the relative size of the cable and the funnel, to avoid leaving a hole in the funnel , and these holes are nearly always plugged loosely with tow or cotton waste instead of with a wooden plug cut to fit. The funnels are generally placed on the sag of the rope, so that the edge of the funnel is tilted towards the rope and often nearly touches it

The killing of rats on board ship is a very necessary procedure when the presence of infected rats on board is known and also as a preventive measure It is, however, a very difficult thing to do thoroughly, especially in passenger steamers which carry a large amount of perishable stores and are fitted with all kinds of wooden partitions Sulphurous acid has been tried and in one instance, to my knowledge, with very partial success It has many disadvantages and can only be used if all the stores and a considerable amount of woodwork be removed, and it will not kill the rats unless it is very condensed Carbonic acid gas will kill rats if it reaches them, but it is very heavy and non diffusible and rats might be able to climb to the upper parts of the ship out of the way I once tried driving rats out of a hold with the fumes of burnt red pepper I very much doubt if there were any rats—at any rate none appeared—though the effect of the fumes on the sportsmen who were waiting to kill the rats as they came up on deck was heartrending

A memorandum on the influence of rats in the dissemination of plague, by Dr W J Simpson, was issued from the colonial secretary's office at Hong Kong in 1900 Dr Simpson especially emphasises the fact that plague attacks rats before human beings, and after dealing with the destruction of rats on shore he makes the following suggestions for killing them on board ship He states that "the destruction of rats on board ship is peculiarly difficult" and "no method hitherto devised has proved entirely satisfactory" He recommends sulphurous acid, carbonic acid gas, and a substance called "pictoline." The methods which he advises for their use could only be employed on cargo steamers He is apparently under the impression that cargo steamers necessarily harbour more rats than do passenger steamers This, as a rule, is not the case. In a cargo steamer the whole of the space beneath the main deck is devoted to holds, with the exception of engine-rooms and coal bunkers, and these holds being made of iron throughout do not provide a comfortable home for rats. On the other hand, passenger steamers are honeycombed with wooden partitions and carry a large amount of edible stores. I once saw the hold of a large cargo steamer emptied and not a rat was to be seen, although search was made for them. In the same steamer 30 or 40 rats were trapped on the voyage in the storeroom and in the crew's quarters Of course, grain ships and others the cargo of which mainly consists of foodstuffs might harbour a very large number of rats, but ships coming from the East mostly carry cargoes of non-edible material

With regard to the detection of plague on board ship at ports of call I can only give the routine employed on ships which carry a surgeon. At Colombo, Penang, and Singapore the mean temperature is too high for plague to flourish and no especial precautions are adopted, though ships sailing direct from Bombay to Colombo are there placed in a modified form of quarantine. At Hong Kong the surgeon's certificate of good health suffices but if there are any suspicious cases on board the port surgeon examines the crew At Shanghai there is a regular inspection of the ship's crew and passengers and the native crew are thoroughly examined There are very complete arrangements at this port for quarantine, &c. In Japan the ship is boarded by four or five gold laced officials who make from a Western point of view, a very curious examination of the ship's crew Among other solecisms, to feel the pulse with the ball of the thumb or palm of the hand is quite usual. At Suez the native crew is examined and the passengers and white crew are inspected, a lady doctor being available if her services are required, and at Marseilles the same routine is practised.

Owing to the precautions taken it is most unlikely that any person infected with plague can board a ship at an infected port. Therefore the large majority of such cases of plague as are found on ships from time to time are, in all probability, infected on board, either by rats clothing, bedding, or cargo, and seeing that cases of plague on board ship still occur far more frequently than they should do I think that the time has come for the recommendations of the Venice Convention to be reviewed and modified. I am strongly of opinion that no native sailor should be allowed to bring any clothing or effects from his home on board ship, even if disinfected. This may appear to be a drastic measure but it is not so in reality and would probably cost less than the present cumbrous mode of disinfection. It would be no difficult matter for the port authorities to establish a depôt where the native sailor could deposit all the clothes and belongings necessary for his sea life during the interval between his discharge from one ship and his engagement on another These could be disinfected if considered necessary This would at least minimise the chances of clothes being brought in contact with plague

The question of rats is a more difficult matter to deal with The funnel when modified seems to be the best method of preventing rats from climbing cables. Each funnel should have *chevaux de frise* of sharp-pointed wire round the circumference, to be coated with some substance obnoxious to rats. These should not be of one stereotyped pattern, but they should be made in such shapes as circumstances may require, and the shapes necessary can only be found out by experience. They should be fixed by the shore authorities and if natives are employed they should be under the direct supervision of a European, and, lastly, the funnels should be placed on the most perpendicular part of the rope, that is, as near the hawse-hole as possible. I do not think it possible to kill all the rats on board any ship by any means short of sinking But I do think that a thoroughly organised system of catching rats by traps or other means would reduce their number to a minimum. It is well known that rats resort to the ship s boats for water and of this fact advantage should be taken. Any live rats seen on board, as well as the daily tale of those killed, should be noted in the log book, and it should be considered as important to keep the number of rats down on board ship as to keep the brasswork clean.

There is one more subject I should like to call attention to Each port makes its own regulations for granting *pratique* to vessels entering it. The result of this is that there is no continuity of action and that while one port may take every precaution to safeguard itself it may nevertheless make no provision to prevent infectious disease from being carried through to another port. The following is an instance. Two cases of illness broke out on a steamer sailing from Bombay on the day before arriving at Colombo These cases were carried through Colombo Penang and Singapore to Hong-Kong, where they were discovered to be plague In the meanwhile infection had spread to two other persons How many more were infected I do not know, as I left the port on the day all this was discovered. Now, if each port were treated not as a unit but as part of a continuous system this probably would not have occurred, as every case of illness would be examined with a view to future contingencies and any case not above suspicion would be removed from the ship This is a matter of considerable importance and directly affects the health of the whole world. It should surely be administered by the central government of the country and not left in the hands of local authorities A scheme should be devised by an international commission of all civilised nations that would be fundamentally the same for all ports differing only in such details as may be found necessary to deal with special epidemics It would be outside the scope of this paper to enlarge on this subject, but its importance and the self evident deficiencies of the system employed must form my apology for mentioning it.

Rugeley

FATALITIES TO WORKMEN CAUSED BY BREATHING SULPHURETTED HYDROGEN

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AT a graving dock in course of construction at Hebburn-on Tyne there occurred on July 17th, 1902, a serious disaster whereby three men were suddenly deprived of life. A similar accident took place on August 25th. On this occasion one man was killed and three men just escaped losing their lives. In the process of excavation the contractors had found it necessary to use a large iron cylinder or caisson. The cylinder at the date of the first accident was 48 feet deep and nine feet in diameter, 15 feet of the caisson projected above the level of the dock. In excavating the 33 feet of soil the workmen in the cylinder passed through sandy clay, stiff clay, gravel, and in the month of July they had reached the boulder clay From the amount of slag that is lying upon the ground the site of the proposed dock must have been occupied many years ago by iron furnaces, while close to where the iron cylinder has been sunk there is a large heap of refuse and tank-waste deposited there half a century ago from chemical works that have long since disappeared. This alkali waste lies on the clay close to where the excavation is being made by the men in the caisson and from it there is a certain amount of drainage. The refuse from chemical works is a nuisance to a neighbourhood in more ways than one. When rain falls upon the waste sulphuretted hydrogen is given off which impregnates the atmosphere, while the liquid that drains away contains sulphur compounds that destroy vegetation. Although the alkali waste had not previously caused alarm at the Hebburn dock so far as the evolution of gas is concerned, it was yet the source of disagreeable sulphurous odours. On the occasion of my visit to the excavations three days after the disaster in July the odour of sulphuretted hydrogen in and close to the place where the caisson is sunk was extremely pungent. The lower part of the cylinder reeked with it. The story of the fatal accidents is briefly this.

At 6.30 on the evening of July 17th a workman entered the cylinder He had been inside about 20 minutes when screams were heard. A comrade, believing that his mate had been overcome by gas, descended the caisson to render assistance, but in a very few minutes he too shouted and fell to the bottom, having been overpowered by the fumes. A third man went at once into the cylinder to give help, but he too was immediately poisoned. Within the incredibly short period of a few minutes three men were lying lifeless at the bottom of the caisson in three inches of water from which strong fumes of sulphuretted hydrogen were being evolved. The works manager allowed himself to be tied to the chain of a crane and lowered into the cylinder but he was overcome by the gas and had to be withdrawn. He, however renewed the attempt and succeeded in getting hold of one of the men with grappling irons, but in hoisting the body the belt broke. Subsequently a diver went into the caisson, but he also failed to recover the bodies. A gang of three workmen thereafter tried to reach their fallen comrades, but on account of the fumes they were obliged to desist at a point 15 feet from the bottom of the cylinder It was not until next morning that the bodies were recovered As naked lights burned well in the caisson on the night of the accident it is apparent that the poisonous gas was not carbonic dioxide nor was it gas of an explosive nature. Assisted by Mr. Malcolm of Hebburn, who had been called to the dock after the occurrence of the accident I made a limited post mortem examination on the bodies of two of the men three days after death The first was aged 23 years He had a well-developed and muscular body, rigor mortis was passing off. The right ear had been torn in removing the body from the caisson and dark blood had kept dripping from the wound ever since. The face was pale and slightly cyanosed. Owing to the opacity of the cornea it was difficult to determine the state of the pupils. The body was not decomposing rapidly On opening the cavities no odour of sulphuretted hydrogen was detected The heart was normal in size—the right side was extremely flaccid and empty, the left was hard, contracted, and empty The lungs were slightly œdematous and pale. The liver was dark. The abdominal viscera were healthy The blood was dark and fluid, some of this was removed from the vena cava for spectroscopic examination. The second man, whose age was 19 years, had a well developed and muscular body, rigor mortis was still present, his hands were tightly clenched as if death had taken place in a convulsion His face was cyanosed, so too were the neck and upper part of the chest, while the hands and arms were extremely pale. No odour of sulphuretted hydrogen was obtained on opening the large cavities of the body As regards the heart a small quantity of serous fluid was present in the pericardial sac, the right heart was flaccid and empty, the left was firmly contracted, hard, and empty The lungs were pale and œdematous The liver was dark. The abdominal viscera were healthy The blood was dark and liquid. Some of this was removed for spectroscopic examination. The veins, generally speaking, contained very little blood.

The blood gave the spectrum of oxyhæmoglobin. There were two distinct bands between the yellow and the green The hæmoglobin was easily reduced by means of ammonium sulphide. There was therefore no carboxyhæmoglobin present in the blood, so that the gas which killed the men was clearly not carbon monoxide The spectroscope gave no further information

As the air in the caisson was redolent of sulphuretted hydrogen it seemed probable that it was this gas that had poisoned the workmen Accordingly, through Mr H J Wilson, His Majesty's Inspector of Factories, I received a sample of the water taken from the bottom of the cylinder This I submitted to Professor Bedson of the Durham College of Science for chemical analysis The following is his report "Evidently a brackish water containing a little iron sulphide in suspension, also some sulphuretted hydrogen dissolved in it The results of examination are as follows Specific gravity, 1 011, total solids, 984 grains per gallon The solids contain the following radicles sodium, potassium, calcium, magnesium and iron, chloride, sulphate and sulphide. The water on boiling gives off sulphuretted hydrogen, 100 volumes of water gave 12 2 volumes of this gas This estimate may be considered low, as on standing some of the gas is decomposed, and as I was unable to make the examination on the day I received the sample there may have been a loss on this account"

For some time after the accident just recorded the men refused to enter the cylinder, but by degrees their repugnance was overcome and the work of excavation again proceeded apace. On August 25th another disaster occurred whereby one man lost his life in the caisson and three others just escaped. By this date the cylinder, now lengthened, had sunk further into the ground The boulder clay had been penetrated and sand had been reached There were 46 feet of water in the cylinder About the level of the water, or about 15 feet from the upper end of the caisson, there was a wooden platform. On August 25th a diver had been working at the bottom of the caisson and after having been thus engaged for an hour he came up to the platform where a workman, aged 28 years, in attempting to remove a glass window from the front of the diver's mask was immediately overcome by gas and fell into the water almost on to the diver The diver shouted for help and for air, which had been stopped, to be again pumped to him. A workman who went into the caisson to the rescue was immediately overcome by the fumes, as also was a youth who tried to render assistance There were now four men in the caisson, all of them more or less overpowered by the fumes, for although the diver was receiving air he experienced the sensation as if he was whirling round and round, and but for timely assistance he too would probably soon have become unconscious Mr A M G Walker of Hebburn was on the spot when the men were removed from the caisson. Three of the men were more or less ill, one of them being completely unconscious, while the man who had removed the glass from the diver's mask was found to be dead, his face being dark as if he had been suffocated Attempts were made for a lengthened period in his case to restore animation, but unsuccessfully By means of strychnine and ether administered hypodermically, artificial respiration, plenty of fresh air, occasional inhalations of oxygen, warmth externally, and stimulants, Mr Walker succeeded in restoring the three men, one of whom stated afterwards at the coroner's inquest that in about a minute and a half after entering the caisson he had become unconscious and therefore remembered nothing more.

In the hope of throwing light upon the dangers incidental to breathing sulphuretted hydrogen I exposed a healthy dog weighing 12 pounds 9 ounces to the influence of the gas prepared and administered by my colleague Dr R. A. Bolam, to whom I acknowledge my indebtedness for his assistance in the experiment. Respiration of an atmosphere containing 0 02 per cent. of sulphuretted hydrogen produced no effect upon the animal nor did inhalation of air containing 0 045 and 0 075 per cent. of the gas. When the dog was placed in an atmosphere containing 0 15 per cent. of sulphuretted hydrogen it very shortly afterwards and without any sign of distress or warning, suddenly became rigid and fell apparently dead, the breathing being the first to cease. Occasionally, and at long intervals, a feeble beat of the heart could be heard Artificial respiration soon restored the animal. In two and a half minutes the dog was quite itself again and was allowed to move about freely for some time. On the animal respiring air containing 0 15 per cent of sulphuretted hydrogen, apparent death occurred in 1 minute 40 seconds, being preceded by strong muscular spasm and stoppage of breathing The heart continued to beat for a period On exposure to fresh air the animal soon revived In repeating the experiment the same events took place There might be one or two deep gasping inspirations, or without these the animal would suddenly fall apparently dead in a state of extreme rigidity and with its breathing entirely suspended. Occasionally very marked fibrillary tremor could be observed over the whole body and in this condition of suspended respiration, while the heart could be felt beating very quickly, feebly, and irregularly the animal could be resuscitated by artificial respiration With each re-exposure to the sulphuretted hydrogen, but never exceeding 0 2 per cent., the dog was more quickly and more profoundly affected. It took the animal longer time to recover, it seemed to be suffering from shock as well. The respiratory mechanism appeared to be totally deranged, the automatism of the respiratory centre was so disturbed that it was with difficulty and only after a lengthened exposure to fresh air that the breathing again became rhythmic When respiration was re-established it was quick, 40 to the minute, the beat of the heart was quick and irregular The pupils were dilated When the animal had recovered from a deep administration it was evident that the gas had profoundly affected its nervo-muscular apparatus, for it could not stand unaided and its limbs remained in a state of rigidity There is not the least doubt that sulphuretted hydrogen causes death, and that very rapidly too, by its effect upon the respiratory centre. Death is sudden and apparently painless The animal simply falls down dead without warning This may be preceded by strong muscular rigidity with slight convulsive tremor accompanied by one or two deep gasping inspirations, and although the breathing is suspended for a period the heart may yet continue to beat quickly, feebly, and irregularly At this stage recovery is possible. On examining the body of the dog after death the heart was found to be flaccid, dilated, and filled with dark fluid blood on both sides From the right auricle blood was removed for spectroscopic examination The lungs were pale and presented nothing abnormal Through the spectroscope the blood showed the two bands of oxyhæmoglobin and was found to be readily reduced by means of ammonium sulphide

So far as concerns the data furnished by the necropsies on the bodies of the two men and dog just alluded to there was nothing detected at the post-mortem examination that can be said to point conclusively to death having been caused by inhalation of sulphuretted hydrogen The diagnosis rests largely upon the character of the surroundings and the mode in which death was induced. In looking over the literature of the subject I find that in nearly all the cases, with one or two exceptions, where death took place rapidly no pronounced pathological lesions have been found and no definite spectrum has been given by the blood.

In order to ascertain whether blood in contact with sulphuretted hydrogen would show a particular spectrum diluted defibrinated blood was exposed to the gas by Dr Bolam and myself We made three experiments. 1 H S was passed through defibrinated ox blood for *one minute* The liquid became chocolate coloured and then slightly green. On examination it gave the spectrum of methæmoglobin—viz., one band in the red and two in the green On adding ammonium sulphide and heating the liquid no reduction at first took place, but after standing for some minutes the fluid assumed a greener colour and by degrees reduction was effected 2 In order to determine what degree of exposure to the gas was necessary for the blood to give the spectrum of methæmoglobin sulphuretted hydrogen was passed for *20 seconds* through diluted defibrinated blood Examined immediately afterwards the two bands of oxyhæmoglobin were found to be still present. By degrees the liquid on standing became dichroic, appearing green by reflected and red by transmitted light, it now gave the spectrum of methæmoglobin, the liquid meanwhile becoming darker and greener to the naked eye. 3 In another experiment sulphuretted hydrogen was passed for only *five seconds* The appearance of the blood at first was unaltered and the spectrum was simply that of oxyhæmoglobin. On examining this blood spectroscopically every minute we found that it was not until four minutes had elapsed from the time of removing it from contact with gas that there began to appear a line in the red of the trum indicating the presence of methæmoglobin. The d itself by this time had become slightly like prune-juice olour. In another minute—i.e., five minutes after sul- retted hydrogen ceased to be passed through the blood— spectrum of methæmoglobin was distinct. Where sul- retted hydrogen acts upon blood for only a very short e methæmoglobin is apparently not immediately formed. s probable, therefore, in fatal cases of poisoning that man ot exposed long enough to the gas for methæmoglobin to elop for as we have seen it was not present in the fatal es alluded to above.

n addition to being evolved from alkali waste sulphuretted rogen is found in drains and cesspools and is due to omposing matter. Other gaseous products of putre- tion such as carbonic acid, carbon monoxide, and monia are also usually present. The effect of breath such foul air will be largely influenced by the es other than sulphuretted hydrogen, that are present l their amount. Usually there is a deficiency of gen. As far back as 1884 Grehant and Peyron nonstrated the point at which sulphuretted hydrogen ked with air became poisonous. In order to kill a dog yron found it necessary to employ a mixture of 1 in 500 ere is not the least doubt that the injurious effects of phuretted hydrogen are not sufficiently appreciated by mbers of the medical profession who have not made emselves acquainted with the literature of the subject or testing its action. Dupuytren and Thenard found air ntaining 0·66 of this gas per 1000 poisonous for birds, 25 per 1000 poisonous for dogs, and 4 per 1000 poisonous horses. Lehmann observed that air containing 0·13 of e gas per 1000 caused local signs of irritation, the effect ing probably a narcotic one judging from the position sumed by the animals experimented upon. When men rking in sewers are obliged to breathe an atmosphere ntaining a fairly large amount of sulphuretted hydrogen ath is often instantaneous, and at the necropsy, as in y own cases, no constant pathological changes are found the body unless it be slight œdema of the lungs and the ct of the blood being dark and fluid. The chambers of the eart may contain fluid blood, but this is not always the case, s in two of the three men killed in the accident in July at ebburn the heart was empty. Lehmann,[1] in addition to is experimental work upon the effects of sulphuretted ydrogen, records the case of three men who breathed an mosphere containing 0·2 of the gas per 1000 of air. Within om five to eight minutes there was intense irritation of the yes, nose, and throat and after 30 minutes they were unable remain in the atmosphere any longer. Air containing 5 of sulphuretted hydrogen per 1000 is according to him, e utmost that can be breathed with safety. Even in this uantity (0·5) it caused in less than half an hour smarting f the eyes nasal catarrh, dyspnœa, cough, palpitation, reat muscular weakness, headache, and faintness, with cold weats. According to Lehmann an atmosphere containing om 0·7 to 0·8 of sulphuretted hydrogen per 1000 of air is angerous to human life and from 1 to 1·5 per 1000 destroys fe rapidly, the symptoms even coming on after withdrawal rom the poisonous atmosphere. There must be, however an liosyncrasy to the effects of this gas if the statements f some writers are to be regarded as trustworthy. In he Encyclopédie d'Hygiène et de Médecine Publique," ibre VI., Layet deals with this subject and mentions the act that some men can bear the absorption of relatively arge quantities of this gas without experiencing any incon- enience. Parent-Duchatalet respired for some time an tmosphere containing 29 per 1000 without suffering any ll effects. My own opinion is that sulphuretted hydrogen is an extremely poisonous gas and in this I am supported by nost writers. Haldane[2] says in writing of white damp, hat the poisonous constituent of this gas is CO, occa- sionally, however, H_2S is also present in formidable proportions. The latter gas is extremely poisonous, as little as 0·07 per cent. being capable of causing death if breathed for a length of time. Air containing 0·2 per cent. kills warm blooded animals within one and a half minutes. A. P. Laurie[3] alludes to the possible danger from this gas but at the same time says he has "not been able to obtain evidence that the occasional exposure to small quantities of the gas has an injurious effect. While no marked symptoms follow the inhalation of small quantities of sulphuretted hydrogen, still it is more than likely that effects must in time follow the breathing of such a poisonous gas. Laurie's remarks apply mostly to persons living in the neighbourhood of chemical works and where the air, as at St. Helens, is occasionally polluted by the gas that escapes from the works. A very small quantity of sulphuretted hydrogen is sufficient to make itself known by its unpleasant odour. When men have been breathing H_2S for a time, and especially when mixed with other gases as in sewers, its presence is not so noticeable, and therefore the dangers attendant upon inhaling the gas are not realised. Gaseous emanations from sewers submitted to chemical analysis by Layet were found to contain sulphuretted hydrogen, ammonium sulphide, carbon dioxide, nitrous dioxide, and phosphoretted hydrogen. Herbert-Backer made a comparison between the various morbid phenomena due to prolonged exposure to air coming from sewers and showed the relationship of these phenomena to the different gases that were present. The sudden death of workmen in sewers is principally due to sulphuretted hydrogen. It is when sewers have got blocked and are being cleaned out that sudden fatalities have mostly occurred. In an ordinary way where there are only traces of this gas the workmen complain of vertigo, headache, and malaise, which disappear when the men come out into the fresh air, but occasionally it happens that a workman falls down in the sewer as if struck by an apoplectic seizure. On Feb 4th, 1862, four men were thus killed in a sewer under Fleet-street London. In 1880 in Paris five workmen were poisoned in a sewer in the Boulevard Roche-Chouart, of whom four died. In addition to sulphuretted hydrogen the air of sewers may be vitiated by carbon monoxide coming from illuminating gas that has escaped through a fissure in the pipes. Having escaped it is taken up by the soil and enters the sewers by aspiration, hence the necessity of a necropsy from a diagnostic point of view and of a spectroscopic examination of the blood of workmen who have died in the sewers. Since putrefying fæcal matter gives rise to sulphuretted hydrogen it should be remembered that empty cesspools are just as capable of causing mephitic poisoning as those that are full. In night-soil men the symptoms of the minor form of mixed sewer gas poisoning are complete and sudden loss of consciousness, immobility, and stiffness of the walls of the chest, respiration, while not entirely stopped, is irregular and incomplete, the pulse is scarcely perceptible, and the face and hands are pale, livid and cold. In the severer forms of poisoning convulsions occur, followed by death. When men have been rescued they have stated that they had experienced a sense of great weight about the lower part of their chest and a feeling as if their head had been tightly grasped in a vice.

Brouardel and Loye in 1885 showed that sulphuretted hydrogen destroyed life in two ways. In one form of poisoning death is *immediate*, *the individual falls down dead as if struck by lightning*. Death in these circumstances is clearly due to the action of the gas upon nerve centres, the pupil is dilated and its reflex is abolished, the limbs are firmly contracted respiration which is momentarily convulsed is soon arrested, the heart beats slowly and with this there is a gradual but regular fall of blood pressure leading up to death, the heart being the *ultimum moriens*. After death the blood is found to be dark and the hæmoglobin is practically speaking not altered. In the second form of poisoning death is slower. To the nervous phenomena there are added those due to asphyxia. After a preliminary phase characterised by dilatation of the pupil, insensitivity of the cornea, arrest of respiration, and slowing of the heart's action there appear symptoms due to asphyxia. Respiration recommences and for the moment the movements are energetic, all the muscles of the thorax and shoulders being brought into play. The heart meanwhile beats irregularly and the blood pressure falls or it rises and falls and the animal dies in a state of coma. The blood is very dark and its hæmoglobin is altered. The urine sometimes contains sugar or albumin."

Workmen who are exposed to the fumes of sulphuretted hydrogen occasionally complain, in addition to general feebleness and sense of weight at the stomach, of a skin eruption composed for the most part of small boils. Some men seem more predisposed to these than others.

It is difficult to say exactly how sulphuretted hydrogen kills. Wynter Blyth[4] says that sulphuretted hydrogen is distinctly a blood poison, the gas unites with the alkalies of the blood and the sulphides thus produced are partly decomposed in the lungs and breathed out again as sulphuretted hydrogen. Bouis,[5] on the other hand, is of the opinion that once sulphuretted hydrogen is in the lungs it finds itself under conditions that are most favourable for its transformation into sulphuric acid, and he therefore concludes that the disorders which it causes in these organs and in the blood ought to be attributed to this modification Hoppe-Seyler maintains that the gas absorbed acts upon the colouring matter of the blood and robs the hæmoglobin of its oxygen. A great deal depends upon the length of exposure to the gas and the amount of it present in the air that is breathed. Neither in the men who succumbed to the gas at Hebburn nor in the dog experimented upon in the laboratory did I find the hæmoglobin of the blood altered in any way J V Laborde, on the other hand, holds that sulphuretted hydrogen so acts upon the hæmoglobin that its presence in the blood determines a characteristic spectrum He is of the opinion that the gas acts mostly upon the nervous system. According to him sulphuretted hydrogen causes a functional arrest of the respiratory centre in the medulla. This effect may be brought about in two ways, directly or indirectly In the first, the poisonous gas when carried by the arterial blood to the brain acts upon the respiratory centre so as to induce disorder, it causes momentary arrest or it brings about in a more definite manner cessation of those functional phenomena which the centre superintends—viz., the mechanical respiratory movements. In the second mode a peripheral impression is made upon the pulmonary mucous membrane, or rather upon the terminal expansions of the vagal nerves in the lungs, whereby there is induced reflexly the same functional suspension By the latter method a fatal accident would be more immediate and more rapid since the gas would not require to be carried by the blood at all. Simple contact of the gas with the pulmonary mucous membrane would be sufficient to produce physiological effects.

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[1] Archiv für Hygiene, Band xiv., 1892, S. 135.

[2] Dangerous Trades The Air of Mines, p. 505, published by Murray 1902.

[3] Loc. cit. Chemical Trades, p. 532.

[4] Poisons their Effects and Detection, third edition, p. 73.

In a paper of this length it is impossible to deal in detail with the chemical methods adopted to detect sulphuretted hydrogen, either qualitatively or quantitatively It is sufficient to state that if air containing the gas is aspirated through a solution of lead acetate a black colour is obtained Similar colouration is obtained on exposing filter paper moistened by silver nitrate or lead acetate solution

Is it possible to prevent such accidents as those that occurred at Hebburn? Excavations close to slag heaps or the waste refuse of chemical works should be conducted with the greatest caution Houses ought not to be erected in too close proximity to these heaps, for Taylor[6] reports that at Cleator Moor the inmates of some cottages that had been built upon iron slag rich in calcium and ferrous sulphide—three adults and three children—died during one night in consequence of a heavy rain washing through the slag and liberating a considerable quantity of sulphuretted hydrogen that found its way into the houses. It is dangerous, therefore, to allow buildings, especially for living in, to be erected close to either slag or chemical waste-heaps In all circumstances the odour of sulphuretted hydrogen should be regarded as a danger signal It is a fairly heavy gas, it has a density of 16 99, and is likely to lie low at the bottom of a cylinder or in a confined space. The freest ventilation is desirable, so as to prevent stagnation and to encourage the removal of the gas as far as possible. Before allowing men to work in confined spaces where there is a suspicion of sulphuretted hydrogen the plan might be adopted of exposing a piece of filter paper soaked in lead or silver solution A cylinder of oxygen should be at hand and in the event of apparent death from breathing the gas artificial respiration should be adopted at once in the open air, warmth applied externally, and stimulants with strychnine carefully administered

Newcastle-on Tyne.

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[5] Encyclopédie d Hygiène et de Médecine Publique Article by Lavet.

[6] Principles and Practice of Medical Jurisprudence, vol ii p. 122.

Royal Victoria Hospital, Bournemouth —On Jan. 16th Princess Louise (Duchess of Argyll) formally opened the new children's ward at the Royal Victoria Hospital Bournemouth The ward will contain 16 cots The hospital was built by the townspeople as a memorial of the jubilee of Queen Victoria and was opened in January, 1890, by the King when Prince of Wales

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THE SURGICAL TREATMENT OF RHEUMATIC FEVER

By JOHN O'CONOR, M A., M D T C.D,
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Since I first[1] invited attention to the necessity for surgical intervention in this disease I have been enabled further to test the value of the treatment in 20 cases, most of which, as may be seen on perusal of the notes, had proved recalcitrant to medical treatment. It would be puerile in a paper dealing with any treatment of this disease to pretend to ignore the high value placed on salicylic acid and its compounds by most competent medical observers, and while it is a duty to admit that many cases seem to derive benefit from its administration, yet a considerable number seem to be unaffected by it, and on many occasions I have witnessed the onset—indeed, establishment—of endocarditis during full physiological exhibition of the drug

In regard to a criticism passed on one of my early contributions on this subject that possibly such cases as had not reacted to salicylates were not rheumatism but a form of arthritis caused by some other infection, I can only state that such a distinction requires an empirical faith which I do not possess, particularly since I have proved that all these acute cases respond equally to an intelligent use of a scalpel Professor Osler in the latest edition of his work states that "the drug treatment of acute rheumatism is still far from satisfactory," and 'the truth is there are certain cases of rheumatic fever that resist all forms of treatment." If he should see his way to give surgery a trial I am confident that he will modify the last sentence in his next edition. At the same time I do not wish it to be understood that I consider my treatment a panacea in all forms of the disease. On the contrary, I have had proof[2] as to its futility in chronic cases, particularly in those of a dry variety, the result of prolonged pickling of synovial membrane and vessels in infective material But in the condition commonly understood as rheumatic fever, acute rheumatic arthritis, or acute rheumatism, I am certain that surgical treatment is most efficacious, not only in causing immediate disappearance of the arthritis and early cessation of general toxæmia, but also from effectually protecting the heart against attack.

In my first paper I ventured the clinical theory that this disease is an infective one, something similar to gonorrhœal arthritis and pyæmia, the germ or toxin gaining admission to the body through the tonsil or other microbial trapdoor, and that the joint invasion is promptly followed by a form of infective arthritis, accompanied with general toxæmia, and furthermore the infected joints serve as incubators where the poison is elaborated and passed into the circulation, and thus conveyed to other articulations and to the heart. Having such views I maintain that removal of the infective material as soon as possible from the infected joints is a scientific and rational method of treatment, a conclusion fully corroborated by results It is hardly necessary to observe that, as in pyæmia and gonorrhœal arthritis,[3] the extent or intensity of metastatic lesions may be out of all proportion to that of the primary focus of infection, yet no matter how trivial the signs of the latter may seem, it is necessary to deal radically with it before hoping effectually to overcome the former I wish again to invite attention to the form of infective watery cellulitis[4] which not infrequently appears to be the dominant manifestation of the disease about the ankle and wrist joints. Sometimes I find this associated with evidence of arthritis of the corresponding joints and sometimes not Multiple incisions effect a prompt cure

Case 1.—A man aged 41 years was admitted to hospital on June 21st, 1897, suffering from rheumatic fever, the symptoms being a temperature of 102° F, the tongue thickly coated, the pulse 80, profuse sweating, anorexia, the urine scanty and high coloured, with a trace of albumin There was slight pain in the left elbow but no swelling was visible th knee joints were swollen, and the patellæ were floating d very painful, with some peri articular inflammation and ght œdema. There were no cardiac complications. Not-thstanding a liberal and prolonged trial of salicylate of la, salicin, turpentine, quinine, and flannel to the joints. nkets, and milk diet the case gradually assumed an ynamic character, and as he could not be got to take urishment by the mouth nutrient rectal enemata were ad-nistered. Blisters, fomentations, ointments, iodine, even seed poultices were in turn applied locally but no treat-ent, internal or external, seemed to diminish the quantity fluid in the knee-joints or general toxæmia. As a last source, on July 17th, arthrotomy of the right knee was rformed and four ounces of turbid serum with many large asses of lymph were removed. Owing to his low condition could not perform arthrotomy of the left knee until three ys later when some six ounces of similar stuff were acuated All constitutional symptoms rapidly disappeared ter the latter operation and he was discharged with good ovement in both joints on Sept. 17th. A year later he ported himself and his condition was found to be normal.

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[1] Glasgow Medical Journal October 1897

[2] 150 Arthrotomies The Lancet April 12th 1902, p 1061.

[3] The Surgical Treatment of Gonorrhœal Arthritis The Lancet Dec. 9th 1899 p 1585

[4] Annals of Surgery April 1899

CASE 2 —A man, aged 59 years, was admitted to hospital n Nov 12th, 1897, suffering from acute infection of both nee-joints with a temperature of 103° F, *profuse sweating,* blankety tongue, scanty high-coloured urine, constipation nd anorexia. As the orthodox medical treatment showed no ndency to reduce the swelling of the knee-joints or to relieve he general toxæmia double arthrotomy was performed on ov 18th. Three and a half ounces of flocculent serum were emoved from the right knee and four from the left Drain-ge with irrigation was continued for four days. Consti-utional symptoms vanished, he was allowed out of bed on ov 28th, and he was discharged cured on Dec. 6th

CASE 3.—A man, aged 40 years was admitted to hos-ital on Dec. 16th, 1897 suffering from rheumatic fever he temperature was 101 4° F, the tongue was furred, here was profuse sweating, and the urine was scanty, igh-coloured, and albuminous He complained of intense ain with stiffness in the left ankle, right knee, and left lbow There was considerable peri articular inflamma-ion about the ankle, the knee was much distended, im nobile, and painful to touch, and the elbow was swollen, ixed, and tender Sodium salicylate was administered in 20-grain doses every two hours, the joints were enveloped in lannel and liquid diet was given. As no improvement took lace on Dec. 18th the left ankle-joint was opened, nothing ut a small quantity of synovial fluid was found, multiple ncisions were then made through the swollen and inflamed peri articular structures, the cellular tissue was freely opened up, and the wounds were irrigated and packed with gauze. The right knee joint was then opened and six ounces of green turbid (almost purulent) serum were removed. Many lymph flakes were detached by the finger from the recesses of the joint and were removed by irrigation and free drainage was provided. Arthrotomy was finally performed on the left elbow and a tablespoonful of dirty serum was removed, followed by irrigation and drainage. On the third day the temperature fell to and remained at, normal, he partook of a full meal on Dec. 25th and was discharged cured on Jan. 10th, the joints being normal in contour and function.

CASE 4 —A man, aged 43 years, a workman, was suddenly taken ill on Nov 25th, 1897 with fever and shivering pain and swelling in both wrists, and a few days later both knees became similarly involved. He continued under the care of his family medical attendant until Dec. 6th when he sought hospital treatment. On admission his temperature was 102° F with all the usual symptoms of rheumatic fever, both wrists were red tender swollen, and stiff, and the left knee was distended and flexed. Salicylates, flannel, and milk diet were most assiduously tried until the 19th and as the condition, local or general had in no way improved both wrists were opened No abnormal fluid was found, but on making multiple incisions into the adjacent area affected with cellulitis a quantity of serum escaped from each wound. Arthrotomy was then performed on the left knee and some two ounces of turbid serum were evacuated. The temperature continued normal after 48 hours the joints rapidly resumed their normal condition, and he was discharged cured on Jan. 11th.

CASE 5.—A man, aged 40 years, was admitted to hospital on Feb. 24th 1893. His history was that ten months previously he caught cold" and suffered from pain and swelling in the left hand and wrist. These symptoms gradually disappeared without treatment. Three months later pain returned in the wrist and two months afterwards the left ankle and foot became swollen and stiff and for the succeeding five months he was unable to walk. On admission his temperature was 99 3° F, his tongue was furred, and there was some sweating, his urine was scanty and high-coloured, he had anorexia and he presented a worn-out appearance. The left ankle and foot were swollen, red, tender, and stiff, any attempt at passive movement caused intense pain. The left wrist was in a similar condition, there was no pain or swelling in any other joint, he had no organic disease The gums were healthy and he had not suffered from colic, he had had gonorrhœa 15 years before. On Feb 26th the dorsum of the left foot was incised, the cellular tissue was freely opened up, and the ankle and three tarsal joints were explored. A considerable quantity of serum oozed from the cut tissues, but the interiors of the joints were normal. The wrist received identical treatment, there was no fluid found in the joint (radio-carpal) On the fifth day the general symptoms had disappeared, there was free and painless movement in both articulations, and the patient asked for solid food. On the twenty-fourth day he was discharged cured Before leaving the hospital he ran 90 yards on a tiled floor his feet being bare, without a limp or ache

CASE 6.—A man, aged 26 years, a sailor, entered hospital on March 1st, 1898, with the following history On Feb 14th he caught cold on board ship and soon afterwards he felt pain in the left ankle. On the following morning his left knee became swollen and painful, accompanied with fever, "dry" tongue, loss of appetite, and scanty dark coloured urine. On admission the temperature was 100° F, the tongue was furred, and the left knee was considerably distended, the patella was floating, with marked tenderness and pain on movement The left ankle appeared to be normal. There was no organic disease. The patient had had gonorrhœa five years previously On March 2nd arthrotomy was performed and six ounces of greenish turbid flocculent serum were removed from the affected knee. Irrigation and drainage were carried out for three days On March 28th he was discharged cured and fit for work

CASE 7 —A man, aged 46 years, a labourer was admitted into hospital on March 1st. 1898, with the following history On Feb. 22nd he slept in wet hay and caught a severe cold. On the following day his right knee and right ankle became swollen, stiff, and painful. On the 27th the left knee became similarly affected. On admission his temperature was 101°F, he had a dirty tongue, profuse sweating was present and the urine was scanty and high-coloured, both knee-joints were distended, flexed, and tender to the touch. The right ankle and dorsum of the foot were swollen, red, and painful. There was no organic disease. On March 2nd three long incisions were made on the dorsum of the foot, serum oozed from the cut surfaces, nothing abnormal was found in the ankle-joint Arthrotomy was then performed on both knee joints four ounces of the usual muddy serum being removed from the right and two ounces from the left. On the third day all symptoms of general toxæmia had disappeared The patient was allowed out of bed on March 14th and was discharged cured on the 30th.

CASE 8.—A man, aged 27 years. a sailor, was admitted into hospital on April 23rd, 1898, with the following history On April 18th he caught "a severe cold on board ship On the 19th the left knee and the left foot suddenly became swollen and very painful, accompanied with fever sweats, shivering, constant cough, and difficulty in breathing On the 21st the right knee and right foot became similarly affected and on the 22nd pain and swelling commenced in the right shoulder On admission the patient presented a livid appearance His respirations were 38, his pulse was 110, and his temperature was 101° F, his tongue was furred and dry, he was bathed in perspiration, both lungs were extensively affected with bronchitis with slight basic congestion and abundant muco-purulent sputum, and his urine was high coloured and albuminous. The right shoulder was fixed swollen, and tender both knees were distended, painful and immobile, and the dorsum and sides of both feet and ankles were extremely inflamed and painful. The fact of his heart having so far escaped led me to take the pulmonary risk in a young sailor A small amount of chloroform was administered and within 20 minutes I returned him to a warm bed with free drainage of the above five joints having also incised and drained areas of cellulitis. Thanks to excellent nursing and free stimulation by hypodermic injections of strychnia and digitalis and rectal injections of hot coffee and brandy with frequent inhalations of oxygen gas, he steadily recovered from operative shock On the third day the dressings were changed. The wounds were healthy, there was slight, painless, active motion in each joint, but the swelling was considerably decreased, the tongue was moist, the respirations were 30 and the bronchitis was improving There was no cardiac complication On the sixth day he was given full diet. As his condition permitted of it he was placed in an armchair before a fire for an hour 14 days later he was walking about with normal joints, no trace of rheumatism having reappeared in any part of the body An uneventful convalescence ensued I think there are few who will not admit that this case was another triumph for Lord Lister

CASE 9 —A man, aged 42 years, a labourer, was admitted to hospital on May 6th, 1898, with the following history On the night of April 25th, while sleeping in a draughty hut, he caught cold, accompanied with fever, shivering, and sweating On the following day he felt acute pain in both wrists next day both feet became painful and on the 28th the left foot became swollen, tender to touch and very painful to move. On May 1st pains had ceased in the wrists and right foot but the condition of the left foot became more intensified On admission on the 6th his temperature was 99° F, his tongue was moist and furred, and the dorsum and sides of the left foot were swollen and very much inflamed With regard to his past history he had never had any serious illness and although he stated that he suffered from gonorrhœa two months previously no evidence of the same could be elicited by repeated examination of the penis during his stay in hospital, however there was a suspicion. On May 7th, assisted by my friend Dr L Colbourne of Beckenham five four inch incisions were made into the area of tumefaction, the tissues appeared to be waterlogged and serum poured out of them when divided, the ankle joint was explored but nothing abnormal was found A rapid and permanent recovery ensued

CASE 10 —A man, aged 44 years, was admitted to hospital on Feb 6th, 1899, suffering from rheumatic fever Both knees were considerably distended, painful, and stiff, and both the ankles and the dorsum of each foot were swollen, red, and painful His temperature was 102 6 F, his pulse was 100, his tongue was furred and he had profuse perspiration His urine was scanty and contained urates and a trace of albumin As to his past history he had had two attacks of rheumatic fever, the first in 1882 and the second in 1888 with occasional attacks of joint pains in the intervals. On Feb 7th arthrotomy was performed on both knees, 12 ounces of turbid fluid were removed from the right knee and four from the left, followed by irrigation and drainage Multiple incisions were made into the area of cellulitis about the ankles, no fluid was found in the joints An uneventful convalescence ensued and the patient was discharged cured on March 31st.

CASE 11.—A man, aged 30 years, a labourer, was admitted to hospital on July 19th, 1899 His temperature was 102° F, with great thirst and sweating His left ankle was swollen and inflamed Two days later both knee-joints and the other ankle became swollen and tender His urine was scanty and full of urates On the 23rd arthrotomy was performed on both knee joints and turbid, flaky serum was evacuated from each Multiple incisions were made in the feet, no fluid was found in the ankle joints Convalescence immediately followed and the patient was discharged cured on Sept. 6th.

CASE 12.—A man, aged 30 years, a coachman, was admitted to hospital on May 23rd, 1899, suffering from an injury to the right knee caused by a fall in the coach house two days previously The joint was found to be considerably distended and somewhat discoloured with some pain on movement. A diagnosis of traumatic hæmarthrosis was made. There were general symptoms. On the 25th the usual arthrotomy[5] was performed and six ounces of dark blood and clots were evacuated from the joint The wound gradually closed, the joint resumed its normal contour, and the patient was allowed out of bed on the eighteenth day On June 23rd he suddenly complained of feeling very ill, with fever and shivering The temperature suddenly rose to 102 3° F Two days later the left knee, both ankles, and the right wrist became swollen, stiff and painful, accompanied with profuse sweating, dry furred tongue, and scanty, high coloured urine. On the following day his respirations were noted to be 34 per minute, with some cyanosis, and a pericardial friction sound was distinctly audible. His temperature was 103° and his pulse was 110 A diagnosis of rheumatic fever was made Soda salicylate was given in 15-grain doses every two hours, the patient was placed in blankets, the joints were enveloped in flannel, and the patient was given a milk diet This treatment was continued for one month, but as no improvement took place, either locally or generally, he became extremely emaciated On July 25th arthrotomy was performed on the left knee and some four ounces of green flaky serum were removed Both ankle joints were opened, each containing about a teaspoonful of turbid fluid, and the swelling around the wrist was freely incised. On the following day on entering the ward it was evident that the right treatment had "at last" been adopted the patient felt much better An uninterrupted convalescence ensued and he was discharged cured on August 25th The joints and pericardium were normal.

CASE 13 —A man, aged 48 years, was admitted to hospital on Nov 14th, 1899, suffering from rheumatic fever His temperature was 100 5° F, he was sweating, had a furred tongue, and complained of great pain in the affected joints, the right wrist, the right shoulder, the left ankle, and the palmar surfaces of eight fingers. For three weeks previous to admission he had been under the care of his family medical attendant, who kept him between blankets, enveloped the joints in warm wool, and administered constant doses of soda salicylate. On admission he was in a most miserable condition, he was generally painful, had anorexia, and was emaciated Altogether he was a most unpromising patient. On the 15th arthrotomy was performed on the wrist, shoulder and ankle, which I supplemented with incisions in the swollen tissues, I also freely incised the inflamed eight fingers On the following day he expressed himself as feeling much relieved The symptoms gradually disappeared, he partook of full diet on the tenth day, and was discharged cured on Jan. 13th. He has frequently reported himself and there has been no relapse.

CASE 14 —A boy, aged 15 years, was admitted into hospital on Feb 7th, 1900, suffering from rheumatic fever, which commenced suddenly six weeks previously with chills and fever and pain and swelling in the right knee and left big toe. On admission the temperature was 100° F, the tongue was furred, and the patient appeared to be very anæmic. The right knee was slightly swollen and was tender on palpation, and the dorsum of the left great toe was swollen and inflamed Two days later arthrotomy was performed on the knee, and a few ounces of green turbid serum were removed An incision was made into the swelling on the toe and serum exuded. On the third day, while the knee and the toe were normal except for wounds, some swelling was noticed and pain was complained of in the right wrist. Chloroform was at once administered Three incisions were made on the dorsum of the wrist and about a drachm of flaky serum was removed from' the radio-carpal joint, into the latter a small gauze drain was inserted. The patient afterwards confessed he had noticed that his wrist was bad before the first operation, but thought that "it did not matter" On the tenth day he was allowed out of bed and he was discharged cured on the eighteenth day

CASE 15 —A boy, aged nine years, was admitted into hospital on Oct. 18th, 1900, with swelling and pain in both knees and ankles. His temperature was 102° F, his pulse was 118, and his tongue was covered with white fur With regard to the heart, the apex was in the nipple line, fifth interspace, there was increased dulness to the left, the first sound was reduplicated and the pulmonary second sound was markedly accentuated A systolic murmur was distinct at the apex, audible along the left sternal border, and also in the axilla Treatment was as follows Sodium salicylate, 10 grains every four hours, was given with blankets flannel, and a milk diet. No improvement followed and on the 21st both knees were opened and greenish flaky serum was evacuated from each Multiple incisions were made on the feet. No abnormal fluid was found in the ankle joints. Rapid recovery ensued The patient was allowed out of bed on the twenty fifth day and was discharged cured a week later Unfortunately no note was taken of the cardiac condition before discharge

CASE 16.—A man, aged 28 years, was admitted into hospital on Oct. 31st, 1900, suffering from rheumatic fever The right knee was distended very tender, and painful, and the left ankle and dorsum of the foot were swollen and tender There was also some swelling noted, nd pain was complained of, in the left knee and right ankle he tongue was furred, the skin was moist, and the tem erature was 101 6° F On the following day arthrotomy of oth knees was performed and about four ounces of flaky erum were removed from the right, and about two ounces rom the left, knee joint, irrigation and drainage were per ormed as usual Multiple incisions were made into the rea of cellulitis around the ankles, these joints did not con ain any abnormal fluid. On the thirty second day the atient was discharged cured

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[5] Traumatic Hæmarthrosis of the Knee-joint New York Medical Journal 1896.

CASE 17—A man, aged 30 years, was admitted into ospital on Feb 2nd, 1901, suffering from rheumatic ever His temperature was 101 6° F, his pulse was 94 is tongue was furred, he had acid sweats, and the left nee was swollen and painful. Sodium salicylate was given very three hours in 10-grain doses, and he was placed in lankets and the joints were fomented. On the 5th the ight knee and both ankles became swollen The tempera ure reached *102 4° at night. On the 7th* arthrotomy of oth knees was performed and the usual dirty greenish luid was removed. Multiple incisions were made *into* the area of cellulitis on the dorsum of the feet, the ankle-joints were opened and some turbid serum was found in each On the 14th he was allowed out of bed, he had normal movement in the joints and the wounds were granulating On the twenty eighth day he was discharged cured.

CASE 18—A man aged 34 years, a labourer, was admitted into hospital on Feb 26th 1901, complaining of pain and swelling in the left wrist and left ankle, which had commenced suddenly on the 19th. On *admission* his temperature was 101° F, his tongue was furred, he had profuse sweating, and the left wrist and left ankle were swollen, red, and tender He was treated for eight days on salicylate of soda, rest in *bed* flannel, and milk diet. No improvement followed, and on the ninth day multiple incisions were made into the area of cellulitis on the back of the wrist. A quantity of serum escaped. The radio-carpal joint was opened and a little turbid flaky fluid was removed. Multiple incisions were then made into the *area of cellulitis around the* ankle No abnormal fluid was found in the joint. On the third day the dressings were changed, the drain was omitted from the wrist the wounds were quite aseptic, pain had vanished, and the swelling was considerably decreased. On the thirtieth day he was discharged cured.

CASE 19—A man, aged 27 years, was admitted into hospital on August 11th, 1902, suffering from rheumatic fever There was a strong family history the father mother, and sisters having suffered *from* rheumatism. On admission his temperature was 100° F, *his tongue* was furred, and he was very pale. Both his knees were swollen, stiff, and painful. The left ankle was very painful, red, and swollen. His urine was scanty His heart was normal. Sodium salicylate was given him in 10-grain doses every three hours The joints were painted with iodine and wrapped in wool and blankets and a fluid *diet* was given. A week later the right ankle became swollen and painful. The above treatment was persevered with until Sept. 11th, when it was obvious that the patient was gradually becoming more debilitated, the joint symptoms remained at a standstill, with continuous moderate general toxæmia Arthrotomy was performed on both knees and some turbid flaky serum was removed *from each.* The ankle-joints were opened and about a teaspoonful of similar stuff was removed from each, the area of cellulitis around the latter joints being freely incised. On the following day all pains had vanished, the toxæmia gradually got less he was allowed out of bed on Oct. 1st, and he was discharge cured and fit *for* work 14 days later

CASE 20—A youth, aged 18 years, was admitted to hospital on Sept. 25th, 1902, *suffering* from rheumatic fever His temperature was 101° F, he had severe headache, anorexia, furred tongue, and pain in the shoulders, both knees were distended and painful. The heart was *normal.* Medical treatment was given as before Four days later the right wrist became swollen, red, and painful, and on the following day both ankles became similarly affected. With regard to the heart cardiac dulness increased outwards and down wards the apex beat was in the fifth space in the nipple line, the pulmonary second sound was much accentuated, and a rough systolic bruit was distinctly audible in the fourth interspace, at the apex and in the axilla On the 30th arthrotomy was performed in both knees and the right wrist and some turbid serum was removed from each. An extraordinary improvement immediately followed. After the third day all general symptoms had vanished and the joints were painless and normal in contour On Oct. 11th a full diet was ordered, and the patient was allowed out of bed on the following day, and two days later was walking about in a garden. I very much regret that the cardiac examination on the 13th still revealed a loud blowing systolic murmur at the apex, conducted round to the back, and another (probably hæmic) systolic murmur was heard in the second left interspace near the sternum. I have no hesitation in *stating* that *this patient's heart* has been practically ruined through my delay in operating, for I have no doubt that if I had performed arthrotomy on both knees on *Sept 26th* the infection would have ceased. As I stated before it is not the first occasion on which salicylic acid has proved worse than useless in my experience.

While *advocating* early surgical interference in rheumatic fever I cannot too strongly deprecate any attempt at the same without the operator feeling assured that he commands all the ordinary essential elements with which to carry out an ordinary aseptic operation It is obvious that under *septic conditions this method of* cure might readily be attended with greater disasters than might even originate from the disease itself. To anyone about to put my practice to the test may I suggest (1) do not puncture, open knee-joints, (2) ligate all bleeding points, and (3) drain, do not cork Also I *wish to insist on* the great value of thorough drainage in these cases, for it would be a more imbecile act to close a joint containing such toxæmic stuff than to seal hermetically a recent ischio-rectal abscess cavity In order to carry this properly into effect in operations on the knee-joint an incision an inch *long* is made on each side of the joint through the capsule. Through both openings a long closed forceps is passed and a fenestrated india rubber tube half an inch in diameter is drawn across the synovial pouch, leaving about half an inch of tubing presenting at each wound Drainage having been thus secured the joint is washed out every morning with a jugful of warm carbolic lotion (1 in 60) and the tube is generally dispensed with on the third or fourth day Irrigation of the joint is daily continued until healing no longer permits of the passage of fluid A little *superficial necrosis of wound tissue caused by* pressure of the drainage-tube need not excite alarm, as this rapidly disappears under an iodoform gauze *dressing* The latter, by the way is made fresh for each dressing by immersing pieces of dry sterilised gauze in a solution of equal parts by weight of iodoform, alcohol, and glycerine. A little formalin (1 in 500) is added to the mixture before use In arthrotomy of the wrist- and ankle-joints drainage is attained by a piece of gauze passed into the joint through the open blades of a dressing forceps previously inserted

Buenos Ayres.

THE EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS

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SUCCESS in the sanatorium treatment of pulmonary tuberculosis depends largely upon the care exercised in the selection of suitable cases, for in proportion as the disease advances beyond the initial stage of infiltration the chances of ultimate recovery become lessened In the majority of cases of uncomplicated tuberculous pulmonary disease, if treatment be commenced during the stage of infiltration and afterwards continued as a precautionary measure the result will assuredly be a complete and permanent arrestment of the morbid condition, the prolongation of life, and the securing of health and comfort. And not only so, but the benefit which accrues from the early isolation of tuberculous patients in sanatoriums is not limited to the sufferers alone, it is extended to the community at large, as in every case under treatment a *possible focus* of *infection* is removed from amongst a larger or smaller circle of people.

The diagnosis of pulmonary tuberculosis in *its early stage* is not always an easy matter Its existence cannot always be confirmed by the detection of tubercle bacilli in the sputum, as frequently expectoration is either absent or it consists of mucus which seldom gives positive results on examination Further, physical signs of disease implicating the lungs may be so indefinite as to be easily overlooked, while the cardinal symptoms of phthisis at this stage are not generally well developed

In considering whether a patient is or is not suffering from early tuberculosis of the lung it is desirable, before proceeding to the examination of the chest, to make a careful inquiry into the family and personal history Due consideration must be given to the existence of a tuberculous family history as pointing to an inherited predisposition or the probability of exposure to infection The presence of a pre existing pleurisy, a history of hæmoptysis, or the evidence of tuberculous disease of the cervical lymphatic glands should be noted That these points are worthy of consideration in relation to diagnosis a glance at the subjoined figures will show Out of 170 patients examined the following numbers were obtained a tuberculous family history in 39 per cent., a history of pleurisy in 25 per cent. , a history of hæmoptysis in 31 7 per cent. , and evidence of lymphatic disease in 12 per cent The nature of onset of the patient's present illness should be carefully inquired into as it may shed some light upon the diagnosis to be subsequently made

As indicated by the figures given above, a "hæmorrhagic onset" is characteristic of a fair proportion of cases, the disease being ushered in by a somewhat sharp hæmoptysis, prior to which little or no complaint of ill health was made. Frequently the onset is more gradual, the patient complaining of such symptoms as anorexia, slight loss of flesh, occasional night sweating, cough with or without expectoration, and some diminution of strength But this is not always so In some cases of early phthisis the pulmonary symptoms are masked, the only evidence of disease being dyspepsia, occasionally with morning sickness, or anæmia, and thus the onset of the disease is so insidious as to escape the watchful eye of the most anxious guardian On the other hand, an acute or subacute onset is met with, the disease being ushered in with symptoms which may be indistinguishable from those of acute pleurisy or influenza. After what may be a varied period of indifferent health the patient is suddenly seized with pleuritic or muscular pains, pyrexia, occasionally with rigors, malaise, headache, night sweating cough with or without expectoration, and loss of flesh In such cases the termination may be rapidly fatal, or the acute symptoms may subside and some measure of improvement follow but the physical signs of pulmonary disease remain.

Before proceeding to the consideration of the various physical signs met with in the early stage of pulmonary tuberculosis it is necessary to bear in mind the sites primarily selected for the deposition of tubercle. The peribronchial, perivascular and subpleural tissues and the walls of the lung alveoli are the regions first invaded, and consequently the physical signs indicative of the early stage are referable to the presence of disease in one or other of these situations.

In cases characterised by early hæmorrhage there is invasion of the perivascular tissue by tubercle, although it does not necessarily follow that in all cases of perivascular infiltration there is hæmorrhage. A careful and methodical examination of the various regions of the chest must always be made. Inspection may reveal the presence of flattening, diminished movement, or muscular wasting over some particular region of the chest wall. Overend emphasises the diagnostic significance of venous varicosities in the cervico dorsal region in early pulmonary tuberculosis and in a certain number of cases they are present, but they are more frequently associated with some degree of consolidation of the lung tissue The deposition of the tuberculous nodule at one or other apex may give rise to some appreciable diminution of the normal percussion resonance. The apices should be lightly percussed during ordinary respiration, full inspiration, and forced expiration Over the supra and sub-spinous fossæ percussion should be more forcibly employed and the interscapular, subscapular, and axillary regions must also be carefully percussed. The condition of the tactile vocal fremitus and the voice resonance as appreciated by palpation and auscultation must be carefully noted Increased vocal resonance at the left apex, as compared with the right, is of greater significance than the converse Deviation from the normal in the quality of the respiratory murmur is, perhaps, the most constant physical sign in early tuberculosis of the lung The mechanical effect following the infiltration of the interstitial lung tissue with tubercle is twofold There is narrowing or occlusion of the lumen of some of the finer bronchi from pressure, while the normal expansion and relaxation of the elastic pulmonary tissue are interfered with and the ingress and egress of air are interrupted Consequently the respiratory murmur may be feeble or entirely absent at one or other apex It may be jerky and irregular in character, the irregularity affecting inspiration or expiration alone or both together Some degree of irregularity of the respiratory murmur is occasionally present in nervous people while undergoing examination, but it is usually to be heard over the greater part of the lung area. When audible over a circumscribed area, and more especially when involving expiration, it points to invasion of the lung tissue by some morbid process With a feeble inspiratory murmur there may be prolonged and harsh expiration or the respiratory murmur as a whole may be harsh in quality with expiration unduly prolonged The adventitious sounds heard during the early stage of pulmonary tuberculosis depend for their presence upon the tissues primarily invaded by tubercle. Over the supra spinous fossa and upper portion of the scapular region in a certain proportion of cases there is pleuritic friction with some diminution of percussion, resonance, and accentuation of the vocal resonance This is the only evidence of disease present and presumably points to the subpleural deposition of tubercle. The constriction of the finer bronchi by nodules in the peribronchial tissue will give rise to the presence of rhonchi from narrowing of the lumen or the production of bronchitis. Sibilant or sonorous rhonchi during inspiration, or accompanying a prolonged expiration heard over a restricted area of lung tissue, more especially if associated with increased vocal resonance should always be regarded with suspicion. Sibilant rhonchi are generally audible towards the end of inspiration, while those accompanying expiration are invariably lower in pitch The detection of râles, however, is of greater importance In many cases they are absent or so faint as to be almost inaudible , when present they occur during, or at the end of, inspiration, are fine in quality, and clicking or crepitant in character A few cases are met with in which crepitant râles with feeble respiratory murmur are the early and only signs present and in which it may be presumed the walls of the lung alveoli are primarily invaded.

The presence of some of the physical signs mentioned above should not be regarded as sufficient in themselves to constitute a diagnosis of commencing pulmonary tuberculosis In all suspicious cases the morning and evening temperature should be regularly recorded for a period of three weeks, so that any rise of temperature may be noted. A continuous evening rectal temperature reaching above 99° F would point to the probability of tuberculous disease. The absence of pyrexia, however must not be taken as contra indicating the possibility of phthisis, as disease in the early and more advanced stages may be present without any appreciable rise in temperature. In doubtful cases a reaction to Koch's tuberculin should be sought for A local inflammatory reaction and a definite rise in temperature should follow the injection of tuberculin in tuberculous subjects. Either tuberculin may be used, but the new tuberculin in doses of from half a milligramme to one or two milligrammes will be found to induce sufficient reaction for diagnostic purposes. Before employing tuberculin the temperature should be taken morning and evening for a period of not less than 14 days While being subjected to the test the patient must remain in bed, and should the first dose fail to produce a reaction three days must be allowed to elapse before an increased dose be given. A rise in temperature of not less than 1° F should be obtained before the diagnosis of pulmonary tuberculosis be made The following cases illustrate the utility of tuberculin.

CASE 1.—The patient was admitted into the Consumption Sanatorium at Bridge-of-Weir on Jan 21st, 1902, with a history of cough without expectoration and occasional night sweating There had been slight hæmoptysis on one occasion, with some loss of flesh and strength of several months' duration No particulars of the family history were obtainable There had, however, been exposure to infection, as the patient had slept for four or five months with a companion suffering from pulmonary tuberculosis On admission the patient was found to be well nourished but anæmic The temperature was 98 8° F , the pulse was 83, and the respirations were 20 The weight was 8 stones 5 pounds 10 ounces The chest measured 30 inches. The right clavicle was more prominent than the left. Over the right supra clavicular and infra clavicular fossæ movement was impaired, tactile fremitus and vocal resonance were increased, and percussion resonance was diminished The respiratory murmur was feeble and a sharp clicking rale was occasionally heard above the clavicle. Over the right supraspinous fossa and right scapular region there was prolonged expiration with increased vocal resonance while over the scapular region alone pleuritic friction was audible. A dose of half a milligramme of the new tuberculin was injected, with due antiseptic precautions into the left interscapular region On the following day the temperature rose 2 4°, reaching 101 2°

CASE 2 —The patient was admitted into the sanatorium on May 24th, 1902, with a history of cough without expectoration, night sweating hæmoptysis, loss of flesh, and diminution of strength of five years' duration As regards the family history, the father had died from some pulmonary disease the nature of which was unknown. On admission the patient was found to be fairly well nourished but somewhat anæmic. The temperature was 98 8° F , the pulse was 64, and the respirations were 20 The weight was 8 stones 4 pounds 10 ounces The chest measured 30 inches The left clavicle was more prominent than the right. Over the left supra-clavicular and infra-clavicular fossæ movement was impaired, the percussion note was distinctly hyper resonant, and the respiratory murmur was feeble and indistinct. In the left mammary region fine crackling râles were audible A dose of one milligramme of tuberculin was injected into the left forearm. Next day the temperature rose 5°, reaching 103 6°

CASE 3 —The patient was admitted into the sanatorium on April 10th, 1902, with a history of cough without expectoration and loss of flesh of four months duration. As regards the family history, two sisters had died from pulmonary tuberculosis. On admission the patient was found to be thin but of good colour The temperature was 98 6° F , the pulse was 70, and the respirations were 18. The weight was 6 stones 12 pounds 4 ounces. The chest measured 30 inches. There was no limitation of movement or any appreciable diminution of percussion resonance. Over the right supra clavicular and infra-clavicular fossæ inspiration was jerky Over the left supra clavicular fossa and immediately below the left clavicle inspiration was jerky and expiration prolonged and wavy in character, while at the end of inspiration a sharp clicking râle was occasionally audible. Over the left supra spinous and scapular regions the respiratory murmur was harsh A dose of a quarter of a milligramme of tuberculin was injected into the left inter scapular region. Next day the temperature rose 2°, reaching 100 2° F

CASE 4 —The patient was admitted into the sanatorium on May 24th, 1902, with a history of cough with expectoration and occasional night sweating with loss of flesh and appetite and increasing weakness of six months' duration No particulars of the family history were obtainable. On admission the patient was found to be fairly well nourished and of good colour The temperature was 99 6° F , the pulse was 76, and the respirations were 24 The weight was 8 stones 1 pound. The chest measured 30½ inches There was some flattening beneath the right clavicle. Over the right supraclavicular and infra clavicular fossæ percussion resonance was diminished, vocal resonance was increased, and the respiratory murmur was feeble and indistinct. Over the right supra spinous and scapular regions the respiratory murmur was feeble and fine crackling râles were audible. The left lung appeared normal. No tubercle bacilli were found in the sputum A dose of one milligramme of tuberculin was injected into the left forearm Next day the temperature rose 5 8°, reaching 104°

CASE 5 —The patient was admitted into the sanatorium on May 1st, 1902, with a history of cough without expectoration breathlessness on exertion, and occasional night sweating, with loss of flesh and appetite of six months duration The mother had died from pulmonary tuberculosis. On admission the patient was found to be of good colour and well nourished. The temperature was 99° F , the pulse was 77 and the respirations were 16 The weight was 9 stones 7 pounds 4 ounces. The chest measured 30½ inches At the right apex percussion resonance was diminished, vocal resonance was increased and expiration was prolonged. Over the left subscapular and infra axillary regions the percussion note was relatively dull the tactile vocal fremitus and the vocal resonance were diminished and the breath sounds were feeble pointing to the effusion of fluid which was confirmed by paracentesis. A dose of a quarter of a milligramme of tuberculin was injected into the right interscapular region. On the following day the temperature rose 1 8°, reaching 100 2° The local inflammatory reaction in this case was severe.

A brief consideration of the pathology of the various stages of pulmonary tuberculosis will emphasise the importance of early diagnosis in relation to successful treatment. The early stage is characterised by the simple presence of tubercles In the intermediate stage there is pneumonic consolidation of considerable areas surrounding the tubercles, while the process of necrosis with softening is commencing in the tubercles themselves The vitality of the tissues is necessarily compromised and arrestment of the morbid condition will seldom, if ever, take place except by the expulsion of the necrosed tissue and the formation and subsequent contraction of a clearly defined excavation. On the other hand, in the presence of comparatively healthy lung tissue and recently deposited tubercles the formation of healthy granulation and cicatricial tissue can under treatment be more readily induced and the stage of complete arrestment more speedily reached

In conclusion, it may be confidently anticipated that if combined with prophylactic measures there be an earnest endeavour to diagnose existing cases of pulmonary tuberculosis in the early stage and submit them to immediate treatment a definite diminution in the prevalence of the disease will result and the prospect of increased health to the future manhood and womanhood of our country will be assured

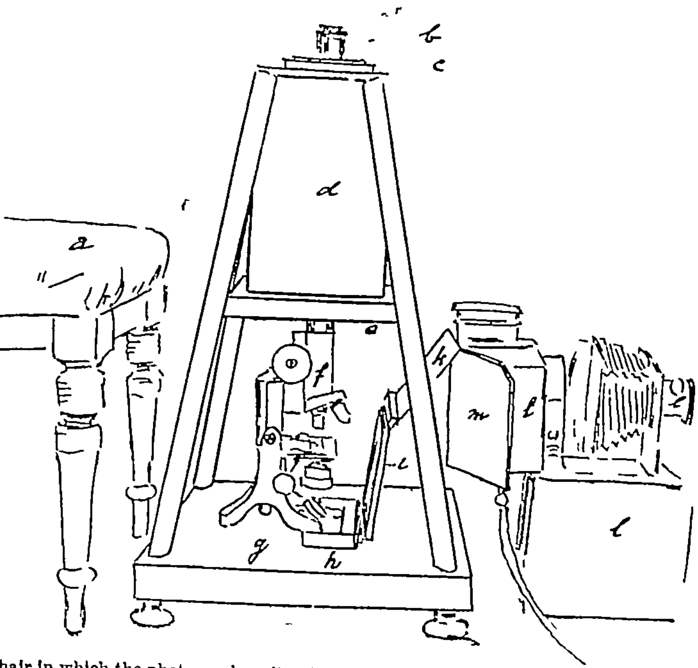
Bridge-of-Weir N.B

DIRECTIONS FOR PHOTOMICROGRAPHY.

By FRANK CROSBIE.

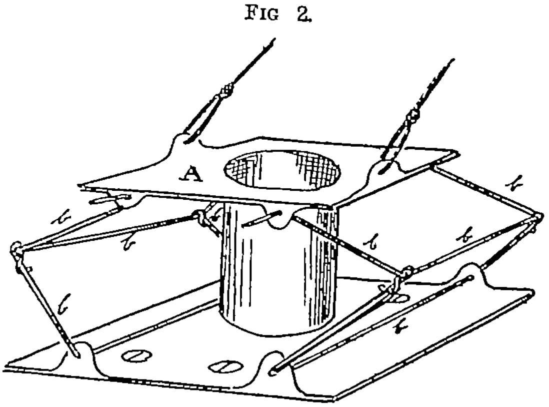
CONSIDERING the great increase in the use of photography during the last few years it is strange that photomicrographs have not been more generally produced. The cause of this probably lies in the supposition that the process is necessarily very difficult and the apparatus expensive This is not the case, and anyone who can develop an ordinary negative can readily produce photomicrographs of a high class, the cost and difficulty being no greater than that of ordinary photography A box camera that will work in conjunction with the microscope must be constructed. This is not difficult and any joiner or skilled amateur can soon make a light-tight box for this purpose at the cost of very few shillings. The camera shown in the illustration (Fig 1) consists of a box supported by four uprights, connected finally to a heavy platform. The whole is made of stout deal stained mahogany colour, and the box is blackened inside a 'dull black." It is so constructed that the top end of the box is adapted to take the detachable reversing back of an ordinary quarter plate camera. Duplicate fittings can usually be obtained from the maker of any quarter plate camera. At the lower end of the box is an aperture pierced in its floor, fitted with a moveable union to connect it with the microscope which stands on the platform beneath The distance between the bottom of the camera box and the platform should be about an inch more than the height of the microscope, after the draw tube has been removed, in order to facilitate removal and readjustment of the microscope. The length of the camera box and therefore the amplification obtainable is limited by the possibility of reaching the focussing screws and the mirror of the microscope when the operator is seated on a chair looking down through the compound focusser on to the focussing screen at the top end of the box. In other words, the total height of the camera is governed by the length of arm of the seated operator The union that connects the lower end of the camera box to the top of the microscope the draw tube having been removed, requires special care. It must move freely up and down in the aperture of the camera box and it should fit *inside* the tube of the microscope and when in position it must be quite light tight. It is made of zinc or card as shown in the illustration (Fig 2) and is fixed on the upper side of the floor of the camera box, the flange resting on the floor and over reaching the margin of the aperture in the box cuts off any stray rays of light The special stanchion hinges cause it to move

FIG 1



a Chair in which the photographer sits when focussing b Compound focussing glass c Reversing back of camera d Light-tight box camera e Union connecting camera and microscope f Microscope g Platform on which the microscope stands h Blocks marking the position of the microscope. i Light filter k Vulcanite shutter l Magic-lantern fitted with incandescent gas m Door at the back of the lantern opened

FIG 2.



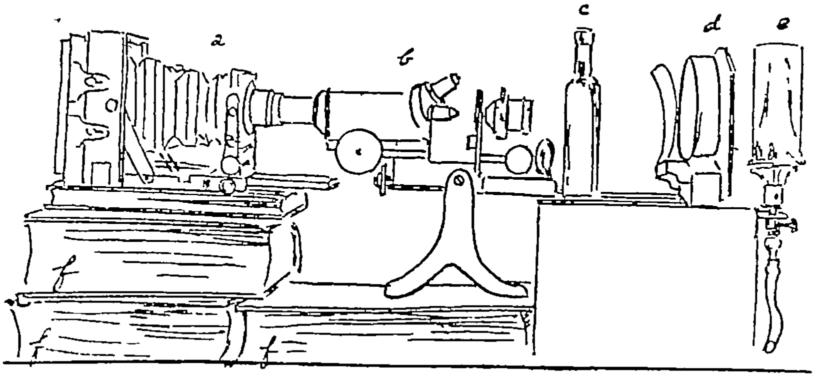
Moveable velvet lined zinc union to connect the camera box with the microscope A Flange attached to the union tube which falls through plate with circular aperture and is fixed to floor of box-camera.

freely and perpendicularly in the aforesaid aperture It can be lifted in an upward direction by means of a string passed through the side of the box at the top, the string being fastened by passing a loop of it over a suitable peg on the outside of the box, so that when released the union tube will fall into position into the tube of the microscope. The union tube should be lined with black velvet to prevent reflection of light. The platform on which the microscope stands should have blocks fastened to mark the exact spot to be occupied by the stand of the microscope, so that it may be immediately under the aperture through which the union tube falls. This also insures exact centering of the image thrown on the quarter plate clear glass screen, fixed at the top of the camera box. On the top of the camera box is fixed the reversing back of a quarter plate camera, but the ground glass focussing screen, which is useless in this work, must be removed and replaced by a sheet of thin *clear* glass free from bubbles and scratches. The lamp is placed on the floor and for comfort should be inclosed in a box. A magic-lantern fitted with an incandescent gas burner, with the door at the back opened, answers every requirement in this respect Incandescent gas is most convenient—it is brilliant, steady, and of constant actinic value.

The stains selected in micrography often throw great difficulties in the way of the photographer, rendering it impossible to obtain really good negatives and necessitating the use of light filters of great depth of colour, with a corresponding diminution of actinic light value and an increase in the length of exposure When it is known that a specimen is to be photographed the stain should be specially selected with a view to this if possible Hæmatoxylin is suitable for sections. Gentian violet gives the best results with bacteria. Fuchsin should be avoided. In fact, it can be roughly stated that all stains on the blue or violet side of the spectrum answer best and stains belonging to the red end of the spectrum give the worst results. Golgi preparations give most satisfactory negatives. Sections stained with hæmatoxylin or other blue dyes are very actinic and it is necessary to exaggerate the shadow thrown by them. This is done by colouring the light before it enters the condenser of the microscope with a light filter or colour screen of a tint complementary to the stain In most cases the screen sold by photographic dealers for landscape photography will be found sufficient, this is a light brown yellow glass screen Should the section be thin and the staining slight or faded greater depth of colour will be necessary in the light filter This can be obtained by staining a film of gelatin on a glass plate with picric acid, or, better still, by using a glass trough or bottle filled with a solution of bichromate of potassium The light filter, however constructed, must be placed between the light and the microscope. If a coloured glass screen it is fitted into a frame which is hinged to the platform on which the microscope stands so that it can be raised or lowered at discretion. To this frame is also hinged a sheet of vulcanite, in order to cut off all light from the microscope when manipulating the dark slide before and after making an exposure

If possible, all preparations of a series to be photographed should be stained with the same dye, as this will simplify the calculations necessary to find the time of exposure, will suit one quality of plate and one light filter, and will render

FIG 3



a Photograph camera with single lens b Microscope with eye-piece. c Light filter (flat bottle filled with solution of bichromate of potassium) d Condenser of magic-lantern. e Incandescent gas burner f Books used to equalise levels of the instruments to that of the gas burner sible an exact comparison of the various results and a rect relation of their several details. Apochromatic ectives should always be used. Achromatic objectives e a blurred image, as the visual and actinic foci are not ncident. The objective of the microscope should be ished and care should be taken that no dust has umulated on the upper surface of the lens The Abbé idenser must be carefully centred before each exposure. is is most important. The specimen to be photographed ring been placed on the stage of the microscope and ussed, the best possible definition d illumination are obtained by ving the Abbé condenser to and . The *eye-piece*, which increases amplification but mars the de ition when this method is used, d the *draw-tube*, which reduces area of the illuminated field, now *removed*. The microscope now placed on the platform in proper position already marked der the camera box. The velvet-ed union is lowered and adjusted. ie lamp is placed in position and e light filter is interposed between mp and Abbé condenser The iage now thrown on the plain ass focussing screen by the micro-ope can with the aid of a com-iund focusser be sought for To id this image, gently turn the cussing screw of the microscope so to increase the distance between e objective and the cover glass of e preparation. Only a small portion the specimen can be focussed at ie time The most important features of the preparation iould be clearly defined and the surrounding field of the jecimen disregarded. The specimen outside the focal lane, though histologically indistinct, will nevertheless give good image photographically When the focus that shows he desired detail with the greatest clearness possible is btained the vulcanite shutter is closed, the dark slide is laced in position, and the plate is exposed in the usual vay

The time of exposure depends on so many circumstances hat it is impossible to give any but approximately correct lirections. When incandescent gas is employed and a andscape light filter of a density increasing exposure three-old is made use of the following table will be found ipproximately correct —

1 inch objective magnifying	25 diameters	... ..	10 minutes
½	50		25
¼	120	...	60
1/12	260		2½ hours

These dimensions it must be remembered, result when the objective alone is used. Two or three times the above exposures will do no harm, as it is almost impossible to over-expose in photomicrography Backed chromatic plates should always be used, they will be found suitable for all blue- and red stained specimens.

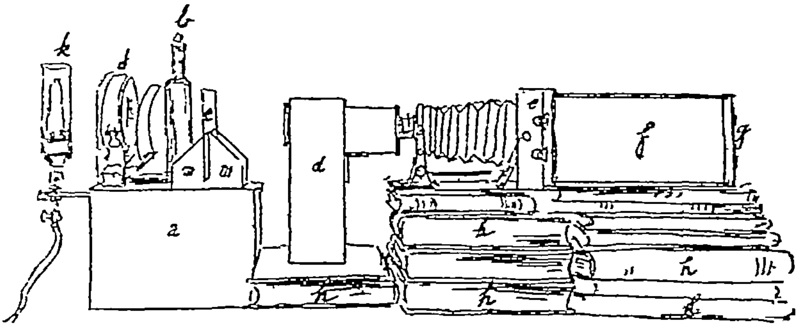
It is assumed that the reader is familiar with the photographic processes generally employed for making negatives lantern slides, and paper prints It will therefore not be necessary to enter fully into the details of development. A developer that will produce dense, clear negatives should be used. The following formulæ will be found suitable —

I	Sulphite of sodium ..	3 ounces
	Hydroquinone	½ ounce
	Bromide of potassium	¼ ounce.
	Distilled water ...	25 ounces.
II	Carbonate of sodium	6 ounces.
	Distilled water	25 ounces

Mix equal parts of these two solutions. Development should not be stopped till the disc on the plate is quite black when examined by transmitted light and held about three inches from the dark room lamp, and the image should show quite clearly at the back of the film through the glass by reflected light Under-exposure gives grey weak negatives, often full of detail but too thin to print. In such a case make a transparency on a chloride of silver lantern plate (Alpha) Intensify this transparency with uranium and make from the intensified transparency a new negative on a bromide of silver lantern plate (black tone) Mercury should not be used for intensification, as the results are uncertain and the details in the shadows are liable to be clogged. By this means a quick printing negative of good colour is obtained without risking the original

To determine the amplification given by each objective in this camera a photograph of a micrometer scale should be taken All photographs made with the same objective in the camera will be on exactly the same scale as the negative thus produced, which will be found invaluable for measurements on negatives lantern slides, and prints.

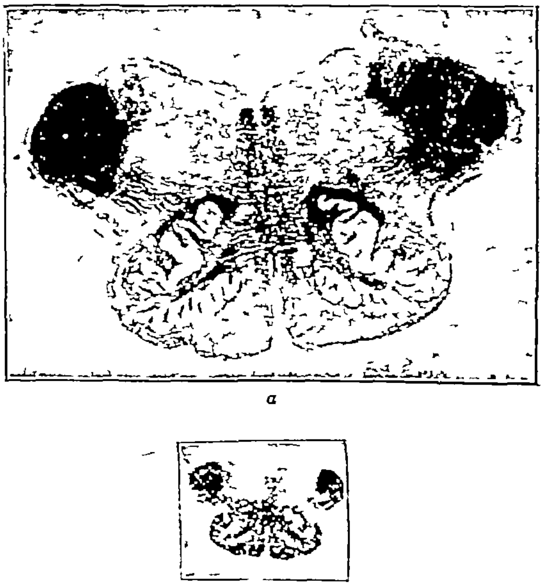
Fig 4



a Magic-lantern box. *b* Bottle containing solution of bichromate (light filter) *c*, Sheet of ground glass *d* Carrier holding section with box to fit on lens sliding in carrier *e* Photographic camera. *f* Extension to increase the length of the camera. *g* Reversing back of the camera. *h* Books to act as stage levelling the instruments *j* Magic-lantern condenser *k* Gas burner *m* Carrier holding ground glass.

Fairly satisfactory photographs of microscopic specimens can be obtained without making any special apparatus in the following manner Fit to an ordinary camera a single or landscape lens (a doublet is not suitable) and replace the ground glass focussing screen with a sheet of *clear* glass as previously described. Use a compensated *eye-piece* with the microscope and focus in the usual manner Remove the light mirror from the microscope, place it in a horizontal

Fig 5


a

b

Taken with photographic camera without microscope (Fig 4) *a* With wooden extension. *b* Without extension.

position with the lamp and light filter in front of it, and adjust the camera with the lens of the camera touching the eye piece of the microscope (Fig 3.) Look with the naked eye into the clear glass screen to ascertain that the apparatus is in a straight line. The camera should be racked out so that the photographic lens is placed at its own solar focal length from the focussing screen This can be done with sufficient accuracy by focussing the image projected by the microscope. Move out the Abbé condenser to obtain even illumination Looking through the compound focusser, carefully focus the image, using first the focussing screw of the camera and then the focussing screw of the microscope. The focus and position of the Abbé condenser will also affect the focus of the image on the screen. This is vitally important and therefore must not be forgotten The Abbé condenser should be moved to and fro till its correct position is found. Actually, the further the condenser is from the stage of the microscope the better is the definition, but care must be taken not to reduce unduly the illumination Expose and develop the plate as previously described. The time of exposure will be about the same for each objective as when using the special camera—i.e, when the ocular and draw tube of the microscope are not used The lens of the camera must be exactly adjusted to the eye piece of the microscope and the instruments arranged in a right optical line, they must be brought to the same level by building a stage with books or other convenient material in order that the illuminated field may not be irregularly curtailed. The amplification depends on the focal length of the lens of the camera, therefore the position of the camera will not alter the size of the image, but the diameter of the illuminated field diminishes very rapidly as the distance between the eye piece of the microscope and the lens of the camera is increased, and *vice versâ*.

It is sometimes desirable to make a photograph showing the whole of a section, which may measure half an inch in diameter This is obviously impossible if a microscope be used, but such a photograph can readily be obtained by using an ordinary photographic camera with a wooden extension increasing the distance between the lens and the focussing screen. (Fig 4) A good wide angle photographic lens of short focus is attached to the camera. A carrier of cardboard or wood, blackened inside, is constructed to hold the section in front of the lens This carrier is made on the principle of the old fashioned photographic box cameras, and consists of two boxes, one sliding inside the other, thus enabling the photographer to vary the distance at which the section is placed in front of the lens, and at the same time preventing any rays of light entering the lens except directly through the section An ordinary camera when extended to its utmost length is usually too short for this work, producing an image of about the same size as the original section. To obtain a larger image the distance between the lens and the focussing screen must be increased. A wooden extension shaped at one end to fit the back of the camera, and with the reversing back of the camera fitted to the other end, will effect this The extension must of course be blackened inside to prevent reflection of light

When using a photographic lens of five inch focal length, with the specimen seven inches from the diaphragm of the lens, an image will be in focus at 19 inches from the lens and the enlargement will be threefold By placing the section nearer the lens and suitably increasing the length of the extension the image can be enlarged to any desired amplification (Fig 5) The lamp must be placed on the table directly in front of the lens and object carrier, a sheet of fine ground glass and a suitable light filter being interposed between the lamp and the section in order to diffuse and to correct the light according to the colour stain of the section. The image is focussed on the clear glass screen by altering the position of the section and by using the focussing screw of the camera. Exposure and development of the plate require no modification

In giving these directions, which are based upon personal experience and the verification of all the points emphasised, I have been as pointed and laconic as possible in language, using the imperative mood notwithstanding its inelegance, in order that my meaning might be as clear as possible, and especially for the instruction of those who have had little or no practical experience in photomicrography I have appended drawings and photographs to illustrate the various methods discussed

Gloucester terrace W

A CASE OF HERNIA INTO THE FOSSA DUODENO JEJUNALIS

By CHARLES T ANDREW, B Sc., M.B, Ch.B Aberd,
JUNIOR DEMONSTRATOR OF ANATOMY ABERDEEN UNIVERSITY

THIS rare form of hernia was found in an old male subject in the dissecting room. When the abdominal wall was opened by a crucial incision in the course of dissection it was noticed that no small intestine was visible when the great omentum was thrown upwards, also that there was a large empty cavity in the pelvis between the sacrum and the bladder As the parietal peritoneum was reflected on to the fundus of the bladder one and a half inches above the symphysis pubis I thought at first that the space was due to the fact that the bladder prior to hardening in formalin had been greatly dilated and so pushed the small intestine out of the pelvic cavity There appeared also to be a large empty space under the left dome of the diaphragm of such dimensions that the closed fist could with ease be slipped under the costal margin, a thing which cannot be done when the subject has been hardened by formalin. In this space the whole of the gastric surface and anterior border of the spleen could be seen from the outside without first drawing the stomach to the left. The whole of the small intestine, with the exception of the lower six inches of ileum, lay in a large sac of peritoneum which ran across the abdomen, lying in the epigastric, umbilical, left hypochondriac, and left lumbar regions To the left the sac extended to the extreme left of the abdomen, to the right as far as the margin of the right rectus muscle. Situated one inch above the bifurcation of the abdominal aorta and slightly to the left of the mid line there was found a distinct semilunar shaped opening looking downwards and to the right towards the cæcum, from which it was distant about two inches The free margin of this ring was thickened and fibrous and stood out very distinctly as it arched over the entering bowel. At the left margin the inferior mesenteric artery came off the aorta and the left colic branch ran forward and upward in the left cornu of the opening The right cornu, with the continuation of the left colic artery, arched over the bowel and then ran upward for a distance of three and three quarter inches to end at the duodeno-jejunal flexure opposite the second lumbar vertebra

It so appeared that the opening of the peritoneal sac was displaced by the weight of the contents from the second to the fourth lumbar vertebra The inferior mesenteric vein lay immediately to the left of the opening The whole of the small gut with the exception of the lower six inches lay in a large hernial sac formed originally by the fossa duodeno-jejunalis described by Treves and situated at the commencement of the jejunum This fossa, the orifice of which looked upwards and to the left and formed by a delicate fold of peritoneum passing from the beginning of the jejunum to the under surface of the transverse meso colon, was found in five out of ten subjects

The size of the fossa is such that, as a rule, it scarcely admits the tip of the little finger In four of the cases in which it was present the margin of the orifice was thin and delicate, but in one old female subject the opening was bounded by a distinct ring, as in the case described, which ended over the duodeno-jejunal flexure, the left cornu formed by the left colic artery which ran in the margin and the right by the commencement of the mesentery

In this case a fold of peritoneum passed from the duodeno-jejunal junction to the under surface of the transverse meso-colon, bounding a fossa which looked to the right but evidently quite apart from the fossa into which the commencement of the jejunum would slip at the first stage of the formation of the hernia, when the top of the jejunum slips into the fossa and is followed from above downwards by the rest of the small intestine As the folds of peritoneum in this region passing from the jejunum to the transverse meso-colon are very variable and as it is necessary in the formation of this kind of hernia that the orifice of the sac should be distinct I propose to name the ring which I have described the "annulus colicus sinister" as the left colic artery runs in its margin The large intestine was greatly distended and the transverse lon crossed the hernial sac near its lower margin, being arkedly narrowed for a distance of four inches to the left the mid line. The descending colon was thrown into a ge sigmoid loop which occupied all the abdominal cavity the right of the rectus muscle and flattened out the all bladder against the under surface of the right be of the liver. There were old peritoneal adhesions etween the gall-bladder and the hepatic flexure of e colon. The liver appeared to have been thrown ack by the pressure of the colon, the lower margin rossing the sternum at the seventh costo-sternal junction, nd the gall bladder was situated opposite the eighth rib in he anterior axillary line. The under surface of the right obe was deeply indented by the hepatic flexure of the colon. he transverse colon crossed the abdomen from the tip of he ninth right costal cartilage to the left anterior superior pine situated six and a quarter inches behind the tip of the iphoid cartilage. Unfortunately during manipulation the ac was torn slightly so that an attempt at reduction without first incising the wall was impossible, but as it stood eduction of the whole of the contents was easy, the bowels eing empty and collapsed but showing no evidence of strangulation.

I am indebted to Professor R. W. Reid and Mr. H. M. W. Gray for kind assistance in making these observations.

Aberdeen.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

SHORT NOTE ON THE CURE OF TRACHOMA BY X RAY TUBE EXPOSURE AND BY HIGH-FREQUENCY BRUSH DISCHARGES.

BY SYDNEY STEPHENSON, C.M. EDIN.,

AND

DAVID WALSH, M.D. EDIN.

TRACHOMA, or "granular lids," as is well known, is a formidable and obstinate contagious malady that even in the most experienced hands, can rarely be cured within one or two years. Any remedy therefore, that shortens the period of treatment to weeks must claim widespread and earnest attention. We believe that such a curative agent exists in two forms of electrical discharge—first, that given off by the x ray focus tube and secondly the brush discharge obtained from a d'Arsonval high frequency apparatus. One case of the treatment of trachoma by focus tube exposure has been reported by Mr. M. S. Mayou.[1] We have treated a single eye in four cases of severe bilateral trachoma in children. Two eyes were cured—that is to say, the granulations and conjunctival hypertrophy disappeared and have not returned after a period of several months. The remaining two eyes were greatly benefited and were well on the road to ultimate cure. The cures were effected by 17 exposures in the one case and by six in the other, with an average exposure of 10 minutes and a distance of about eight inches of the antikathode from the lid. The good effects were found to be equally marked with closed as with everted eyelids. 22 applications of a mild high-frequency brush applied by means of a vulcanite electrode connected with a d'Arsonval apparatus cured a severe case of trachoma in another patient.

The radiotherapy of trachoma presents several obvious advantages over the ordinary treatment by escharotics—as, for example, its painlessness, its great rapidity and its simplicity. The fact that a severe malady like trachoma (which has led to the expenditure of many thousands of pounds of public money in this country alone) can be cured by exposure to an active focus tube and to a high frequency brush suggests that the curative agency may be identical in both instances. This observation may possibly throw fresh light on the therapeutic action of the focus tube, a point about which little is really known. The common agency may be a brush discharge, visible from the high frequency electrode and invisible from the focus tube. In any case the introduction of new and powerful methods of treating trachoma must have an important bearing upon the victims of ophthalmia in many countries.

ARTHRITIS AS A COMPLICATION OF MEASLES.

BY ROBERT CRAIK, M.D. GLASG.

A HEALTHY boy, aged seven years, suffered from whooping-cough in June, 1902, which lasted for two or three months but did not seem much to impair his health. He had been quite well for over a month when he complained of pain in his left knee on Nov. 2nd. On the 1st he had been quite well and had helped to gather sticks for a bonfire on the 5th. His mother thought that he had hurt his knee in getting sticks from the hedge-roots. But he always maintained that he had not hurt himself, so that any injury he sustained must have been trifling. There was no sign of any scratch or bruise or of any swelling but the lad limped a little. On the 3rd as he complained less he was sent to school but as he limped home at mid-day he was not allowed to go back. On the 4th and 5th he sat about the house looking out of sorts and occasionally complaining of his left knee. On the morning of the 6th he was covered with the rash of measles and he remained in bed all day. He was first seen on the 7th when he appeared to have a typical attack of measles, an epidemic of which prevailed at the time. He had slept well during the preceding night and was resting comfortably in bed. Nothing was said about the knee. On the 8th, however, the mother mentioned the matter and I found there was pain about the joint on pressure and on movement. The boy did not care to move the left leg at all, but lay on his left side with the joint flexed, in which position alone he seemed comfortable. There was little or no swelling or redness, but I suspected there was some effusion into the synovial cavity. The patient was feverish on the 7th but on the 8th the temperature was normal when I visited him. The knee was covered with cotton wool and a bandage was applied. It seemed easier for a few days, but movement was always painful and there was soon distinct evidence of effusion. The effusion increased and at my daily visits the temperature varied from normal to 99° or 100° F. On the 30th the effusion was very great and there was a faint blush on the inner aspect of the joint above the patella. The joint was opened freely on each side of the patella. A large quantity of synovial fluid escaped and a little pus which seemed to come from the interior of the joint was evacuated on pressure. After washing out the synovial cavity a drainage-tube was passed under the patella and out at the opposite side and left in for several days. Recovery appears to be quite satisfactory and the little stiffness will probably soon disappear.

This is an example of arthritis following so soon after measles as to suggest that the measles caused the joint affection. A history of injury often precedes pneumococcic arthritis, and the injury probably determines the attack. There is no mention of arthritis as a complication of measles in most of the text-books, certainly none in Osler's "Text-book of Medicine," in Allbutt's "System," or in Watson Cheyne's "Manual of Surgery." Rose and Carless say that arthritis sometimes attacks children *after* measles. Had it been scarlet fever instead of measles the arthritis would certainly have been attributed to the scarlet fever.

Conisborough.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

A Higher Mould Fungus isolated from a Case of Multiple Granulomatous Tumours.—The Resisting Powers of Staphylococcus Pyogenes Aureus against the Persalts of Mercury.—A Diphtheroid Bacillus isolated from Two Cases of Puerperal Fever.—A New Pathogenic Diphtheroid Bacillus.—The Morphology and Distribution of Bacillus Pestis and some Similar Microbes.

A MEETING of this society was held on Jan. 20th, Dr. E. KLEIN, the Vice-President, being in the chair.

Dr. W. S. LAZARUS-BARLOW made a communication on a Higher Mould Fungus that he had isolated from a case of Multiple Granulomatous Tumours. The patient, a man aged 42 years, showed a number of raised and reddened masses on an area of the back approximately a foot square at the point of the greatest agglomeration of the masses, but actually more or less covering the back and flanks between the scapulæ and the crests of the ilia. Many of the foci were as large as walnuts. From first to last when the patient was discharged improved he was under observation about two years. It was at first thought that the condition was syphilitic, but subsequently, after anti syphilitic treatment had proved ineffectual, the provisional diagnosis was actinomycosis By this time the masses had begun to show central softening and were opened with full antiseptic precautions The pus so obtained was caught in a sterile test-tube On examination it was found to contain a small number of spherical grains similar to those present in the pus of actinomycosis Tubes of maltose broth were inoculated with the pus and a mould was obtained as the only growth In portions of tissue removed at the same time from the man s back foci of a mycelium were found that stained by Gram's method and conformed satisfactorily with the growth obtained from the pus. Subsequent attempts to cultivate the organism from the pus discharged from the opened abscesses failed, only streptococci and staphylococci being obtained The mould grew on all the ordinary media, but most satisfactorily upon those made with maltose and on potato It was aerobic, grew better at 37° C than at the room temperature, did not grow on gelatin, did not coagulate milk, formed acid, had a very slight diastasic action on starch, formed flocculent balls in liquid media leaving the medium itself clear, and on solid media appeared first of all as a white, filmy mycelium that grew superficially and into the depth, and subsequently became either waxy in appearance on the surface or covered with a velvety layer of coffee colour In all cases the ultimate condition was of the last-mentioned kind Aerial hyphæ were formed. The organism stained with the ordinary anilin colours as well as by Gram's method, and it was neither acid- nor alcohol fast. The mycelium was branched and dichotomy was common though not invariable In old cultures it was seen that the mycelial filaments broke up into chains of spores resembling those occurring in the streptothriceæ in arrangement but oval in shape and much larger In spite of the general resemblance to the streptothriceæ in mode of growth it differed essentially in the far greater size of the hyphæ and of the spores The organism did not appear to have a special form of fructification for its spores Dr Lazarus Barlow had been unable to identify the mould —Mr A. G R. **FOULERTON** said that the artificial cultures resembled sporothrix, though the sections of the tumour itself did not do so Clinically, the case also resembled those examples of sporothrix infection which had been described, for the tumours were multiple and had a tendency to break down

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[1] Transactions of the Ophthalmological Society, vol. xxii. 1902.

Dr F W **ANDREWES** brought forward facts relating to the Resisting Powers of Staphylococcus Pyogenes Aureus against the Persalts of Mercury It was well recognised that this was one of the most resistant non sporing organisms both against heat and chemical disinfectants, but it was not sufficiently recognised that its resistance against mercuric salts was altogether exceptional. This fact was of special importance in surgical disinfection. Dr Andrewes described observations which he had made on a strain of this coccus which appeared to possess unusual powers of resistance and which in broth cultures resisted 1 in 500 perchloride of mercury for 45 minutes, and in pure water for 12½ minutes By repeated passages through the disinfectant, in which it might be supposed that only the most resistant survived, transmitting their resistance to their progeny, a strain of staphylococci was produced which had even higher powers of resistance. The results finally obtained were as follows. The cocci resisted 1 in 500 perchloride of mercury in pure water for 20 minutes, 1 in 1000 perchloride of mercury in pure water for 50 minutes, 1 in 1000 perchloride of mercury in 0 3 per cent. salt solution for 80 minutes and 1 in 1000 perchloride of mercury in nutrient peptone-broth for over four hours. The resistance against biniodide of mercury was equally great, but it did not in the least extend to antiseptics of other groups. Carbolic acid, 1 in 40 killed the cocci in less than two minutes, and 1 in 400 medical izal in less than one minute. These results might be exceptional, but in routine disinfection it was necessary to provide against the exceptional as well as against the commonplace.—Dr F J **POYNTON** asked if Dr Andrewes had made similar observations with regard to the cyanide of mercury —Mr **BISHOP HARMAN** said that in recent experiments which he had made on the staphylococcus pyogenes aureus and t coccus he had isolated from the South African veldt sore ascertain the relative resistance of these organisms perchloride of mercury, amongst other methods he had us that of very free dilution of the cultures with a lar quantity of the antiseptic—viz, 1 cubic centimetre of broth culture mixed with 49 cubic centimetres of t antiseptic to equal 1 in 1000 perchloride of mercur In these conditions the staphylococcus pyogenes aure had survived 20 minutes' exposure and the veldt sore cocc 40 minutes, beyond which he had not gone. He furth noted a great increase of stickiness of the colonies due t the production of a glutinous "capsule" which he thoug might act as a protective It appeared that Abbot had note this feature in 1891, further Abbot had taken extr ordinary precautions in his experiments to prevent clumps o organisms being exposed to the antiseptic, in which co dition he supposed them to afford each other some protectio from the action of the reagent —Dr **KLEIN** asked if D Andrewes had compared the strain of staphylococcus wit which he had experimented with ordinary laboratory culture of the organism and suggested that the strain with whic he had experimented might be especially resistant.—D **ANDREWES**, in reply, said that he had not made an observations with the cyanide of mercury He had no during his experiments noticed any increased stickiness o the colonies after treatment with perchloride of mercury

Mr **FOULERTON** and Dr W F **VICTOR BONNEY** communicated a paper on a Diphtheroid Organism Isolated from the Uterus in two cases of Puerperal Fever. This organism, which in morphological and cultural characteristics closely resembled the bacillus diphtheriæ, was isolated in pure culture from the cavity of the uterus of a woman o the seventh day after a normal confinement, and from the upper part of the cervical canal of a woman in whom, 1 days previously, a miscarriage at the end of the second month had occurred In both cases there was considerable pyrexia and in both the patient recovered—in the second case, however, after a prolonged illness. The bacillu was, perhaps, a little larger and coarser than bacillus diphtheriæ, but presented the same variation of morpholog characteristic of the latter organism. On nutrient agar cultures, after 24 hours' incubation at 37° C, long, beaded, spindle shaped, pear shaped, Indian club-shaped, and coccal forms might be seen. In broth cultures the organism appeared chiefly as a rather short evenly staining rod, but even in this medium other forms were occasionally seen. The bacillus stained by Gram's method and was not pathogenic for guinea pigs and the other animals on which it was tested. Whilst the bacillus belonged to the so-called "diphtheroid" group of organisms, it was to be easily distinguished from the bacillus diphtheriæ by (1) the somewhat coarser shape, (2) by the fact that no appreciable amount of acid was produced in glucose peptone broth cultures after six days' incubation at 37° C, and (3) by the fact that it was non-pathogenic for the guinea pig Mr Foulerton and Dr Bonney had met with a similar organism once in a case of catarrh of the cervical canal, and had also isolated a similar culture from a case of phagedæna of the penis, they also thought that it might be allied to the "diphtheroid" organisms which had been described in cases of noma vulvæ and which they themselves had found in cases of cancrum oris There was no direct proof that the bacillus was pathogenic in the cases of puerperal fever from which they had isolated it, but they thought that on the whole there was a strong probability that its presence in the uterus was the cause of the symptoms —Dr G **LESLIE EASTES** said that he had found in the pus from a case of urethritis of a man an organism which closely resembled that described It did not, however, stain well by Neisser's method and was not pathogenic to animals —Mr K. W **GOADBY** said that he had found an almost similar organism in pyorrhœa about the gums. It was not acid fast and did not stain by Neisser's method.—Mr **HARMAN** said that he had found a similar organism in the conjunctival sac in a case of ophthalmia neonatorum The organism was not pathogenic to animals.—Mr **FOULERTON**, in reply, said that because these growths resembled one another there was no reason for regarding them as the same With regard to their occurrence in cases of urethritis he said that he had examined 56 cases of that disease and had never come across a diphtheroid bacillus The point of interest in the present paper was that a definite organism had been found in two definite cases of puerperal fever.

Dr **KLEIN** described a new Pathogenic Microbe belonging the group of Diphtheroid Bacilli It was found in white ts, causing in these animals extensive consolidation of the ngs. In the hepatised parts the alveoli and infundibula nd bronchi were filled with, and distended by, fibrinous xudation, red and white blood corpuscles and continuous asses of the above microbe. Microscopic specimens and antern slides of the microbe as it occurred in the lungs nd under cultivation were shown. The morphological including positive Neisser's test) and cultural characters including acid production) of the microbe appeared identical with those of the bacillus diphtheriæ. Small or large doses f culture caused on inoculation into rodents a firm tumour which gradually enlarged to considerable size and in the ourse of about a fortnight led to the formation of an abscess. This ultimately opened spontaneously and led to complete ecovery No fatal issue in rats or guinea pigs had been roduced by even large doses of the culture Diphtheria ntitoxin, 400 or even 600 units per half grown guinea pig, ad no power to neutralise the pathogenic action of a small ose of the culture.

Dr KLEIN exhibited lantern sides illustrating some points n the Morphology and Distribution of the Bacillus Pestis nd some Similar Microbe.

OBSTETRICAL SOCIETY OF LONDON

Discussion on Puerperal Insanity

A MEETING of this society was held on Jan. 7th, Dr PETER HORROCKS, the President, being in the chair.

Dr ROBERT JONES opened a discussion on Puerperal Insanity His paper was based upon a personal experience of 259 cases of puerperal insanity divided into 120 cases commencing during the actual puerperal period, 83 during lactation, and 56 during pregnancy Insanity was stated to occur once in every 700 confinements It was stated to be of a characteristic form after confinement, amounting to an almost nosological entity, but this was not the case during pregnancy or during lactation, there being no definite type of insanity occurring in connexion with these two stages. The divisions were, however, more convenient than typical. The following propositions were advanced by Dr Jones —1. The insanity of pregnancy was more common in first confinements among single women, the disappointment, shame, and disgrace of illegitimacy being an important factor in the mental breakdown. 2. During pregnancy the mental condition was more often acute melancholia than acute mania and suicidal symptoms, which occurred in 41 per cent., had to be carefully guarded against 3. The insanity of pregnancy was divided into that occurring during the early months and that occurring during the later months, and in these the nearer the insanity in point of time to the confinement the more acute were the mental symptoms. Insanity was not more frequent when the sex of the child was male. 4 The insanity of the puerperium came on after the first confinement in 33 *per cent.* of the cases and supervened suddenly rather than gradually 5. The cases which occurred during lactation presented characters of marked general physical exhaustion and mentally were more often of the depressed than of the maniacal form Lactation insanity became chronic oftener than the insanity of the other periods. There was a tendency to low forms of inflammation, thrombosis gangrene, and phthisis during the insanity of lactation Both suicidal and infanticidal promptings were more common in lactation than in puerperal cases—that was, in cases where insanity commenced more than six weeks after confinement. 6. The early symptoms of threatening insanity were loss of sleep and headache, and these should be a forewarning of mental breakdown. The busy delirium of hallucinatory type ending in acute restless, purposeless mania with religious and erotic delusions, was characteristic of this variety 7 As regards etiology, heredity was more marked and in the direct maternal line in puerperal and lactational insanity and was equally paternal and maternal in the insanity of pregnancy A previous record of hysteria was frequent in puerperal insanity The question of marriage of hysterical persons was considered. 8. The pathology was that of heredity and stress. Was the stress due to a toxin? 9 As regarded prognosis, cases of insanity during early pregnancy improved towards the end of pregnancy whereas those of late pregnancy became worse at the puerperium Puerperal insanity was markedly recoverable. Improvement was rapid being often complete in three months, but generally took from four to five months. 10 With regard to treatment, all cases presenting headache and sleeplessness must have absolute quiet and rest, and sleep must be procured. Home treatment was desirable in all cases if possible. Unusual and sudden impulses of suicide and infanticide must be guarded against The presence of the husband aggravated the symptoms. There was much necessity for a liberal and stimulating dietary Change was necessary in puerperal insanity when cases tended to become stuporous. Menstruation was a sign of mental improvement. Purgatives and iron were well borne. The following special questions were put forward by way of criticism. 1 Was there such a disease as puerperal insanity—a mental alienation which was either caused by the puerperium or an accompaniment of this physiological crisis? 2 If there was, were the mental conditions due to toxæmia or to septicæmia or to both? Or was the delirious mania which occurred in connexion with this period due to extraordinarily emotional disturbances? How far did the moral factor enter into the etiology, and how far did pregnancy in the unmarried state influence the causation of insanity? 3 What was the relation between mania and melancholia? 4 What was the essential pathology of this disease? 5. What was the relation between albuminuria and pregnancy? also between albuminuria and the puerperal state? 6. In Dr Jones's cases, so far as the history could be obtained from the relatives or those present no prodromata of insanity beyond sleeplessness and headache were as a rule noticed and the onset of insanity was sudden, what was the nature of the onset in the practice of obstetric physicians? 7 As to prevention and treatment, did hysteria in youth manifest itself by insanity in later life at the puerperal or other physiological crisis, and should marriage be discountenanced in these? What views should be generally held as to the marriage of neurotic persons? What were the views as to home and asylum treatment, as to local and general treatment, and, a more especially important point, as to the induction of premature labour?

Sir JOHN WILLIAMS dwelt upon the peculiar condition of the nervous system in pregnancy, parturition, and the puerperal state, and reviewed briefly the pathology of puerperal insanity He strongly deprecated the resort to surgical measures in the treatment of this insanity

Dr. G F BLANDFORD said that beyond question the earliest symptom of approaching mental trouble was loss of sleep, and this should be most closely watched and every precaution taken that the patient should not be disturbed by noises or talking in the room, by the child being brought to be nursed or by the visits of friends. With regard to Dr Jones's question, whether the mental disturbance was due to toxæmia or septicæmia or both, it must be remembered that toxæmia and septicæmia were different things. Septicæmia produced puerperal fever, not puerperal insanity

Dr G E. HERMAN said that the main duty of the general practitioner and the obstetric physician in regard to puerperal insanity was to prevent it. Treatment was mainly in the hands of the alienist. To prevent puerperal insanity the great things were to see that the patient got food and sleep. If sleep was absent he thought that the best hypnotic was alcohol. There were objections to alcohol of which in the present day no one was in danger of losing sight. Every hypnotic, if too much was taken, did harm, but the harm done by alcohol, if taken too freely, was far less and far slower in coming than that done by chloral, bromide, morphia, sulphonal, or any other hypnotic, if taken habitually for long periods. Medical men were not justified in taking upon themselves the responsibility of discountenancing a proposed marriage. The utmost that a medical man should do was to express to those concerned whatever fears he might have as to the result of marriage.

Dr C A MERCIER took exception to the statement that headache was a common prodroma of puerperal insanity The only trustworthy indications, he thought, were sleeplessness and loss of appetite. He did not think that single women who became mothers suffered much emotional stress as a rule. Many of them were already half witted and the insanity of the puerperium was only an exaggeration of their usual state. The rest were for the most part upon a low moral plane. He protested strongly against the suggestion that puerperal mania could be treated satisfactorily at home and maintained that institution treatment was always best.

Dr F H. CHAMPNEYS fully indorsed all that had been said about sleeplessness as the striking symptom of threatening insanity and about the pre-eminent value of alcohol as a sedative in such cases It seemed to him that if mental distress were a factor in producing puerperal insanity its frequency after illegitimate births ought to vary directly with the moral standard It was well known that the moral standard with regard to such matters varied greatly in different countries If the above contention were true the proportion of cases of insanity in single mothers ought to be lowest in immoral and highest in moral countries. As regarded toxæmia and its relation to pregnancy he did not think that the explanation given in the paper would altogether suffice. Effete products were doubtless prevalent after confinement, on the other hand, the sense of physical and mental comfort and relief ordinarily experienced after delivery was proverbial. He did not think that this would be the case if ordinary toxins were the usual cause of insanity after labour

Dr W LLOYD ANDRIEZEN stated that the division into insanity of pregnancy of the puerperium, and of lactation was a conventional and not a nosological classification He concluded from a careful study of statistics that illegitimate pregnancy was twice as frequently followed by mental disorder as legitimate pregnancy He regarded puerperal insanity as comprising three main types of mental disorder—viz, first a collapse delirium following upon parturitions attended with marked exhaustion and hæmorrhage, secondly an acute confusional insanity with hallucinatory delirium (frequently misnamed "mania'), and thirdly, mania or melancholia proper or alternating manio-melancholic insanity

Dr F W MOTT said that among the large number of cases recorded by Dr Jones there was not a single case of gangrene, perhaps, therefore, he might be allowed to relate an instance which he had seen in a woman certified as suffering from puerperal insanity who was admitted into one of the London county asylums. This patient not long after admission developed signs of symmetrical gangrene of the feet The child had been born dead and the woman was suffering from septic endometritis. Her mental condition improved when this was treated.

Dr R PERCY SMITH said that with regard to the early symptoms he thought that next to sleeplessness, restlessness and early confusion of thought were more important than headache. There was no definite form of mental disorder which could be looked upon as absolutely characteristic of puerperal insanity, and cases might be of the delirious, confusional, maniacal, melancholic, stuporous, or delusional type. He had very little personal knowledge of illegitimacy as a cause but called attention to Dr T S Clouston's statement that 75 per cent of the puerperal cases admitted to Morningside Asylum followed illegitimate births Another point in the etiology was that 26 per cent of the cases admitted to Bethlem Hospital had had a previous attack of insanity, either one before marriage or one after marriage, which was not puerperal in origin or a previous puerperal attack He said that alienists constantly found a history of previous "hysteria' in patients admitted to asylums which when carefully inquired into was found in many cases to have been a previous attack of definite mental disorder euphemistically called "hysteria." He was sure that such patients ought not to marry

Dr E W WHITE thought that Dr Jones's proportion of occurring cases was too low, probably 1 in 400 confinements was nearer the mark, for there were many which did not go to the asylum for treatment and of which no records were obtainable. He drew attention to certain of the mental symptoms and to the temperature charts in this disease. The obscene language, erotic tendency, and self abuse were probably of peripheral origin from abnormal uterine conditions, altered lochia &c In nearly all his cases there was an elevation of temperature of from one to two degrees in the evening with a morning fall of a degree or less, lasting from ten days to a fortnight, then a subnormal temperature for several weeks Frequent baths with scented soap were necessary on account of the perverted skin secretion.

Dr W S A GRIFFITH stated that with regard to the insanity of pregnancy there was a group of cases quite distinct in which the main feature was the apprehension of the patient, either real or simulated, that unless the pregnancy was terminated she would become insane, he looked upon all such cases with the gravest suspicion, not of insanity, but of rather the reverse—namely, as an ingenious method of putting strong pressure on the medical adviser to produce abortion

Dr T SEYMOUR TUKE agreed with previous speakers in the necessity for good feeding and urged the early resort to artificial feeding if called for While admitting the great value of alcohol the danger of forming a habit must not be lost sight of

Dr T CLAYE SHAW referred to the question of the existence of a mental disorder due to the puerperal state. It appeared to him that there were two classes of cases really existent, but both characterised by the delusions, incoherence, and other mental symptoms supposed to be pathognomonic of insanity due to the puerperal state alone. Insanity characterised by prominence of sexual mental demonstration might occur in young women at the developmental epoch or in women of middle or advanced age in whom there were no uterine or ovarian complications of any kind to be passed through, just as delusions of a sexual character might be seen in boys and men accompanied by acts of masturbation, and yet there was no occasion to attribute the symptoms to influence from the genital organs at the moment. When, however, the temperature was higher than was usually met with in acute insanity and the symptoms came on shortly after parturition, there was a strong argument in favour of a direct connexion between the mental and bodily states, especially when there was a history of hereditary taint, together with the probability of the presence of a septic condition.

Dr J M. AMAND ROUTH urged the desirability of having intermediate receiving houses, or a nursing home, where women suffering from such temporary insanities as those under discussion could be received and treated Such a plan would avoid the stigma of having been in an asylum and would make it much easier to get the friends of the patient to agree to her removal.

The PRESIDENT thought that obstetricians saw these cases, as a rule, at a much earlier stage than did the alienists. Perhaps for this reason, and because of the shortness of time, the introducer of the subject had said but little about diagnosis When the patient was admitted into an asylum the diagnosis had been made, but in the earlier stages it was not always easy to say that a case amounted to actual insanity He considered that the refusal of food was a far graver symptom and pointed much more certainly to insanity than did sleeplessness

Dr JONES replied briefly

LARYNGOLOGICAL SOCIETY OF LONDON—A meeting of this society was held on Jan 9th, Mr E Cresswell Baber, the President, being in the chair—The following officers were appointed for the year—President Dr P McBride. Vice-Presidents Mr A A. Bowlby, Dr Dundas Grant, Dr P Kidd, and Mr C J Symonds. Treasurer Mr. W R H Stewart. Librarian Dr StClair Thomson. Secretaries Dr J Donelan and Dr E. Furniss Potter Members of the Council Sir Felix Semon, Mr E Cresswell Baber, Mr C A. Parker, Dr W Permewan, Mr R. Lake, and Mr L A. Lawrence.—Sir Felix Semon exhibited a case (which had been previously shown at the November meeting of the society) of Ulceration of the Left Tonsil with Enlargement of Numerous Cervical Glands on both sides of the neck (? malignancy) in a man, aged 70 years It was now seen that the ulceration had disappeared and that the tonsil had become much smaller, whilst the enlargement of the cervical glands had considerably diminished Malignancy was now excluded. The case was shown again as affording valuable evidence that ulceration of a tonsil in old people with enlarged glands must not necessarily be looked upon as malignant—Dr P Watson Williams exhibited new designs for Sphenoidal Sinus Cutting Forceps and a Laryngeal Spray—Dr A. Bronner showed a drawing and read notes of a case of Suppurative Ethmoiditis and Frontal Sinusitis after radical operation for Nasal Polypi. The nose had been curetted on three occasions with Meyer's ring knife Four weeks after the last operation the patient began to have pain, a high temperature, and became semi comatose. The nose and forehead became swollen. Both frontal sinuses were opened and found to be full of pus The dura mater was exposed. The patient was relieved for 12 hours after the operation and then died. The anterior part of the left frontal lobe was found to be necrosed and there was extensive purulent basal meningitis.—Dr H. L Lack showed a man, aged 59 years, with Aphonia of six months' duration who had a similar attack ast year He spoke as if the glottis were closed but could sing with a natural voice —Dr McBride was of opinion that this case was one of spastic aphonia.—Dr Lack also showed a microscopic section from a Large Ulcer of the Tonsil in a woman, aged 25 years, showing (?) tubercles There was no history of syphilis but the case yielded immediately to iodide of potassium.—Dr Lack also showed a Microscopic Section of a Cyst of the Ventricle of the Larynx opened when operating on a case of malignant disease of the larynx.—Mr Lake exhibited specimens of New Growths removed from the Nose (1) of the Posterior Extremity in a male aged 52 years, (2) of the Septum and Inferior Turbinal in a male, aged 28 years, and (3) of the Inferior Turbinal in a patient, aged 72 years (an old lupus case) —Dr H. Tilley showed a case of Large Hypertrophy of the Mucous Membrane in the Arytenoid Region (so-called inter arytenoid pachydermia) in a robust-looking man, aged 48 years.—Dr. Donelan showed a specimen of a Large Naso-Pharyngeal Fibro Myxoma with prolongations extending to the anterior nares in a youth, aged 18 years —Dr Barclay Baron showed a case of Naso-Pharyngeal Malignant Disease in a woman, aged 50 years. The patient had complained of deafness and nasal obstruction and discharge of blood and pus from the nose for about eight months. Three months previously a hard, irregular growth had been removed by scraping from the naso-pharynx with relief of all the symptoms. The *symptoms had again returned and the* naso-pharynx was filled with growths which protruded into the nostrils The nature of the growth was uncertain, in places it had the appearance of lympho-sarcoma.—The President, Mr. W G Spencer, Dr McBride, Dr W Hill, and Dr Pegler discussed the case.—Mr Atwood Thorne showed a case of Epithelioma of the Larynx in a man, aged 60 years. There had been hoarseness for six months previously, the left cord was seen to be fixed in the middle line and a growth was observed involving the left arytenoid and ary-epiglottic fold. There were slight tenderness to external pressure and a large gland under the ramus of the jaw on *the left side. There was no history* of syphilis Potassium iodide had been given for the last fortnight, but without any appreciable benefit The case was discussed by the President, Dr Lack, Sir Felix Semon, Mr Waggett, Dr Dundas Grant, and Dr McBride. The opinion expressed was that the case was not suitable for operation.—Dr Fitzgerald Powell showed (1) a case of Infiltration of the *Pharynx and Post-nasal* Space in a man, aged 45 years, probably syphilitic, and (2) a Growth in the Post-nasal Space appearing below the soft *palate in an infant, aged* 18 months, for diagnosis.—Mr Spencer showed a case of Symmetrical Swellings of the Gum at the posterior extemity of the alveolar border of each upper jaw in a woman, aged 37 years.—Dr W H. Kelson showed (1) a woman shown at a previous meeting suffering from Aphonia due to a rounded growth originating in the left ventricle of the larynx which had been removed, and on examination under the microscope was found to be a fibroma undergoing mucoid degeneration, and (2) a case of Recurrent Fibrous Polypus of the Nose in a man, aged 26 years.—Dr Dundas Grant showed a case of Chronic Laryngitis with Inter arytenoid Pseudo-pachydermic Swelling probably due to purulent rhinitis in which the hoarseness had much diminished and the inter arytenoid swelling had become smaller during the use of a nasal wash for one week.—Dr Dundas Grant also showed a case of Hereditary Specific Perforation of the Left Anterior Pillar of the Fauces

DERMATOLOGICAL SOCIETY OF LONDON —A meeting of this society was held on Jan 14th, Dr H Radcliffe Crocker being in the chair —Dr Radcliffe Crocker showed a middle aged man who for nine weeks had been affected by the appearance of reddish pink, oval, slightly elevated, and slightly desquamating Patches on both Flanks and on the Left Arm The patches were about three inches long by two inches broad and their long axes lay in the direction of the lines of fissure of the skin. They had been apparently somewhat benefited by treatment and the reason for showing the case was to ascertain the opinion of the members as to whether it was probably an early stage of mycosis fungoides or not.—Most of the members thought that the evidence was not sufficient to lead them to suspect mycosis fungoides —Dr J H. Sequeira showed a man who had had Lupus Erythematosus of typical appearance affecting the scalp, face, and ears for four years and who for the last year had also suffered from a papulo vesicular and weeping eruption resembling eczema on the arms, buttocks, and thighs The question was whether the second eruption was a simple eczema or whether it was *one of those very acute phases* of lupus erythematosus of which examples had been shown to the society —Most members, though admitting the difficulty of making a definite diagnosis without watching the case, were inclined to believe that the disease on the extremities was really eczematous.—Dr A. Whitfield showed a child, aged three years, suffering from Tinea Tonsurans of the microsporon variety treated by x rays The child had had two patches of the disease for many months and one of these had been treated first. In all 14 exposures had been given, with the result that every hair, both sound and diseased, had fallen out entire one week after the cessation, and this patch was cured The hair was beginning to grow again slowly three weeks later The other patch was under treatment and had had ten exposures without any hair falling out. Slight reddening had, however, begun to be visible and Dr Whitfield thought that a very few more exposures would cause shedding as before He pointed out that a little more experience was required before introducing the treatment generally and that it must be carried out carefully as in some cases the hair had apparently not returned, but he thought the method compared favourably with all others in rapidity, cleanliness, and painlessness. It was, of course best adapted for patchy cases —Dr J M H. M'Leod showed a child, aged six years, with a rapidly developing diffuse and areate Alopecia. The whole duration of the disease was three weeks and already most of the hair on the head was lost The scalp was very scurfy and entirely free from oily seborrhœa There was some plugging of the follicles but no micro-organisms had been found either in the scales or hairs. The number of clavate and other forms of atrophied hairs present was very striking

BRISTOL MEDICO-CHIRURGICAL SOCIETY —The *fourth meeting of the session of this society was held* in the medical library of University College on Jan. 14th, Mr G Munro Smith being in the chair —Mr J Paul Bush, C M G, showed a Fibroid Tumour of the Uterus and Papillomatous Cyst of the Ovary removed by operation A fistula of the ureter ensued which healed completely without further surgical interference —Dr E W H Groves, Dr J L. Firth, and Dr W C Swayne remarked on the specimen.—Mr E. H. E Stack showed a most interesting series of Contracted Pelves and pointed out that *it was those cases* where a moderate amount of contraction was present that gave rise to the greatest difficulty, as in extreme cases of contraction the deformity was usually diagnosed at a much earlier period.—Dr Swayne and Mr Munro Smith spoke on the subject —Mr A. W Prichard read notes on a case of Ruptured Intestine successfully operated upon in which there was tuberculous disease of the peritoneum —Mr C A. Morton, Mr Munro Smith, and Mr Bush commented on the case —Dr H. G Kyle read notes of a case of Perforated Typhoid Ulcer that he had operated on in which the perforation could not be efficiently closed with sutures and in which he had placed the perforated intestine beneath the abdominal incision, surrounding it with gauze, the patient eventually died from a continuance of the enteric fever —Dr J O Symes Mr Bush, Mr W H Harsant Mr Stack Dr Groves, and Mr Morton spoke on the subject.—Mr H. F Mole read a paper and showed the specimens of two cases of Ruptured Tubal Pregnancy, in one the rupture had taken place into the general peritoneal cavity and in the other between the layers of the broad ligament.—Mr T Carwardine made some remarks on the paper

SOUTH-WEST LONDON MEDICAL SOCIETY — A meeting of this society was held on Jan 14th, Surgeon Major Mark Robinson, I.M.S., the President, being in the chair —Mr P M Yearsley read a paper on the Indications for the Mastoid Operation. He said that the mastoid operation for the relief of acute suppuration in the adnexa of the middle ear and the *modified* complete radical post-aural operation for the cure of chronic middle-ear discharge had taken an important place in modern surgery The operations originated by Schwartze, Stücke, and Ballance and the complete post-aural operations were briefly explained. These operations belonged to one of two groups (1) the opening of the mastoid antrum without interfering with the middle ear, and (2) the *opening* of the antrum and the formation of one large cavity common to said about sleeplessness as the striking symptom of threatening insanity and about the pre-eminent value of alcohol as a sedative in such cases It seemed to him that if mental distress were a factor in producing puerperal insanity its frequency after illegitimate births ought to vary directly with the moral standard It was well known that the moral standard with regard to such matters varied greatly in different countries If the above contention were true the proportion of cases of insanity in single mothers ought to be lowest in immoral and highest in moral countries. As regarded toxæmia and its relation to pregnancy he did not think that the explanation given in the paper would altogether suffice. Effete products were doubtless prevalent after confinement, on the other hand, the sense of physical and mental comfort and relief ordinarily experienced after delivery was proverbial. He did not think that this would be the case if ordinary toxins were the usual cause of insanity after labour

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Dr F W Mott said that among the large number of cases recorded by Dr Jones there was not a single case of gangrene, perhaps, therefore, he might be allowed to relate an instance which he had seen in a woman certified as suffering from puerperal insanity who was admitted into one of the London county asylums This patient not long after admission developed signs of symmetrical gangrene of the feet The child had been born dead and the woman was suffering from septic endometritis. Her mental condition improved when this was treated

Dr R Percy Smith said that with regard to the early symptoms he thought that next to sleeplessness, restlessness and early confusion of thought were more important than headache. There was no definite form of mental disorder which could be looked upon as absolutely characteristic of puerperal insanity, and cases might be of the delirious, confusional, maniacal, melancholic stuporous, or delusional type. He had very little personal knowledge of illegitimacy as a cause but called attention to Dr T S Clouston's statement that 75 per cent of the puerperal cases admitted to Morningside Asylum followed illegitimate births Another point in the etiology was that 26 per cent of the cases admitted to Bethlem Hospital had had a previous attack of insanity, either one before marriage or one after marriage, which was not puerperal in origin or a previous puerperal attack He said that alienists constantly found a history of previous "hysteria' in patients admitted to asylums which when carefully inquired into was found in many cases to have been a previous attack of definite mental disorder euphemistically called "hysteria." He was sure that such patients ought not to marry

Dr E W White thought that Dr Jones s proportion of occurring cases was too low, probably 1 in 400 confinements was nearer the mark, for there were many which did not go to the asylum for treatment and of which no records were obtainable He drew attention to certain of the mental symptoms and to the temperature charts in this disease. The obscene language, erotic tendency, and self abuse were probably of peripheral origin from abnormal uterine conditions, altered lochia &c In nearly all his cases there was an elevation of temperature of from one to two degrees in the evening, with a morning fall of a degree or less, lasting from ten days to a fortnight, then a subnormal temperature for several weeks. Frequent baths with scented soap were necessary on account of the perverted skin secretion.

Dr W S A Griffith stated that with regard to the insanity of pregnancy there was a group of cases quite distinct in which the main feature was the apprehension of the patient, either real or simulated, that unless the pregnancy was terminated she would become insane, he looked upon all such cases with the gravest suspicion, not of insanity, but of rather the reverse—namely, as an ingenious method of putting strong pressure on the medical adviser to produce abortion.

Dr T Seymour Tuke agreed with previous speakers in the necessity for good feeding and urged the early resort to artificial feeding if called for While admitting the great value of alcohol the danger of forming a habit must not be lost sight of

Dr T Claye Shaw referred to the question of the existence of a mental disorder due to the puerperal state. It appeared to him that there were two classes of cases really existent, but both characterised by the delusions, incoherence, and other mental symptoms supposed to be pathognomonic of insanity due to the puerperal state alone. Insanity characterised by prominence of sexual mental demonstration might occur in young women at the developmental epoch or in women of middle or advanced age in whom there were no uterine or ovarian complications of any kind to be passed through, just as delusions of a sexual character might be seen in boys and men accompanied by acts of masturbation, and yet there was no occasion to attribute the symptoms to influence from the genital organs at the moment. When, however, the temperature was higher than was usually met with in acute insanity and the symptoms came on shortly after parturition, there was a strong argument in favour of a direct connexion between the mental and bodily states, especially when there was a history of hereditary taint, together with the probability of the presence of a septic condition.

Dr J M. Amand Routh urged the desirability of having intermediate receiving houses, or a nursing home, where women suffering from such temporary insanities as those under discussion could be received and treated Such a plan would avoid the stigma of having been in an asylum and would make it much easier to get the friends of the patient to agree to her removal.

The President thought that obstetricians saw these cases, as a rule, at a much earlier stage than did the alienists. Perhaps for this reason, and because of the shortness of time, the introducer of the subject had said but little about diagnosis When the patient was admitted into an asylum the diagnosis had been made, but in the earlier stages it was not always easy to say that a case amounted to actual insanity He considered that the refusal of food was a far graver symptom and pointed much more certainly to insanity than did sleeplessness

Dr Jones replied briefly

Laryngological Society of London—A meeting of this society was held on Jan 9th, Mr E Cresswell Baber, the President, being in the chair—The following officers were appointed for the year—President Dr P McBride. Vice-Presidents Mr A A. Bowlby, Dr Dundas Grant, Dr P Kidd, and Mr C J Symonds. Treasurer Mr. W R. H Stewart. Librarian Dr StClair Thomson Secretaries Dr J Donelan and Dr E. Furniss Potter Members of the Council Sir Felix Semon, Mr E Cresswell Baber, Mr C A. Parker, Dr W Permewan, Mr R. Lake, and Mr. L A. Lawrence.—Sir Felix Semon exhibited a case (which had been previously shown at the November meeting of the society) of Ulceration of the Left Tonsil with Enlargement of Numerous Cervical Glands on both sides of the neck (? malignancy) in a man, aged 70 years. It was now seen that the ulceration had disappeared and that the tonsil had become much smaller, whilst the enlargement of the cervical glands had considerably diminished. Malignancy was now excluded The case was shown again as affording valuable evidence that ulceration of a tonsil in old people with enlarged glands must not necessarily he looked upon as malignant—Dr P Watson Williams exhibited new designs for Sphenoidal Sinus Cutting Forceps and a Laryngeal Spray—Dr A. Bronner showed a drawing and read notes of a case of Suppurative Ethmoiditis and Frontal Sinusitis after radical operation for Nasal Polypi. The nose had been curetted on three occasions with Meyer s ring knife Four weeks after the last operation the patient began to have pain, a high temperature, and became semi comatose. The nose and forehead became swollen Both frontal sinuses were opened and found to be full of pus The dura mater was exposed. The patient was relieved for 12 hours after the operation and then died. The anterior part of the left frontal lobe was found to be necrosed and there was extensive purulent basal meningitis—Dr H. L Lack showed a man, aged 59 years, with Aphonia of six months' duration who had a similar attack rn to the article under that heading, written by Kallius, d he will find it described as the treatment of organs d tissues with potassium bichromate for a variable ngth of time according to the effect required to be oduced, after which the sections are placed in solutions of nitrate of silver of definite strength or in solutions of mercury bichloride, when a finely granular prepitate occurs which is composed of chrom silver or chromublimate, enabling certain elements of the tissues, and ssentially the cells, when the preparation is properly leared, to be distinguished from others It is pointed out hat Golgi's method is best adapted for the investigation f embryonic structures. The details of the process are hen given, as, for example, the strength of the soluons to be used, the duration of exposure of the ssues to the action of such solutions, and the emperature at which they should be kept. The advanages of the method are shown to be that it is very enerally applicable, affording, when the successive steps re properly carried out, beautifully clear objects, whilst it as the further advantage that thick sections are more nstructive than excessively thin ones. The rest of the rticle, which extends over no less than 34 pages, is occupied with the numerous modifications that have been suggested by Cox, Sala, Hoyer, Ramon y Cajal, Obreggia, Pal, Greppin, Kallius, and many others, some being especially adapted for particular tissues, as, for instance, the nervous system, the muscles and the cornea. Finally, there is an excellent bibliography

The work is extremely carefully edited and when completed should be on every laboratory table, for it is convenient to have the data here given at hand and much trouble and disappointment will be saved by a reference to its pages.

The English Poor laws their History, Principles, and Administration By SOPHIA LONSDALE, Poor law Guardian, Lichfield Union. Third edition, revised and enlarged. Westminster King and Son. 1902. Pp. viii.-89 Price 1s. net.

EVERY medical man, and indeed every ratepayer ought to know something about the Poor law At the present time, especially when there are a number of able-bodied unemployed men in the East-end of London, it is most desirable that so pressing a question as their relief should be considered in the light of knowledge previously acquired. There is great danger that the money of ratepayers, and of the charitable public may be used in a manner which is not only useless but absolutely mischievous

Miss Sophia Lonsdale, who has had the experience afforded by the actual study of the Poor law in its practical working has written a little book which gives in small compass a very large amount of useful information. Three lectures which were originally delivered at the University Settlement for Women at Southwark have been revised, corrected, and brought up to date, and in their present form they will give to any intelligent reader a clear conception of the nature of the Poor laws and of the way in which and by whom, they are administered. Those who have not the leisure or wish to read the monumental work of the late Sir George Nicholls[1] will be able to get from Miss Lonsdale's book in a couple of hours a general and fairly correct outline of the causes which led to the making of the laws and a general knowledge of ' legal poverty" in England from the time of Elizabeth.

The most useful part of the work is contained in the third chapter where a very clear account is given of the actual everyday working of Poor law relief. There is a description of the workhouse with its officers, the master, the chaplain, the medical officer, and the porter (who "is supposed to prevent the entrance of objectionable things into the workhouse"). The various systems adopted for the education of pauper children are enumerated and briefly described. The peculiarities of vagrants are touched upon in sufficient detail, and evidence is brought forward to show that the shelters and refuges which have lately been provided by well meaning people in such profusion are by no means an unmixed blessing Indeed, it is said that not a few of these " moral elevators " are a disgrace to civilisation and in the case of many "the worst of our casual wards is a paradise in comparison to them " There are some valuable suggestions as to the best method of helping men who are out of work and it is pointed out that in any scheme which is to have a chance of success it must be recognised that "the unemployed are not all exactly alike." A thrifty man of good character may be temporarily out of work. Every effort should be made to keep such a man off the rates. On the other hand, the idle and vicious are best treated in the workhouse or by reforming agencies. It has been proved over and over again that indiscriminate outdoor relief imposes upon the ratepayers a burden too heavy for them to bear and tends to increase rather than to diminish the state of things which it is designed to remedy Examples bearing on these and on other points are very simply and clearly given by Miss Lonsdale, who in most, if not in all, cases mentions the sources of her information

The book might, it is true, be improved by further revision, but taken as a whole it is an extremely good piece of work written in great part from personal knowledge by a woman of clear insight, of acute observation, and of high intelligence. It is entirely free from foolish and hysterical exaggeration and would serve as a good literary model for His Majesty's Women Inspectors of Factories.

Text book of Electro-Chemistry By SVANTE ARRHENIUS, Professor at the University of Stockholm. Translated by JOHN MCCRAE, Ph.D London Longmans, Green, and Co 1902 Pp. 344 Price 9s. 6d

ELECTRO-CHEMISTRY is one of those branches of chemical science which has undergone immense development during the last 20 years and to Professor Arrhenius much of this progress is due. The effect of the electric current upon a liquid containing a metallic salt in solution was, of course, observed many years ago, the phenomenon being called "electrolysis." Faraday may be said to be the founder of electro-chemistry by his classic researches on the electrolytic deposition of metals, he having succeeded in establishing certain laws in regard to the phenomenon. But the phenomenon of electrolysis has gone a step further than merely illustrating the separation of metals from solutions of metallic salts, it has thrown light not merely on the nature of solution but, *a priori*, on the constitution of matter. Professor Arrhenius is perhaps the best living exponent of the marvellous development which we have indicated and with him should be mentioned Van t Hoff and Ostwald

The work before us is founded upon a series of lectures delivered by Professor Arrhenius at the University of Stockholm in 1897 The English translation, which is based on the German edition, has been admirably done by Dr McCrae. The translation into German of the original Swedish edition was made by Dr H. Euler and in that edition many valuable references to the literature of the subject up to 1901 have been added. In the same way Dr McCrae has made the English edition very valuable by appending a list of references to the recent literature on the subject. We find that the context contains references to recent work undertaken in this country such as that by Messrs. Heycock and Neville on the solutions of metals in each other The various sections of it and the tympanum. Roughly speaking the former was specially adapted to the relief of acute cases and the latter to the cure of chronic suppuration. The indications for the mastoid operation were discussed under the heads of acute and chronic diseases. Under acute diseases were included (1) acute middle-ear suppuration with invasion of the antrum, (2) an acute exacerbation in the course of a chronic suppurative otitis media, (3) influenzal mastoiditis, (4) secondary infection from a meatal abscess, and (5) acute middle ear tuberculosis Chronic conditions in which the mastoid operation was called for included (1) chronic suppurative otitis media, (2) recurring discharge, (3) facial paralysis, (4) cholesteatoma, (5) persistent mastoid pain, (6) meatal stenosis, (7) Bezold's mastoiditis, (8) mastoid fistula, (9) necrosis, and (10) as a preliminary to other operations.—A discussion followed the reading of the paper

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[1] A History of the English Poor-law in Connexion with the State of the Country and the Condition of the People. By Sir George Nicholls, K.C.B. late Poor-law Commissioner and Secretary to the Poor-law Board Murray 1854

EDINBURGH ROYAL MEDICAL SOCIETY—A meeting of this society was held on Jan 16th, Dr Prentice being in the chair—Dr Peter McBride read notes on some Abdominal Cases which presented difficulty of diagnosis Three of them had been supposed to be intestinal obstruction but after examination they were diagnosed as gastro intestinal influenza, alcoholism, and distended bladder Another case with symptoms like those met with in gall stones was not diagnosed as the patient got well without operation—Dr T W E Ross read notes on a case of Œdema Glottidis, for which tracheotomy was performed The patient had symptoms of renal disease The cause of the œdema was doubtful.—A dissertation on Gait by Dr C M. Campbell was read in his absence by Dr H. J Dunbar After describing and analysing the mechanism of walking in a normal individual he showed the value of gait as an aid to diagnosis in some pathological conditions

GLASGOW NORTHERN MEDICAL SOCIETY—A meeting of this society was held on Jan. 13th in the Royal Infirmary—Dr John Macintyre gave a very interesting lantern demonstration on Electro-therapeutic Apparatus in the lecture room, with special reference to affections of the œsophagus and respiratory passages, after which the members inspected the new electric pavilion and were shown the apparatus and instruments—The meeting was brought to a close by a vote of thanks being accorded to Dr Macintyre and the superintendent of the infirmary

Reviews and Notices of Books.

Encyklopadie der Mikroskopischen Technik, mit besonderer Berücksichtigung der Farbelehre Herausgegeben von Professor PAUL EHRLICH, Dr MAX MOSSE, Dr RUDOLF KRAUSE, Dr HEINRICH ROSIN, and Professor Dr CARL WEIGERT Mit zahlreichen Abbildungen. Berlin Urban. Wien Schwarzenberg 1903 Abtheilung I., pp 400, Preis 10 Mark Abtheilung II., pp 400 Preis 10 Mark. (*Encyclopædia of Microscopy with Special Description of the Art of Staining* By Professor EHRLICH, Dr MOSSE, Dr KRAUSE, Dr ROSIN, and Professor CARL WEIGERT Two Parts, each of 400 pages, with numerous Illustrations. Berlin Urban Vienna Schwarzenberg Price 10*s* each part.)

AN incredible amount of time and attention has been bestowed upon the technical details of microscopy during the last two or three decades Sections obtained by mechanical means of the uniform thickness of a fraction of a millimetre of the various tissues have been examined in fluids like the aqueous humour and the physiological saline solution, which are as nearly as possible identical with the normal conditions, they have been exposed to the action of innumerable acid and alkaline solutions of different strengths, to the influence of salts of many metals, to alcohol of various degrees of specific gravity, to clarifying oils, and to numerous staining agents, and with each new agent or method new features in the tissues under examination are discovered and a better understanding of them is arrived at The application of potassium bichromate, the employment of osmic acid, the double and triple staining of Ehrlich and Weigert, the silver nitrate and gold methods of Golgi and of Ramon y Cajal, and the use of formol have all aided in establishing the prevailing conceptions of the structure of our bodies In the present encyclopædia the student, or, indeed, the professor, who is working at any special tissue will find full details of almost all the means that have been hitherto tried to exhibit the modifications that the cell undergoes in its progress to maturity, whether passing through its life isolated and free or uniting with others to form membranes or glands or the fibres of muscle or nerve, or incrusting itself with cartilage or salts to form organs of support. It is here shown that each tissue demands special treatment and that some play of the imagination is required to combine the varying appearances presented by the action of different agents and to obtain a general idea of the structure or organ under examination.

The reader must not expect to find in the pages of this volume a treatise on histology There is no connected account of the structure of any special organ. In the article "Haut" (Skin), for example, there is no such description as is contained in the works by Quain and Sharpey, by Gray, or in Schäfer's "Essentials of Histology," but he will find described the original method which Herxheimer employed to demonstrate the spiral fibres known by his name and the modifications suggested by Kromayer, Unna, Schutz, Mayer, and Delafield. He will find the different modes of showing the presence of eleidin and of pigment, the proper method of preparing nails and hairs for section, and the methods of exhibiting the characteristic features of favus, trichophytia, pityriasis, erythrasma, actinomycosis, blastomycosis, and cheloid acne. A long section covering 74 pages is devoted to the subject of injection, the various substances that have been used, as gelatin, gum, albumin, wax, tallow, asphalte, resin, paint, fusible metal, alcohol, and glycerine, are all given with the colouring agents which demonstrate the complexity and enhance the beauty of the preparation or, as in the case of the liver, aid in enabling the distribution of the vessels to be understood. Numerous forms of pumps and syringes are depicted and a section is devoted to physiological injection.

There is an excellent article covering 50 pages, entitled "Embryologische Technik," written by Herr Ballowitz of Greifswald This gives full details of all necessary proceedings for the study of embryology, including artificial fertilisation, the method of obtaining and observing the living specimen, the preparation of ova and embryos, the processes of fixing and hardening these exceedingly delicate objects, of staining and imbedding them, of cutting and mounting sections, and of the reconstruction of embryos on the completion of serial sections, with various experimental and operative methods Herr Ballowitz dwells on the importance of rapid removal of the developing ovum from the body of the parent It has been found that even in reptiles the young embryo rapidly breaks down, so that Dr Yoeltzkow found it necessary in his researches on the development of the crocodile in Madagascar to have the animals chained and dragged up to his house where he could open them and at once transfer the ova to the fluid used to preserve them. In order to obtain the ova in different stages of development a small opening was made in the abdomen and a string of the ova was extracted with the hand, all having arrived at the same stage of development. The wound was then aseptically closed and after two days was reopened and another batch of eggs was removed The rules for the application of the various fixing agents, such as osmic acid, chromic acid, corrosive sublimate, picric acid, nitric and acetic acids, platinum chloride, alcohol, and formol are then given, with the advantages and disadvantages attending the use of each

Again, should a young microscopist desire to obtain some information of Golgi's method of staining, he has only to has been reached and only attain a stage corresponding to that of the ripe proglottides of a tænia after having led an independent existence for a considerable time. The strobila is actively locomotive. Mr Haswell refers this cestode to the genus Phyllobothrium. 2. The Development of Lepidosiren Paradoxa, by J Graham Kerr, Regius professor of zoology in the University of Glasgow This is the third instalment of the papers on this subject by Professor Kerr and is devoted to the development of the skin and its derivatives The changes which the chromatophores undergo under alternate exposure to light and darkness are well described and well rendered in the plates illustrating the paper Separate sections are devoted to the stomodæum, the teeth, the hypophysis, and the central nervous system In the account of the brain of the adult lepidosiren it is shown that it closely resembles that of protopterus The cerebral hemispheres arise at two separate bulgings of the wall of the thalamencephalon, the pineal organ is simple without any trace of a separation of a part of it to form a "parietal organ." The rudiments of the eyes, nose, and ears are at first solid, the cavity of the optic vesicle arising secondarily, in the histogenesis of the visual layer of the retina the development of the rods is preceded by the formation of the oil globules. 3. The Metamorphosis of Corystes Cassivelaunus (Pennant), by Robert Gurney, B A. Oxon 4 Artificial Parthenogenesis and Fertilisation, a review by Thomas H. Bryce.

Analytical Records

FROM

THE LANCET LABORATORY

BROMOCOLL

(CHARLES ZIMMERMANN AND CO 9 AND 10 ST MARY AT HILL, LONDON E.C)

BROMOCOLL is an organic compound containing bromine which it is proposed to substitute for the ordinary alkaline bromides. It is a yellowish brown powder insoluble in water or acid fluids, but slowly soluble in alkaline fluids Bromocoll, therefore, is probably absorbed in the intestinal tract. It is stated that it gives the well known sedative effects of the alkaline bromides, while it is without injurious action, and its administration in the place of bromides in epilepsy in comparatively large doses is suggested Bromocoll used in the form of an ointment is said to be efficient in the treatment of irritable conditions of the skin as eczema and prurigo Bromocoll would appear to be a definite chemical compound containing tannin, gelatin, and bromine and is prepared by acting on gelatin with brominated tannin The drug is stated by several German physicians of repute to give encouraging results in sleeplessness epilepsy, and other nervous disorders

HUNTER BALTIMORE WHISKY

(W LANAHAN AND SON BALTIMORE A. A. BAKER AND CO 30 MINCING-LANE LONDON E C)

The following analysis of this rye spirit is interesting as showing relatively small amounts of secondary products of fermentation such as aldehyde, furfural, higher alcohols, and ethers. The results were as follows Extractives, 0 40 per cent, mineral matter, 0 01 per cent, alcohol, by weight 35 50 per cent., by volume 49 40 per cent, equal to proof spirit 74 30 per cent The secondary products given in grammes per hectolitre were as follows aldehyde, 3 50, furfural, 1 00, higher alcohols, 30 00, ethers reckoned as ethyl acetate, 34 30 The spirit is dark brown in colour and is intended to be taken rather as a liqueur than diluted with plain or aerated water It possesses the peculiar flavour and smell of rye spirit which in certain countries is much esteemed. Compared with malt whisky or genuine brandy the amount of higher alcohols, furfural, aldehyde, and ethers is small. From this point of view the liqueur is a very pure spirit—that is to say, it approaches the composition of diluted ethyl alcohol as do most grain derived spirits in general We may add that the alcoholic strength is somewhat low, and, indeed, half a degree lower than the limit of dilution of whisky permitted in this country

KARNOID PREPARATIONS

(KARNOID LIMITED 6 AND 7 STONECUTTER STREET LUDGATE-CIRCUS LONDON, E C)

We have already drawn attention to the excellent results obtained by that method of drying in the cold which is adopted in the preparation of Karnoid foods These products recently have been considerably improved as regards flavour An analysis of karnoid beef showed that it contained 55 per cent. of proteid and no less than 12 16 per cent. of albumin was extracted by cold water Chicken karnoid yielded in a similar way 13 64 per cent. of albumin. The clear cold water solution of karnoid turns into a sort of jelly on heating owing to the coagulation of the myosin albumin Karnoid meat preparations are excellent foods and admirably adapted for the requirements of the invalid They afford a ready means of preparing a really nutritious meat tea. We have also examined a preparation of oysters obtained by the same dry cold process Here, again, we found the albumin of the oyster in a soluble condition, the total amount of matter extracted by cold water being 50 per cent. and the amount of coagulable albumins 13 per cent. The dried oyster flesh was in a powdered form resembling white pepper in appearance This method of concentrating and comminuting fleshy foods is a great advance on other methods, since in the product are retained the vitalising principles of the original meats intact

IMPERIAL STOUT

(A LE COQ AND CO 25 ORANGE STREET LONDON S E)

This stout is described as "extra double" and our analysis confirms this description, assuming that this expression refers to stout showing a very high percentage of malt extractives The following was our analysis Malt extractives, 9 21 per cent. (containing over 8 per cent. of proteids), mineral matter, 0 45 per cent., alcohol by weight 9 36 per cent., by volume 11 61 per cent., equal to proof spirit 20 35 per cent. The sample we examined was in good sound condition and ripe and possessed a rich malty flavour It is free from excessive acidity and the carbonic acid gas is the product of the fermentation of the liquor itself and is not artificially forced in We have already expressed the opinion that artificially carbonated malt liquors are dietetically inferior to those which effervesce with their own natural gas of fermentation This stout it is stated, has been shipped hitherto exclusively to Russia. Stout has a reputation of being a very nourishing malt liquor and in this regard this specimen must be assigned a high position, since its analysis shows a very considerable proportion of nutritives.

(1) INVALID FOOD AND (2) TELMA COCOA

(THE TELMA SYNDICATE 57 FENCHURCH-STREET LONDON E C)

(1) The invalid food is stated to be prepared from malted lentils and malted wheat, a fact which is easily revealed by microscopic examination The food contains a large amount of soluble carbohydrates owing to the malted process and the digestibility is thereby increased Our analysis gave the following results Moisture, 5 08 per cent, mineral matter, 1 90 per cent, proteids, 17 24 per cent, carbohydrates and fat 75 78 per cent (2) Telma cocoa is a mixture of dextrinised cocoa with the foregoing food There is thus a dietetic gain, the cocoa adding some nitrogenous principles as well as stimulating substances Our analysis of the cocoa gave the following results Moisture, 5 79 per cent., mineral matter, 1 96 per cent., proteid, 20 72 per cent., carbohydrates and fat, 71 53 per cent These foods present the

the subject are dealt with in a lucid manner and notably so in the chapter in which the application of electrolysis to the separation and estimation of metals is described. Rules are laid down for the direction of the analyst who decides to adopt this convenient method of estimation Incidentally, it may be pointed out that the quantity of a salt in a solution may be determined by measuring its conductivity, and, further, the method can be applied to the estimation of two given salts in the solution "At high dilution all salts when applied in equivalent quantity conduct almost equally well." It is obvious from this fact that it is possible to find the weight equivalents of salts present, for instance, in potable water by determining the resistance The methods of electro-analysis might be employed with advantage in cases of metallic poisoning Thus copper, mercury, lead, arsenic, antimony, tin, and zinc could be recovered directly in the metallic state from the contents of the stomach The book deals with many other branches of the subject, as for example, the theory of accumulators and the utilisation of heat developed by the electric current, as in the manufacture of carbide of calcium, carborundum, and aluminium, and in other processes in which electrical appliances are employed A book of this kind written in the English language has long been wanted, and those who wish to gain an insight into the nature of electro chemical action and its applications have now the advantage of being able to consult a work by one of the first authorities on the subject

LIBRARY TABLE

Aids to Gynæcology By ALFRED S GUBB, M.D Paris, M R C S Eng London Baillière, Tindall, and Cox. 1903 Pp 136 Price 2*s* 6*d* —This little book, which is one of "The Student's Aids Series," has, we see, reached its fourth edition It does not pretend to be more than an 'epitome of the signs, symptoms, and treatment of the diseases peculiar to women," to quote the words of the author As such it will be found useful to the student and to the young practitioner, but for the former of course its use must be supplemented by some good text book

Aids to Forensic Medicine and Toxicology By WILLIAM MURRELL, M D , F R.C P Lond. Sixth edition. London Baillière, Tindall, and Cox. 1903 Pp 110 Price 2*s* 6*d* —This is another of "The Student's Aids Series " It is clearly written and if used as the author in his preface says that it should be used will be found to be of value. We are glad to see that Dr Murrell calls attention to the fact that all judges are bound to administer the Scottish form of oath without question if the witness so desires it

Herbert Fry's Royal Guide to the London Charities Edited by JOHN LANE London Chatto and Windus 1903. Pp iii.-294 Price 1*s* 6*d* —This valuable work becomes larger every year It might with advantage be reduced by eliminating details of certain militant "religious" associations which can hardly be described as charities But the inclusion of these is only a small blemish on an otherwise excellent compilation.

A Doctor's Thoughts By CLEMENT B GUNN, M D Edin Selkirk James Lewis 1902. Pp 100 —Dr Gunn, like 'Weelum McLure," is a Scots country practitioner His "thoughts" are embodied in a collection of sonnets of which most show a true poetic afflatus. To those who appreciate the beauty of nature and the romance of religion this little book will afford much pleasure

Carmina Medici By WILLIAM FINDLAY, M D Paisley Alexander Gardner 1902. Pp 166 Price 3*s* 6*d* net — Dr Findlay's muse plays on a rougher toned pipe than that of Dr Gunn But in this world action is more important for most of us than is contemplation and such poems as "The Hypochondriac" will go home to every practitioner's heart. Should, however, anyone, like Barnes Newcome, be drawn towards the domestic affections, let him read "A Spring Monody," and if he can do so without a lump in his throat we shall be surprised. The "Kirkyard Eclogue" on Glasgow Royal Infirmary is admirable reading and we are glad to see eulogies of three of our favourite writers—Henry Vaughan, Sir Thomas Browne, and Dr John Brown.

A Handbook of the Open-air Treatment By Dr CHARLES REINHARDT and Dr DAVID THOMSON London John Bale, Sons, and Danielsson, Limited. 1902 Pp 176.—This is the second edition of a useful book the first edition of which was reviewed in THE LANCET of March 2nd, 1901, p. 637 To this edition Dr David Thomson has added a short record of the history and results of the open air treatment. The list of sanatoriums has been brought up to date and at the beginning of the book sundry passages of interest to a patient suffering from pulmonary tuberculosis have been added

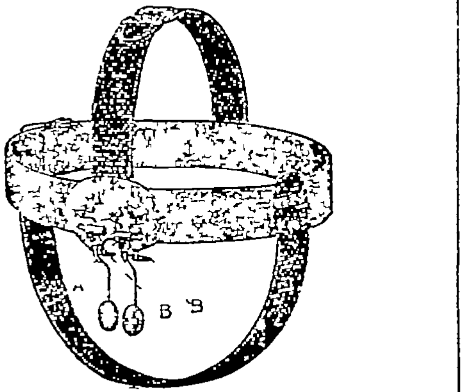
Glossaire Médical By Dr L. LANDOUZY, Professor of the Medical Clinic at the Paris Faculty of Medicine, Laennec Hospital, and Dr F JAYLE, Chief of the Gynæcological Clinic of the Paris Faculty of Medicine, Broca Hospital With five Maps and 426 Illustrations. Paris C Naud. 1902 Pp 663 Price, paper covers, 16 francs , cardboard covers, 18 francs —This is a dictionary of medical terms and expressions The authors urge that constant progress accomplished and numerous discoveries made in medicine and surgery result in the employment of so many new terms that a book of reference is much needed. Again the custom of calling an instrument or an operation by the name of the practitioner who first resorted to such instrument or operation does not help to indicate what the meaning of the term may be All this has given rise to a complicated medical language which no practitioner can be expected to know thoroughly Again, there is a difference between the words that might be employed and those that are usually utilised The glossary before us seeks to give what is practically useful , not so much all possible nomenclature or all the old terms, but rather all the modern words and expressions which are actually in vogue. It is a collection of new words, of anatomical expressions, of diseases that bear the personal names of their discoverers, of recent medicaments, of the principal mineral waters, sanatoriums, &c. To these words brief bibliographical indications are added and numerous small but well executed illustrations render the meaning more accurately than would be possible by mere verbal descriptions. Deformities and monstrosities constitute a large portion of these pictures, and as many of them are taken from life they are very interesting Then the maps give the health resorts, the sanatoriums, agricultural colonies for the convalescent, and the like. Altogether the work may be regarded as a very complete compendium and, considering that such technical works are generally very expensive, the price in this case may be described as moderate

JOURNALS AND MAGAZINES

The Quarterly Journal of Microscopical Science Edited by E RAY LANKESTER, F R.S , with the coöperation of ADAM SEDGWICK, M A , F R S , W F R. WELDON, F R.S , and SYDNEY J HICKSON, F R.S With Lithographic Plates and Engravings on Wood. London J & A. Churchill. 8vo New series, No 183 Vol. XLVI Part III. December, 1902 Pp 108 Price 10*s* —This part contains the following articles 1 On a Cestode from Cestracion, by W A Haswell, F R S The cestode here described is found in considerable numbers in the large intestine of that ancient fish, the Port Jackson shark. In it, as was noticed by von Beneden, the proglottides are set free from the posterior end of the strobila long before maturity op of the chamber immediately over the burner or fire. The esult of this arrangement is that a maximum amount of conensed liquid is obtained and according to our analysis this quid contains a very appreciable amount of sulphur in the orm of combined sulphuric acid In one experiment we btained 13 ounces of fluid after the stove had been working ix hours, the total gas consumed being 48 cubic feet—that s to say, approximately one ounce of fluid is obtained from hree cubic feet of gas consumed. On analysis this fluid was ound to contain seven grains per gallon of sulphuric acid SO_3) which is equal to about three grains of sulphur per gallon. There is thus an important amount of sulphur washed out of the products of combustion and as sulphur compounds are the most objectionable products of the combustion of coal gas this result is decidedly a favourable eature of the stove. As to the heating efficiency of the tove this need hardly be determined by experiment since all the possible heat of the gas consumed is entirely utilised for the purpose of heating a room The maximum reading of a thermometer placed one foot in front of he stove was 80° F The stove we tested consumed only eight cubic feet of gas per hour and on a very cold day it sufficed to raise the temperature of a room of 1500 cubic feet capacity from 55° F to 61° F in three hours Considering that only eight feet per hour were consumed and that the room was a difficult one to keep warm on account of spacious windows with a north aspect, this result is satisfactory The temperature of the room was subsequently maintained at 62° F for four hours, although the outside temperature fell to 48° F As might be expected, the amount of carbonic acid gas in the air increased, the actual increase after six hours being from 3 5 parts per 10,000 to 10 parts per 10,000 No attempt, however, at ventilation was made and the increase of carbonic acid gas under the same conditions, but with people living in the room, was in much the same progression. Even after several hours' working there is no evidence of the presence of those offensively smelling gases which point to defects in the working condition of the stove and the formation of which has served to prejudice so much the use of coal gas for heating purposes. The stove gives an efficient and healthy heat, the warmed air being quite free from smell or "stuffy" character and it is not "scorched." The Carron Company of Glasgow and elsewhere are the makers and the London agency is at 20 Victoria street, Westminster, S.W where various types may be seen in working order

A NEW FORM OF NASAL TRUSS

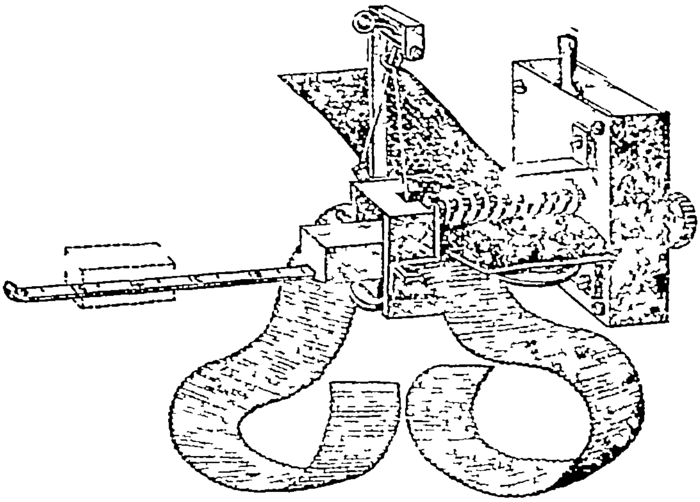
HERETOFORE the difficulty has been to prevent the forehead plate of a nasal truss from slipping from side to side and upwards over the forehead. The present truss is designed to obviate this difficulty by making the lower border of the forehead plate follow the contour of the root of the nose and contiguous orbital margins. A rounded notch A corresponding with the root of the nose is cut in the plate and the margins of the lower part of the plate forming the sides of the notch are bent backwards in a blunt curve, B B, to almost a right angle to the rest of the plate. The notch therefore embraces the root of the nose, while the turned back portions of the margins of the plates catch under the orbital ridges at the internal angular processes of the orbits This prevents the truss from being displaced upwards, while the notch prevents any movement from side to side. The truss is provided with the usual straps and head band, and to the plate are fixed the usual arms for making pressure upon, and fixing, the nasal bones or cartilages. It is made by Messrs. Arnold and Sons, West Smithfield, London, E C



Harley-street W W J WALSHAM, F R C S. Eng , &c.

IMPROVED RICHARDSON'S SPHYGMOGRAPH

HAVING found that the Richardson's sphygmograph was so constructed that it was not possible to apply a pressure of more than four ounces and that a pressure of one ounce was not always to be depended upon, I have suggested that certain alterations shall be carried out by Messrs Allen and Hanburys, Limited of 48 Wigmore-street, London, W , which will remedy these defects The steel bridge has been raised to permit the weight being pushed home beneath it where it does not interfere with the movement of the steelyard The figures indicating the pressure are read off on the steelyard on the distal side of the weight and not on the proximal as is customary A pressure of from one to six ounces can be easily seen and registered. The pressure indicated by each figure has been separately tested by the makers and found accurate.



J FLETCHER LITTLE, M.B Cantab , M.R.C P Lond.
Harley-street, W

ROYAL INSTITUTION—The Friday evening discourse at the Royal Institution on Jan 16th was delivered by Professor James Dewar the subject being Low Temperature Investigation One of the researches described was concerned with the formation of ice under a pressure of several thousand atmospheres. Among the various experiments he showed how a vacuum tube could be progressively exhausted so as to exhibit in a brief period all the phases of electrical discharge in rarefied air up to the production of Roentgen rays, the exhaustion being produced by cooling the tube in one spot with a little sponge soaked in liquid hydrogen

THE PLYMOUTH ROYAL EYE INFIRMARY—The annual meeting of the subscribers of this institution was held on Jan. 14th under the presidency of the mayor of Plymouth. The medical report showed that during 1902 there had been 2130 out-patients treated, 261 in patients admitted, and 309 operations performed. The financial statement showed that an unfavourable balance of £1076 remained, including £1000 standing against the building fund of the new infirmary The mayor made a strong appeal to clear off the debt on the building and contributed 10 guineas to start a special fund for that purpose.

general advantages of malted food and the selection of the constituents has been judiciously made. The pulse foods, for example, are much better digested when malted and mixed with wheaten flour

HUBBLE S BEEF BISCUITS (ST IGO)

(Alfred Hubble, 85 New Church road, Camberwell, London S E.)

Microscopical examination of these biscuits reveals the presence of a considerable amount of beef tissue and, in view of this result, it is not surprising that a high proportion of proteid was found. Our analysis gave the following results Moisture, 7 82 per cent., mineral matter, 3 97 per cent., proteids, 35 84 per cent. The balance may be accepted as consisting of starch and fat. The biscuits have a pleasant meaty flavour and are "short" and crisp They serve very well as a source of temporary nourishment in emergency As the analysis shows, they contain a high proportion of tissue-forming substance

HÆMATOGEN (HOMMEL S)

(Nicolay and Co 36 and 36a St Andrew's-hill Doctors Commons London E C)

We have already indicated in these columns the composition of Hommel's hæmatogen. The preparation contains the normal salts of blood plasma and is rich in unaltered albumin as is shown by the fact of the preparation turning nearly solid on heating Besides these important points hæmatogen also, of course, contains iron in organic form and partly on this account Hommel's hæmatogen has proved valuable in anæmic conditions. The preparation has recently been improved chiefly in regard to flavour Formerly it had a curious salty flavour which was distasteful to some persons This objection can no longer obtain.

VARIOUS CHOCOLATES

(Séchaud & Fils Montreux Switzerland London Offices Peninsular House Monument street, London E C)

We have received some novel specimens of chocolate from the above firm, one containing chopped nut, another coffee, and another milk The analysis of the milk chocolate was as follows Moisture, 2 5 per cent, ash, 2 25 per cent, fat, 27 90 per cent., and proteid, 7 30 per cent. The preparations are not only pleasant to the taste but they are also nutritive. The flavour of those chocolates containing coffee is decidedly novel

CASUMEN ARROWROOT

(Prideaux's Pure Casein and Life Food Co Motcombe Dorset)

The addition of pure milk proteid to arrowroot is a correct physiological proceeding since arrowroot is one of the most easily absorbed starches known, while casumen is a soluble proteid Moreover, arrowroot contains less than 1 per cent. of proteid, and alone therefore possesses no tissue-forming value, while casumen contains over 90 per cent. of proteid Our analysis of casumen arrowroot was as follows Moisture, 14 15 per cent, mineral matter 1 05 per cent, fat, 1 20 per cent., proteid, 28 20 per cent., and arrowroot starch 55 40 per cent. According to this analysis casumen arrowroot consists of arrowroot plus 30 per cent. of casumen. This 30 per cent. represents the gain obtained as regards nourishing value by mixing casumen with the arrowroot. It forms an excellent food for invalids and infants and for those possessing weak digestive faculty

JEYES SPECIAL FLUID

(Jeyes Sanitary Compounds Co Limited 64 Cannon street London E C)

We have at various times described the series of disinfectants prepared by Jeyes' Sanitary Compounds Co, the original preparation being known as creolin, a fluid coal tar compound which forms a uniform emulsion with water This company has recently prepared a coal tar disinfectant of a similar nature but with increased germicidal power which is known as Jeyes' special fluid.

According to the bacteriological experiments made by Dr E Klein, this new preparation is decidedly destructive to certain pathogenic organisms. The experiments related to the germicidal action of the fluid on staphylococcus pyogenes aureus in various dilutions and after varying periods of exposure of the micro-organisms to the fluid. In another series the germicidal power of the special fluid in various dilutions on tuberculous sputum was tested, the time of action being 24 hours, the *materies morbi* having been applied to the surface of wood. As is well known, the resisting power of the staphylococcus is an excellent guide as to the power of a given disinfectant. The results showed that even when the special fluid was diluted to the extent of 1 in 400 it proved a complete disinfectant for this specific organism in an exposure of five minutes. In the second series of experiments the sputum of a person affected with pulmonary tuberculosis was tried. There was no doubt of the presence of an abundance of the tubercle bacilli. The result of inoculation experiments on guinea pigs ultimately showed that the virulent tubercle bacilli deposited and dried on wood became completely disinfected by solutions of the special fluid up to 1 in 800 after an exposure of 24 hours. According to these results the preparation is obviously a trustworthy germicide.

New Inventions.

THE CARRON PATENT HYGIENIC INDUCTION CONDENSING GAS STOVE.

The heating efficiency of a gas stove depends of course upon the extent to which the total possible heat of combustion is realised. The greatest economy in this direction would be attained by allowing gas to burn in the open room and making no provision for carrying away the escaping products of combustion. There are, however, obvious objections to this method apart altogether from the fact that the combustion may be not completely satisfactory If the products of combustion of coal gas were only carbonic acid and water they would be no more objectionable than those arising from human respiration. Under such conditions, and all things being equal, the gas stove would sin less against the purity of the air than a human being However perfect the combustion of coal gas may be there are always sulphur compounds to be reckoned with and attempts have been made from time to time to free the products of combustion from these sulphur oxidation products. To some extent such purification is distinctly effected in what is known as the "condensing gas stove" of which that of the Carron Company is a decidedly improved type, giving a high heating efficiency on a very small consumption of gas and yielding products of combustion which in the main are condensed, the liquid so formed containing much of the original sulphur of the gas in the form of combined sulphuric acid. Carbonic acid gas is also in some measure condensed, while in a well designed stove practically all the steam is reduced to water The fact that the products of combustion are in this way largely condensed is not the only favourable feature of the stove, for in the act of condensation their heat is given up and made available for the purpose of warming. On this account the Carron condensing stove shows a very high heating efficiency and *a priori* the consumption of gas is small. The construction of the stove is very simple. Over the gas flame which may be of the argand or Bunsen type with a chimney, or over a red hot gas fire, an exit chamber is placed through which the gases pass and are expanded by the heat The gases then travel to the right and to the left to chambers at each side of the stove. Condensation occurs and vapour is produced. The top section of the stove is quite hot while the lower section is cold The hottest point, and therefore the greatest expansion, occurs roughly about half way down the condensing chamber Between the condensing chamber and the burner or fire on both sides are two tubes which carry off the vapour which is led to them by the hot gases formed at the careful in drawing up the terms of reference. These terms should specifically state that the object of the inquiry was to determine the best means of efficiently *applying* vaccination and revaccination, the desirability, or the reverse of revaccination should under no condition be the subject of discussion. But in our opinion the moment for legislation is opportune. We have a strong President of the Local Government Board supported, let us hope, by a strong Government The appointment of a departmental committee means postponement and then it becomes difficult to prophesy what may be the calibre of the Government which may be called upon to deal with this question, and what may be the fighting power of the then President of the Local Government Board—for a successful President of the Local Government Board usually passes to better paid offices, when public health loses a man who, had he stayed, might have done admirable constructive work While congratulating the Imperial Vaccination League and the Jenner Society upon the great success of their labours we must urge them, hether or not a departmental committee be appointed, to arry on the war The whole difficulty is merely one of rganisation, and vaccination has upon its side education, nfluence, and wealth. Let those who possess these advanages make use of them for the control of small pox.

The Medical Examination of Lunatics in Workhouses

THERE were 3425 insane persons admitted into the asylums of the county of London during 1901 the great majority of whom passed through the metropolitan workhouses in the process of being certified. In addition to these there was a large number of persons who, being admitted into workhouses as alleged lunatics, were, after 14 days detention, discharged under the advice of the medical men engaged in their examination. The examination of all these persons and the choice of the medical men employed therein are matters therefore, of very considerable importance, both public and professional When a relieving officer or overseer of the parish removes a person alleged to be of unsound mind to the workhouse he forthwith lays information before a justice of the district who is bound under the statute to summon a medical man to his aid to examine and to report upon the mental condition of the alleged lunatic. The choice of the medical man who is summoned and also the amount of the fee which has to be paid to him by the guardians rest entirely with the magistrate There is nothing in the statute to guide him in this matter it being assumed that most of the justices will be enabled to find such guidance in common sense and reason as applied to the duties of their responsible office It is therefore a matter for the gravest regret when complaints can be made upon good ground that the chief reason for the selection of the medical man is that he is the ordinary medical attendant or personal friend of the justice concerned. The majority of the metropolitan justices employ the medical officer of the workhouse, being apparently guided in their choice by the fact that the alleged lunatics are under his care and constant daily observation, whereas any outside practitioner can of necessity only make special and occasional visits to patients who are under the care of another medical man It has been alleged in some quarters as a reason for not employing the medical officer of the workhouse that the latter might be induced to certify lunatics for the sake of the fee. But the fee is paid for the medical opinion and report, quite apart from the nature of that opinion, whether for or against the sanity of the patient, so that the fallaciousness of this stupid accusation is apparent The Commissioners in Lunacy have expressed the eminently reasonable view that the proper person to certify as to the sanity or insanity of an alleged lunatic is the medical attendant of the patient for the time being, and in the case of inmates of a workhouse this is certainly the medical officer If it could be shown that any individual practitioner had had, previously to being employed by the justice, special experience in lunacy this might be brought forward as a reason for his being called to the case by the justice But it is alleged that sometimes the practitioner is employed merely because he happens to be a personal friend or the medical attendant of a justice, and where such relations between the justice and the examining medical man form the only reasons for the medical man's selection we have a grave abuse of authority The medical officer of the workhouse is nearly always possessed of special experience not only of Poor law lunacy but of the character and habits of the particular social class to which the patient belongs and the community ought not to be deprived of his valuable services upon the amiable impulse of a justice desiring to oblige a friend In view of the complaints which we have received the matter should, we think, be brought to the notice of the Commissioners in Lunacy, or, in the event of the expression of their opinion not having sufficient weight with the justices, before the Lord Chancellor

The Medical Officer of the Ballachulish Slate Quarries

As we have already stated in THE LANCET[1] Lord KYLLACHY has given his decision in the action raised in the Outer House of the Court of Session by the Ballachulish Slate Quarries Company, Limited against Dr LACHLAN GRANT, whom the directors of the company sought to prevent from continuing to practise medicine in the district of Ballachulish. Dr GRANT was under contract to attend the workmen of the company by virtue of an agreement made with the directors in which he bound himself to accept a month's notice to terminate his services and further to give up any other appointments which he might then hold in the neighbourhood and to discontinue all practice there. It was not, presumably, contemplated by Dr GRANT when he made this agreement that he might be dismissed under it arbitrarily or without proof of any default on his part, and consequently when he found himself in receipt of a notice which he considered to be so given he refused to carry out the portion of his arrangement relating to practice in the district. Judgment has now been given against him and he

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[1] THE LANCET Jan 10th 1903 p. 123.

THE LANCET.

LONDON SATURDAY JANUARY 24, 1903

The Deputation of the Imperial Vaccination League

THE members of the deputation from the Imperial Vaccination League which waited upon Mr LONG at the Local Government Board on Jan. 14th must have been highly gratified by the cordial sympathy with which they were met, indeed, we can recall no other instance in which the programme of a deputation has been so unconditionally accepted. An account of the proceedings will be found at p 260 of our present issue. It is a matter of satisfaction to THE LANCET to find that the President of the Local Government Board was able to agree with the views set forth by us in our leading article of Jan 10th, and we were pleased to see that Mr LONG urged upon the deputation the necessity of the continuance of its crusade if it wished its proposals to be carried to, and through, the House of Commons Mr LONG was, however, careful to guard his position as a Minister of His Majesty's Government and member of the Cabinet He told the deputation that he had not yet consulted his colleagues and that even had he done so he would have deemed it undesirable, politically speaking, to reveal his plan of campaign for the edification of the opponents of vaccination. In our leading article, to which Mr LONG referred in his reply to the deputation, we urged upon the Imperial Vaccination League the desirability of approaching some of the leaders of the Opposition in order that when the Government proposals are made known they may not become the subject of party polemics, and although the President of the Local Government Board seems to have some misgivings as to the practicability of a non contentious measure, we are still of opinion that the effort should be made to confer with the leaders of the Opposition The support of Sir MICHAEL FOSTER Sir WALTER FOSTER, and Dr FARQUHARSON ought to be secured.

The question arises whether Mr LONG'S influence in the Cabinet will suffice to convince his colleagues of the wisdom of his convictions Although the President of the Local Government Board presides over a department which exercises the predominant influence in domestic legislation and which is responsible for the public health of the nation, this department, unfortunately, does not occupy a very high position in the eyes of the Government As Sir MICHAEL FOSTER remarks in the current number of the *Nineteenth Century*, it has been accorded by the State an inferior status in "the hierarchy of Government Departments.' Until the President of the Local Government Board receives the rank and pay of a Secretary of State it can hardly be expected that the county and district councils and boards of guardians will take that position in publi affairs which the importance of their work demands. Th reference to local authorities brings us back to the questio as to whether Mr LONG S decision to transfer the administration of the Vaccination Acts to county councils and count boroughs is the best possible one Since the deputatio took place several suggestions have been made to u upon the subject, and it is clear from the number an sincerity of these proposals that there is some want o unanimity upon the matter among local authorities an their officers as to what is the best scheme. It i suggested by some that the administration should be lef in the hands of the guardians but that county council should be given a supervising power, and that, should th necessity arise, such county councils should be able t supersede the guardians in administration. One o the arguments used in support of this view is that the vaccination officers, who are very frequently relieving officers, are already under the guardians and that a transference of administration to the county councils would place the unfortunate officials under two masters. There is, of course, something in this view, but it seems to us that the claim that vaccination should be a thing quite apart from the disabilities real and imaginary, of the Poor law is so strong that the difficulties of detail would have to be greater than we think them to be to justify us in foregoing an important advance in principle. As a matter of actual fact, the vaccination officers have now frequently three masters—i.e., the guardians, the Local Government Board, and the registrar general—for vaccination officers are very frequently also registrars of births and deaths. If the county councils are brought into fresh relations with boards of guardians a step will be taken which may tend towards a far greater complication of local affairs than obtains at present. We think that the interests of the county councils in matters of sanitation should be deeper, and that vaccination, being a detail of public health administration, had better be put in their charge. We have already alluded to the advantages in this respect which they will possess under the Education Act

Some of those who have placed their views before us strongly advocate the appointment of a departmental committee to consider the administrative problems involved, the idea being to make certain that the Government proposals, when framed, will constitute a strong measure founded on first-hand knowledge of the facts We see the force of the suggestion, but are afraid tha the step would mean the postponement of the difficulty Even if the suggestion were acted upon at once the committee might take a considerable time to get into working order The number of witnesses to be examined would in all probability prove to be great, and before the report could be prepared and presented the legislative crisis would have been passed and the present Vaccination Act would be extended for at least another year A departmental committee might, we allow, smooth the passage of a Vaccination Bill, but we have some qualms in mentioning a departmental committee since this is such a very favourite device with Governments of all shades of opinion for shelving awkward questions Certainly, if such a committee were appointed it would be necessary to be very infamous Mrs DYER, who was hanged in 1896 after a series of cold blooded murders, has thrown a more lurid light upon the details of this revolting traffic than the trial of the two women SACH and WALTERS, which was concluded at the Old Bailey on Jan. 16th by the passing of the death sentence upon both the accused. It was shown for the prosecution in the course of the case that the guilty women worked in connexion with one another, being in constant communication and sharing the profits of their transactions, while the whole of the circumstances taken together proved beyond any reasonable doubt that each knew and connived at the acts of the other. SACH kept a "maternity home," including in her advertisement of it the statement "baby can remain." Women—in every case, probably, women to whom motherhood meant ruin—came and were delivered at SACH'S "home." Where their natural feelings for their offspring made them hesitate to dispose of the infants SACH allayed any scruples that they might feel by specious assertions of her power to get the infants adopted into good homes in return for small payments. Immediately after birth the children were taken from their mothers and handed to WALTERS who removed them to her own lodgings. In the particular case of the murder upon which conviction has followed a few drops of chlorodyne deprived the newly born infant of life and the disposal of the body alone remained to be considered. Probably the method with which we are familiar from reading about it frequently in newspapers was the one which WALTERS intended to employ. She meant to leave the infant's body in a parcel at a railway station or in a railway carriage, but she had already excited the suspicion of a police officer who resided in the same house, with the result that she was arrested at South Kensington station with the corpse in her possession. The arrest of WALTERS was immediately followed by that of SACH and the statements of the two women were such as to render it lawful for the prosecution to give evidence of other similar cases at the trial on an indictment dealing with the death of one child only, and the circumstance secured the just conviction of both the miserable wretches. When evidence was forthcoming that other children had been born under SACH'S auspices and transferred to WALTERS who had disposed of them in some way or other of which no explanation was forthcoming, and when it was proved that one such child had been seen dead in WALTERS'S arms in a coffee shop, the possibility of the death which led to the arrest of the prisoners having been due to an accidental overdose of chlorodyne became too remote for acceptance. Similarly it became clear that SACH, though she did not herself kill the children, could not have been ignorant of their fate. It was left open to the accused to prove that they had in fact procured the adoption of infants by well to-do people in accordance with their proposals to the mothers, but this they were unable to do. Upon proof of the clearest sort both women were therefore found guilty of murder and justly condemned to death.

From time to time Acts of Parliament have been passed with a view to protect the lives of infants from baby farmers, and the most recent statute, passed in 1897, was an improvement to some extent upon its predecessors. The policy adopted by the legislature has been to make it necessary that persons undertaking the care of infants for hire should give notice of what they are doing to the local authority, so that their proceedings may to some extent become the object of supervision and inspection. It is easy to see that the operation of such laws as these can be evaded by a little ingenuity and secrecy on the part of those who ought to give the required notice, but SACH and WALTERS apparently conducted their business in such a manner that they were not in the eye of the law baby farmers at all. SACH purported to be the manager of a maternity home and WALTERS to be the agent for the transference of the infants to foster mothers, neither according to her own statement was a baby farmer. The second section of the Infant Life Protection Act 1897, orders that any person retaining or receiving for hire more than one infant under the age of five years for the purpose of nursing or maintaining such infants apart from their parents for more than 48 hours shall within those 48 hours give notice to the local authority. There was no evidence that either SACH or WALTERS ever had upon her hands more than one child at a time, or that the children ever remained with either of them for so long as 48 hours alive. It was further their custom to undertake the entire charge of the children intrusted to them, thus ridding their parents of them in consideration of a sum of money paid down. The obvious dangers of traffic of this kind have attracted the attention of the legislature, but here, again, SACH and WALTERS were safe from supervision without any need to break the law. The fifth section of the Act already referred to provides that notice shall also be given within 48 hours to the local authority by any person retaining or receiving an infant under the age of two years on consideration of a sum of money not exceeding £20 paid down and without any agreement for further payment as value for the care and bringing up of the said infant. SACH and WALTERS made their profits larger and at the same time kept themselves outside the scope of this section by the simple process of exacting from the parents of their victims more than £20. With the child of whose murder they were convicted they received £25, and in the case of one of the witnesses examined £30 had been paid, but they would have been equally safe from the obligation to notify their proceedings had they taken £20 0s. 6d. It would be interesting to know who posted these women in the law, and by enabling them to escape lesser penalties has conduced to their conviction for a capital crime. We have entered into the legal aspects of baby farming with some detail because it behoves our readers to be aware of the existence of bogus maternity homes and of the possibility of their being instituted with the intent to defeat the objects of the laws for the regulation of baby-farming.

The following are some of the conclusions to which the facts proved at the trial of SACH and WALTERS seem almost inevitably to lead. The difference made by the law between the baby farmers who take charge of several children at a time and those who take one at a time only is not justified by any comparative safety of the single child, and the child adopted in consideration of a larger sum than £20 needs the same protection as that accorded to the infant for whom humbler provision has been made. It has to be recognised that a number of women, not all of them poor in the sense has been held to be bound by the contract which he unquestionably made. It is possible, no doubt, that an appeal may lie and that points of law raised before Lord Kyllachy may be argued again in a higher court. Whether this be so or not we do not propose to discuss these but to assume the present decision to be final, while we would point out to medical practitioners how undesirable it is in their own interests and in the interests of the public that they should bind themselves by rigid contracts of this kind without fully understanding their import and being prepared for all their possible consequences.

We have suggested what may have been in the mind of Dr Grant He may have considered that the directors of the quarry company, in the interests of their workmen, desired to provide against the unpleasant contingency of their medical officer proving at some future date to be negligent or incompetent in the performance of his duties, and that they accordingly protected themselves by means of a prompt and easy method of getting rid of him. Confident in his own competence and integrity he, no doubt, felt no anxiety lest summary dismissal should at the same time deprive him of his practice at the quarry and of that which he was evidently likely to acquire in the district Others would perhaps have thought as he did. Some, more prudent, would perhaps have demanded the insertion in their contract of an undertaking by the directors not to exercise their power to terminate the engagement except for causes which would not have been difficult to define. Such a demand might not have been acceded to, but the refusal in itself would have been a warning of what might be expected to occur, and such a warning could have been disregarded or not according to the choice of the medical man. We see no reason, however, why the candidate for such a post should not occupy as strong a position as those seeking to obtain his services Men of ability are not to be had for the asking, taking into consideration the emoluments offered and the limited possibilities of future additions to them in a district such as that of the Ballachulish Slate Quarries. Whatever the conditions may be, however, which may influence the directors of a company employing workmen to dispense with the services of their medical officer they are likely to be such as directly concern the contracting parties only The objectionable feature of an agreement which binds a medical man, as Dr Grant was bound, is that it indirectly affects a whole district by making the medical man who is perhaps most easily available for its inhabitants, if not the only practitioner within their reach, the servant of a body of traders who can retain him or get rid of him as they please but who have no interest in his presence or absence, or, indeed, in his existence, except in so far as it affects themselves. We have already pointed out[2] that Dr Grant has filled the post of Poor law medical officer of the Ballachulish district That the directors of a quarry company may properly have a voice in the choice of a medical officer for their men may be conceded—although in this instance the Ballachulish quarrymen entirely deny that their directors can claim any right whatever to interfere—but no one can hold that the directors of such a company ought to be able to appoint and summarily to dismiss the Poor law medical officer of the locality in which they happen to carry on business

We quoted in The Lancet[3] upon a previous occasion a statement or manifesto of the directors which professed to assign as the cause of Dr Grant's dismissal a defect in his contract. The contract appeared not to prevent him from taking work at a distant granite quarry, and we pointed out that the quarry said to be objected to was not in our opinion so far distant as to make this a valid excuse. We have also referred[4] to other circumstances which are said to be connected with the giving of the notice. These, we observe, are freely written and spoken of in the district apparently without any satisfactory reply being made to the very serious allegations put forward. The more recent developments of the dispute, however, show a state of affairs still to be deplored, while at the same time they confirm the position of those who maintain that the notice given to Dr Grant was not given for any good cause. In consequence of a resolution passed by the men and handed to the manager of the quarry the men have been "locked out" and deprived of their means of living They had, however, before this addressed to the shareholders of the company, who are apparently only 27 in number, a statement of their case and appealed to them in the hope, as they expressed it, that the shareholders' sense of right and justice may guide them to make an effort to terminate an unrighteous and unmeaning persecution of a respected, upright, and honourable man. To such an appeal we can only add the very strong recommendation that the shareholders should not dismiss the question lightly, and that they should not give their support to their directors, or, indeed, to the men, without full investigation of all the points that have been raised. We would further remind them that although men are within their legal rights who claim the full advantage of a bargain made, legal rights may sometimes be foregone without disadvantage or discredit to those who exercise such forbearance. In this case Dr Grant and those who sympathise with him only ask for such consideration and forbearance as justice will be found to demand after full inquiry has been made

We have no desire to be harsh in our judgment, but the impression left by a perusal of the whole of the materials available to us is one distinctly unfavourable to the directors of the Ballachulish Slate Quarries Company upon the broad question as to whether they have carried out their portion of the agreement between themselves and Dr Grant in the spirit in which such agreements should be carried out by all the parties to them. With regard to the agreement itself Dr Grant may be legally bound by it, but its terms are not such as, in our opinion, should be offered to members of the medical profession or accepted by them without their full purport being made clear upon the face of the document.

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Baby-Farming

Several recent criminal trials have drawn attention to the danger with which infant life is threatened by the practice of "baby-farming," but none since the case of the a ridiculous one It is also an impertinent one. Dr comes *to the conclusion that the whole report is* hing but an advertisement and thinks that it is only right let it be known, but Dr Lee is not an unbiased judge. haps he will withdraw the accusation of commercial dis- testy which he has categorically brought against the tors of this paper now that he has received a quite un- essary assurance from us of the independence of our ions And perhaps he will not Whichever course he may pt is quite indifferent to us, as we know that our readers l believe us when we say that his suggestion that our estigation into the brandy trade of Cognac was undertaken oblige the spirit-merchants is a childish one.

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[2] The Lancet August 2nd 1902, p 300

[3] The Lancet August 16th, 1902, p 449

[4] The Lancet, Nov 1st, 1902, p 1229

THE METROPOLITAN WATER-SUPPLY

HE report on the condition of the metropolitan water- ply during the month of November, 1902, has been ently issued by the Water Examiner The Thames river ter was in good condition from the 1st to the 27th days the month and of "indifferent quality" on the 28th, 29th, l 30th. The rainfall at West Molesey during the month ounted to 1 66 inches. The average daily supply de ered from the Thames was 133,297,668 gallons, from the *20,492,701* gallons, from "*springs*" and wells 55 628,188 lons, and from the Hampstead and Highgate ponds 685 lons. The total average daily supply was 209 419,142 lons for a population estimated at 6 435,126 and this resents a daily consumption per head of 32 54 lons. The Chelsea Company delivered the largest daily ount per head (40 28 gallons) and the East London mpany the smallest (26 82 gallons) The Chelsea, East ndon, Grand Junction, and Kent Companies delivered a aller, and the Lambeth, New River, Southwark and uxhall, and West Middlesex Companies a larger average ily quantity than they did during the corresponding month the year 1901. It may be remembered, however, that isons have been given in THE LANCET which make it ubtful to suppose that it would be wise to place implicit ist in the figures given in the report of the Water aminer On this point it may suffice to refer to the notes ven in THE LANCET *of* Jan. *10th*, 1903, p 116, Nov 15th, 32 p 1336 and Oct. 18th, 1902, p 1065 and to add that explanation has yet been given as to the curious cumstance that water from the Langham Hotel well found way into the mains of the West Middlesex Water mpany During the month of November the East ndon Company obtained supplies of water from the uthwark and Vauxhall Company "*and from the New* ver Company aided by the Grand Junction and West ddlesex Companies." The Water Examiner states that e average daily supply passed on by the Southwark d Vauxhall Company amounted to 8 723,333 gallons and at the quantity passed on by the New River Company if spread over the whole of the month was equivalent to average daily supply of 4 981,100 gallons.' Another count of the sources of supply of the East London Com ny is given on page 8 of the Water Examiner's report der the heading, Details of the Metropolitan Water- pply and Works of the Water Companies for the month November, 1902. In column 5 of this table, under the ading, "Average Daily Supply during the Month— allons," the following statement appears in reference to the mpany Supply from river Lee and storage 4 041,673, om Thames, 8 611,000, from wells, 16 *320,327*, *from* anworth springs, 1,601,000, from Thames, per Southwark id Vauxhall Company, 8 736,000" It will be noticed that gures on the same subject given in different parts of the port are not identical. No explanation is given as to how happens that the discrepancy occurs The proportions of rown tint in samples of water observed in a two-foot tube ranged from two to 16 degrees of the standard in use. In many of the former reports of the Water Examiner it has been stated that all the samples of water collected at the works of the companies were efficiently filtered," but the Water Examiner has never said on what authority the statement has been made, and although the question has been asked several times in THE LANCET it has never been affirmed that any sample of water collected at any "works" of any metropolitan water company *has ever been* sub- mitted for analysis to Dr T E Thorpe, F R S, the chemist to the Local Government Board. The November report of the Water Examiner does not contain the time honoured paragraph concerning efficient filtration to which allusion has just been made. In its place occurs the following sentence "All the samples of water collected at the works of the *companies* were clean, bright, and free from suspended matter" It would be interesting to know whether samples of the water of the East London Company's Thames filtering station were examined on Nov 28th, 29th, and 30th, and if so by whom. The Water Examiner does not say on what authority he makes the statement we have quoted. Dr T E. Thorpe fully examined a sample of the East *London Company's water which was taken on* Nov 10th, and samples of all the other companies' supplies collected on Nov *11th.* It is *unfortunate that* no full examination was made of the supplies during the period at which the Thames river water was in "an indifferent"—*that is to say*, a muddy—condition (Nov 28th, 29th, and 30th) Dr Thorpe found in the case of the samples which he fully examined that *the relative* amount of organic impurity contained in them could be represented numerically as follows Kent, 9, New River, 12, East London, 18, West Middlesex and Grand Junction, 26, Chelsea and Lambeth, 27, and Southwark and Vauxhall, 29 All the Thames-derived supplies were found to contain more organic matter than did the corresponding samples examined in October, and the water of the New River *Company* contained less than half the average organic impurity found in the Thames supplies. In the case of the East London Company's water taken at Lee *Bridge* and "representing the filtered Lee supply," Dr Thorpe found considerably less organic matter than in the Thames-derived supplies. Dr Thorpe, we should imagine, has fallen into a slight error if he believes that the water at Lee Bridge correctly represents the filtered water of the river Lee. According to the account given by the engineer of the East London Company during the month of November the amount of water taken from the river Lee and storage was only a little over 4,000,000 gallons daily, whilst the amount derived *from* wells *was over four times that* quantity, and unless we are *mistaken* the water filtered at Lee Bridge is a *mixture* of river and well water It is, however, to the Thames stations of the East London Company and especially to the water there filtered whilst the river is muddy, that we would again direct the attention of Dr Thorpe should the question be within his province.

WHAT IS A QUALIFIED NURSE?

THE departmental committee appointed by the Local Government Board to inquire into the question of workhouse and infirmary nursing and the difficulty which had been experienced in obtaining an adequate supply of nurses for the Poor law service proposes to answer the above question in a somewhat novel manner, and in a way which we venture to think deserves the careful attention of those who are interested in the occupation of *nursing* as a whole and the standard of workhouse nursing in particular Paragraph 90 of the committee's report *proposes to recognise* as '*minor training* schools" any of the smaller workhouses which possess (1) a superintendent nurse of the workhouse or a matron of of being actually indigent, are desirous of getting rid of their children to do so is of vital importance to them in gaining their livelihood. The people who relieve these parents of their offspring act from sordid and not from benevolent motives The baby farmer's profits by honestly carrying out the trust undertaken are likely to be but small and they can be increased only at the expense of the adopted infant, whose death, where a single and final payment has been made, is the most lucrative issue for which the baby-farmer can hope Insurance of the child's life, if it can be effected, may increase those profits, but infant life insurance in relation to the present method of death registration is not being considered here, as, for obvious reasons SACH and WALTERS did not draw attention to their schemes by attempting to insure their hapless victims' lives. It has before now been urged in THE LANCET that all so-called hospitals and nursing homes, where profit is made out of the care of the sick and helpless, should be subject to systematic inspection and supervision. In the case of SACH and WALTERS the lying in home kept by the former was an institution the conduct of which concerned herself alone A medical witness at the trial had attended confinements there but stated that he was only called to cases of special difficulty It will therefore be seen that in the majority of births occurring at this establishment there was no witness even to the child's existence except persons whose interest was best served by concealing it. The cheap and easy access of women like WALTERS to concoctions containing poison is another element of danger to infant life. Chlorodyne is readily obtainable and preparations sold as sedatives for ailing children are known even by the most ignorant women to be capable of causing death if given in excess, while the plea that the excess was an accident is likely to be accepted by a merciful jury if there is no evidence to rebut it It is fortunate in the interests of justice that in the case of SACH and WALTERS the evidence of similar transactions resulting in the disappearance of other infants was forthcoming to preclude the possibility of their innocence

Annotations.

"Ne quid nimis"

THE NEW INEBRIATES ACT

WE regard the working of the new Inebriates Act, which came into force upon Jan 1st of this year, as very hopeful in some directions, though in others the results that will be obtained are rather doubtful. For example, of the wealthy classes no one will be affected by the penal clauses, save, perhaps, the very young rich man who drinks in public—a character, we are glad to think, that is becoming rarer day by day as public opinion in the services and the universities declares itself more strongly against drunkenness The poor will be benefited despite themselves, but the rich will be able to avoid the reforming action of the law The Act will be far less efficacious in its operation in cities than in country districts In large towns it will be impossible to keep erring individuals from obtaining liquor and the process of notification will be almost a dead letter Still, as the law courts have begun to show, even in such a city as London an active police by arresting drunkards can do good. The village drunkard should cease to exist, for in villages police notification will prove almost a total barrier to the obtaining of liquor. On the whole the Bill should tend to lessen the number of inebriates. Mr F S D Hogg, the superintendent of the Dalrymple Home at Rickmansworth, estimates that over 50 per cent of those admitted into retreats for inebriety owe their downfall to sociability, and it is obvious that by far the greatest amount of social drinking takes place in public houses. Some social inebriates may be driven by the penalties into secret drinking, but many more will be saved from the woeful penalty that is paid for a too expansive and too facile geniality A dipsomaniac, whether regular or periodical, and whether his lapses into excess are frequent or infrequent, will, we expect, continue to drink, regardless of consequences He may make some attempt to conceal his habit, but not much good can be expected from such a course. With regard to the clause which provides for a legal separation between husband and wife on the ground of habitual drunkenness of one or other partner its working is bound to be beneficial to the community A certain number of persons will be relieved from a life of martyrdom and a certain number of children will obtain a chance of decent up bringing in a respectable home, which has hitherto been denied to them. In addition, the possibility that a separation may ensue if the vicious habit is not broken will send to retreats inebriates whom no form of persuasion has hitherto constrained to seek such help We should not, in fact, be surprised to learn that this clause of the Act proves a strong inducement to many to become total abstainers.

"THE LANCET AND ITS COMMISSIONS"

WE have received a letter from Dr Robert Lee of Gunterstone road, West Kensington, which is addressed to us on the envelope and within to the *British Medical Journal*. We do not pretend to guess for which journal Dr. Lee's letter was intended, but it has fallen into the right hands so far as his purpose is concerned For he wrote it (presumably) for publication and we give to it with cheerfulness the publicity which we are certain that our esteemed contemporary would not have granted —

> ### THE LANCET AND ITS COMMISSIONS
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> *To the Editor of the British Medical Journal.*
>
> SIR,—There is something about THE LANCET Commissions which is not quite agreeable There is a kind of advertising tone about them, of a very subtle nature for while they promote the interests of one class they injure others unfairly and this is most difficult to read between the lines, until the advertisement and samples arrive The Report of a LANCET Commission goes out as part of the journal then a short time after a copy of the journal is sent for no particular reason as far as I can make out and then later another copy with the name of the firm or company interested in some particular statement in the Report to which attention is drawn and perhaps some sample of the article is sent along with THE LANCET The conclusion one comes to is that probably the whole Report is nothing but an advertisement and that the claim THE LANCET makes to be perfectly independent is not consistent with the way in which the Report is used as advertisement. If a journal lays itself open to suspicion it is only right to let it be known. The *British Medical Journal* happily has not run this risk.
>
> Yours, &c.,
> DOUBTFUL.

Dr Lee is, we suppose, referring to the investigations lately conducted by our Commissioner into Cognac and Brandy Substitutes. The value of that work to the medical profession and the public was widely acknowledged in the press and led the great growers and importers of Cognac brandy to send copies of THE LANCET to certain members of the medical profession whose addresses are in the Medical Directory and in some cases to offer samples of their produce. But of course THE LANCET had nothing to do with any of this. We gave no addresses, we sent no samples, we mailed no copies, we had no communication whatever with those who did so, and the suggestion that our action in the matter was taken in collusion with the proprietors of certain brandies certainly be the portion of all such infamous persons. Phillips's case was not as bad as that of Oslar, for he does not seem to have been personally responsible, but considering that a homeless vagabond constantly gets three months' imprisonment for ' sleeping out" it is a scandal that men can get off with a money payment when they have, in the pursuit of money only, deliberately tried to poison their fellow creatures.

THE NEW PRINCIPAL OF THE UNIVERSITY OF EDINBURGH

WE congratulate Sir William Turner upon his appointment as Principal of the University of Edinburgh in succession to Sir William Muir Sir William Turner's long and distinguished services to his *alma mater* as a professor are rightly recognised by this call to the head of the University His sound business qualities, energy, and tact, which have been so much in evidence in his conduct of affairs as President of the General Medical Council, may be invaluable to the University of Edinburgh in the present crisis in things educational.

THE CUTANEOUS EXCRETION OF CARBON DIOXIDE AND WATER IN MAN

WHILST the excretion of carbon dioxide and water from limited areas of the skin has been the subject of repeated observations the quantity of these substances eliminated from the whole surface has rarely been examined. The well known researches of Gerlach, Reinhard, Ersmann, Fubini, and Rorchi made on limited areas demonstrated, speaking generally that the excretion of water is increased either by a rise in the external temperature or by a diminution in the relative moisture of the surrounding air whilst that of carbon dioxide is clearly subject to the influence of varying temperature, so that with a higher temperature more carbon dioxide is discharged. Aubert and Lange inclosed the whole body in a chest with the exception of the head and passed through the chest for two hours by means of a pump a continuous stream of air free from carbon dioxide, the quantity of which was estimated in the air escaping from the chamber The temperature in their experiments varied from 29° to 33° C, and the average quantity of carbon dioxide estimated to be eliminated in the 24 hours was 4 grammes, or a little more than 60 grains Temperature was shown by these observers to have great influence on the discharge of the gas, for at 29·6° C only 2·9 grammes were eliminated in 24 hours, whilst in the same period at a temperature of 33° C no less than 6·3 grammes were thrown out. Schierbeck, experimenting in a similar manner on persons sitting naked and clothed, found that in the latter case below a temperature of 33° C (91° F) the perspiration remained insensible, but at higher temperatures than this sweating commenced. In those who were clothed much more insensible perspiration was given off than in those who were naked. Without clothes 22·2 grammes of water were eliminated per hour at 29·8° C 27·8 grammes at 30·4° C, and so on proportionally to 38·4° when 158·8 grammes were eliminated. Schierbeck came to the conclusion that when clothed and at rest and at a temperature of 32° C the total perspiration amounted to from two to three litres in 24 hours In regard to carbon dioxide, Schierbeck found that it remained nearly uniform between 29° and 33° C, and amounted to about eight grammes in 24 hours. On exposure to temperatures above 33° C the quantity eliminated rose rapidly so that at about 34° C it was nearly double. The subject has again been taken up by E. A. von Willebrand, who gives the results of his inquiries (made in Professor Tigerstedt's physiological laboratory at Helsingfors) in the last part of the *Scandinavisches Archiv für Physiologie* for the year 1902. In the first series of researches the elimination of water was estimated at temperatures from 12° to 30° C In a second series the temperature of the air admitted to the chest in which the person experimented on sat varied from 18° to 31·5° C Each experiment lasted for about two hours and the subject was a healthy man, 26 years of age, who weighed 68 kilogrammes. At 12° C the insensible perspiration amounted to 10·52 grammes per hour and at 28° C it was 27·25 grammes per hour The graphic curves which are plotted out show that the excretion of water by the skin by insensible perspiration when the body is at complete rest rises slowly and proportionally to the increase of the temperature in the surrounding air from 12° C to some point between 30° and 33° C when sweating occurs In regard to the elimination of carbon dioxide the experiments show that the excretion of this gas by the skin when the body is at complete rest remains unchanged between 20° and 33° C, being about seven or eight grammes in 24 hours, but where the temperature rises so high as to cause sweating—that is to say, at about 33° C—the discharge of carbon dioxide is suddenly doubled or even trebled. It may be added that von Willebrand agrees with Krause and Donders that the insensible perspiration is essentially a physical process and is the result of simple evaporation from the surface of the skin Sensible perspiration or sweat is, of course, the secretion of the sudoriparous glands

REFORM IN BURIAL INSURANCE

THE crime for which the women Sach and Walters now lie under the death penalty has revealed to the public of how little importance infant life is to a certain section of the community and Mr Justice Darling has done good service by directing attention to the present system of child insurance in a case which recently came under his notice. This arrangement, with whatever motive and reason it may have been initiated, has the disadvantage of making no adequate provision for the safety of the child. As the case now stands a parent can only recover invested money by the death of the child and, moreover, the sum insured is frequently in excess of that which would be required by many poor parents or guardians of children for actual burial expenses As events have proved, insurance has in very many cases gone hand in hand with neglect and illness conducive to a fatal issue. Mr Justice Darling's protest in favour of fresh legislation on this subject is practically identical with that of numerous tongues and pens which for years past have striven to bring about a fairer arrangement. It is truly remarkable with what foresight even poor, idle, and dissipated parents, while denying their younger children the barest, most obvious necessaries of life, are still able to maintain an insurance for burial expenses. Too much, perhaps, has been made of the alleged necessity for such a provision in the case of death among the children of the poor Funeral expenses under such conditions need not exceed a very small sum indeed The bulk of such outlay if used at all in connexion with the burial would probably be employed upon matters of entirely secondary moment which might be to a great extent dispensed with. When not so used, a frequent alternative, it represents money in the parents pocket, not, it is reasonable to suppose, without a possibility that it will quickly find its way to that of the neighbouring publican. There is a widely prevalent impression that such a course as this describes the circulation of burial insurance money in a large number of cases The possible peril to a child's well being is obvious, and this danger, illustrated as it has been by the teaching of experience, has aroused a feeling in favour of reform which continues to gain in strength. A legislature which has done so much to remove the evils which beset the lot of children, and especially of poor children, may well be the separate infirmary, and (2) a medical officer who engages to devote some of his time to instructing probationers by lecture or otherwise, and in which (3) systematic instruction is given by the superintendent nurse *or* (the italics are ours) medical officer which complies with the general plan to be laid down by the Local Government Board At the end of one year s training under these conditions the candidate is to receive a certificate, and it is proposed (paragraph 91) to create a new grade of nurse under the title of "qualified nurse." Even in thoroughly well equipped and well organised training schools, such as those which are attached to the metropolitan hospitals, a nurse cannot become really qualified to exercise her calling in so short a time, and the absence in small workhouses of a sufficiently varied number of cases and of modern methods of treatment and appliances renders the suggestion that she should be called a "qualified nurse" almost ludicrous. It will, indeed, be regrettable if the Local Government Board should sanction the recognition as qualified nurses of women who would hardly be trained in the elements of nursing

THE REMOVAL OF THE VERMIFORM APPENDIX WHEN THE ABDOMEN IS OPENED FOR DISEASE OF OTHER ORGANS

IN the *Journal of the American Medical Association* of Oct. 25th, 1902, Dr Howard Kelly has discussed the important question, Should the vermiform appendix be removed when the abdomen is opened for disease of other organs? The relation of the vermiform appendix to pelvic surgery was suddenly brought before his attention in 1894 by the case of a patient under his care for general pelvic discomfort and dysmenorrhœa He performed laparotomy and found a retroflexed uterus, adherent ovaries, and a relaxed vaginal outlet He suspended the uterus, ligatured the varicose ovarian veins, and repaired the vaginal outlet, but the patient was little, if at all, improved. Some months later she had an attack of appendicitis and was operated on by another surgeon with complete relief of all her symptoms Evidently the source of her troubles was the appendix. Since this experience Dr Kelly has never opened the abdomen without examining the appendix whenever it was possible to do so without enlarging the incision or running the risk of conveying infection to healthy parts. Out of a series of 115 cases he has found the appendix adherent to the right tube or ovary in 10 cases, involved in adhesions in 37, congested in three, and obliterated at the base in one case. Only 64 appendices were normal Dr Kelly has sent a circular to the principal American surgeons requesting an answer to the question, "Is it advisable to remove the apparently normal appendix whenever the abdomen is opened for other reasons, or whenever an incision is made in the right lower quadrant?" The majority replied that they do not remove the normal appendix during an operation performed for other reasons, but always remove it if it is even slightly adherent to other organs or if though free it is abnormally long—a practice which Dr Kelly indorses He does not remove the normal appendix for the following reasons 1. The operation would slightly increase the risk of danger, shock might occur at any moment and the additional five minutes consumed in the removal might have serious consequences 2 There are no statistics to show that the existence of a normal appendix involves a definite risk per mille either of death or serious disease. 3. The appendix may have some function. As Dr Robert Abbe asserts that the normal appendix never contains fæcal concretions, Dr Kelly advises that if such can be felt the appendix should be removed, even though it appears healthy He considers, further, the question whether the appendix ought not always to be removed when operations are performed near the cæcum which might give rise to adhesions In men the risk is slight but in operations on the uterus or right ovary the appendix may become adherent to the recent wound. Dr Kelly has observed five such cases, in which the appendix was subsequently removed. In four the appendix adhered to the stump of the right ovary and in one to a wound in the uterus from myomectomy Dr Kelly advises that whenever the right ovary is removed the raw stump should be protected by covering it with peritoneum and burying it out of sight. In all right-sided pelvic operations he also removes long free appendices, because an appendix which hangs free from the cæcum and is long enough to reach the field of an adjacent operation may become adherent and thus render the patient liable to an attack of appendicitis

THE ST BARTHOLOMEW'S HOSPITAL APPEAL

AT a meeting of the special appeal committee of the governors of St. Bartholomew s Hospital held at the Mansion House on Jan 19th, the Lord Mayor being in the chair, it was moved by Sir Trevor Lawrence, the treasurer of the hospital, seconded by Mr B Cohen, M.P, and carried unanimously —

> That having regard to criticism upon the proposed appeal for the enlargement of St. Bartholomew s Hospital based on inaccurate information a committee be appointed to report (1) whether it is desirable in the public interest and on financial grounds to retain St. Bartholomew s Hospital on its present site (2) in the event of the retention of St Bartholomew's Hospital on its present site whether any better scheme of rebuilding than that suggested by the governors can be devised (3) upon any other matters affecting the hospital that the committee may think it desirable to inquire into And that such committee consist of 15 members nine to be nominated by the Lord Mayor and six by the treasurer of the hospital and that the treasurer and the Lord Mayor be *ex-officio* members of such committee.

We think the resolution an eminently sensible one and congratulate the special appeal committee upon having adopted it unanimously St Bartholomew's Hospital has incurred criticism at the hands of many people woefully ignorant both of general matters in hospital administration and of the particular affairs of the institution and it is well that the public should know what a strong and carefully selected committee has to say upon the whole situation. We take it for granted that the committee, a majority of which will represent the public, will be strong and carefully selected, and that its report will be made upon an exhaustive examination of the facts.

GARBAGE-MONGERS

AT the Guildhall on Jan. 19th John Oslar of Denver Lodge, Nazeing, Essex, farmer and butcher, was summoned for sending to the Central Meat Market two quarters and two flanks of diseased meat, intending it for sale as human food. The meat came from a cow which had belonged to a Mr Dean living in the neighbourhood of Nazeing This cow accidentally strangled itself in its stall and was found dead. The carcass was dragged out into the yard and "stuck," when a little blood flowed. A knacker was summoned to take the carcass away, but on his way the knacker called on Oslar and asked him "if he could do with it." Oslar consented, paid the knacker 20*s*, and promised a load of hay in addition. He dressed the meat and sent it to market. Dr W Collingridge said that the meat was filthy and horrible. Oslar was fined £50 and costs or two months' imprisonment. On the same day, at Westminster, Enoch Phillips of Sloane-street, Chelsea, was summoned by the Chelsea borough council for exposing for sale as food on Jan. 9th a large quantity of game and poultry which was unfit for food Dr Louis C Parkes said that the game was lying in ice and water, it was sodden and putrid. Defendant was fined £10 and two guineas costs. We have said over and over again that persons who sell or try to sell putrid meat for food are neither more nor less than potential murderers. No fine is heavy enough, punishment and imprisonment with hard labour should ycism in the human subject have been known since the ; of Fabricius in 1618 and considerably more than cases have now been recorded. The first case ve recorded is typical of the condition except that an r glass form of stomach is very rarely found The pro- ; is usually though not invariably permanent. Various lanations have been suggested. Dr Müller regards the dition as atavistic in origin, while Dr Ferrannini explains case as a gastric neurosis. Dr Alt supposed that the con on was an attempt to correct defective primary mastica of the food which is very frequently observed in these s. Others have suggested mimicry as the explanation of family associations of this condition, but in Dr Müller s s, no one of the three was aware of the condition in relatives.

THE MEDICAL DIRECTORY FOR 1903

'HE issue of Messrs J and A. Churchill's valuable lical Directory for the current year presents some new tures The size of the page has been enlarged to royal avo, whereby the thickness of the volume is reduced, ile the date of the year is stamped on the two side covers well as on the back. The total number of names for 3 is 37,291 as against 36 788 for 1902 an increase of Of departmental increase the most marked is in the nber of Irish practitioners, the number for 1903 being 1 as against 2587 in 1902 Registered practitioners ident abroad have increased from 3952 in 1902 to 4117 1903. The introductory articles are decreased by the appearance of the article on the Army Medical School, tley but increased by an article upon the Medical Staff llege R.A.M.C Two other articles appearing in this ir s issue are a list of royal commissions dealing with dical and public health questions and a list of London oners. The Medical Directory is not generally supposed be a humorous work, but we have derived unfeigned usement from the classified list of books advertised in the lowing pages (viii.–xxxv) The catalogue, which we will at the outset is exceedingly useful is divided into head s and subheadings, and it is the latter which are so aint. Thus we find Beale s Liver, Foxwell's Liver, ndle s Surface, West's Chest, Woakes Deafness, Fenwick's ethra, Scott s Urine Campbell s Flushing Luff's Gout, evor's Diseases, Beale s Morality Haig s Uric Acid, rris' Ringworm, Bryant's Breast, Eccles Imp Descended tis and Bland Sutton s Ovaries. Notwithstanding the provements in the Directory the price remains the same as retofore and Messrs Churchill are to be congratulated on the continued excellence of their publication.

TABES DORSALIS A STUDY OF 140 CASES

THE medico-statistical study of nervous disease has made nsiderable progress during recent years. An interesting atistical study of 155 cases of tabes dorsalis by Dr Byrom ramwell was made the subject of an annotation in HE LANCET[1] in May last. Professor Joseph Collins of ew York has published in the *Medical News* of Jan. 3rd, 903 an account of tabes dorsalis based upon a personal udy of 140 cases Of these 52 were private patients, 47 ere hospital patients and 41 were dispensary patients. lany of these patients had been under observation for pwards of ten years so that something could be learned reference to the prognosis As regards sex 124 were ales and 16 were females, a ratio of 15 males to two emales. Of the males 12 were single, 78 were married nd 12 were widowers, no facts being stated concerning he rest. Of the females, six were single, six were married nd four were widows The average age of onset of the disease was 38 years 22 cases began between the ages of 20 and 30 years, 48 cases between 30 and 40 years, 45 cases between 40 and 50 years, and 14 cases between 50 and 60 years In one patient the symptoms began at the age of 18 years and in another at 60 years The age of onset was earlier in women than in men, 50 per cent of the female cases occurring between 20 and 30 years of age, as compared with 11 per cent of males for the same period Syphilis was ascertained to have existed in 85 males, or 68 per cent., while in 19 more its presence was probable though not certain The syphilis is said to have been slight in 80 of these cases. Of the 16 female cases some denied syphilis, but it was ascertained by inquiry that several of them had contracted it from husbands or lovers and that 11 of them, or 70 per cent., had thus been positively infected As regards alcoholic habits, it was found that 42 of the 140 patients had been intemperate drinkers Traumatism as an etiological factor was found only in five instances, one of these following a street car accident. In only seven cases could mental or physical overstrain be ascertained to have played a part in the etiology "The preponderating influence of syphilis," adds Professor Collins, "is shown in cases of tabes affecting both husband and wife, of which several cases were met with" A survey of the medical literature of Germany, Great Britain, and the United States is also added and seems to bear out this statement. As to the *modus operandi* of syphilis in bringing about tabes Professor Collins states that we know very little. All we do know of the pathogenesis of tabes may be, he concludes very briefly summed up it occurs in civilised mature men and women who have had syphilis and in children who have inherited syphilis, but why it occurs we do not know

THE PREVALENCE OF SMALL-POX.

AT a meeting of the Wigan board of guardians held on Jan. 2nd the following letter, addressed to the clerk, was read from Mr William Berry, medical officer of health of Wigan —

> Dear Sir —In consequence of the outbreak of small pox in one of the lodging houses of this borough and the further prevalence of the disease in the towns surrounding Wigan I beg to call the attention of your board to the necessity of vaccination and revaccination as the only true prophylactic measure known I wish to suggest that it would be well to revaccinate those officers of the workhouse who have to deal with the nomad class which is answerable for its introduction into the town It would be well also that the inmates of the workhouse should have the opportunity of being revaccinated. I do not think it necessary for the present at all events that the guardians should make special arrangements for the purposes of revaccination but I should like it to be made known that the public vaccinator is willing to revaccinate any person who applies to have the operation performed I am informed that recently the tramp wards have not provided ample accommodation for the numbers who have sought a night s lodging and if this is so it is very desirable that the medical officer of the workhouse should have the opportunity of examining and revaccinating them before sending them out to the common lodging houses in fact it would be well to compel the tramps who have not recently been revaccinated to submit to the operation before giving them a night s lodgings

Mr Fairhurst thereupon moved that the letter should lie on the table and Mrs. Alice Johnson seconded this motion The latter also asked, "Don't you think that if they had a good bath it would be better than vaccination?" She also is reported as saying, 'There is nobody but the doctors to benefit by vaccination That is why the doctors have so much to say about it" Eventually a resolution was carried that Mr Berry should be informed of the receipt of his letter and that the board was taking all precautions to prevent the spread of the disease. Now it is unfortunately a fact that no board of guardians has any power compulsorily to vaccinate tramps or anyone else but it is also a fact that small pox is often spread by tramps and that more especially in the winter Mrs. Johnson is, we suppose, an anti vaccinationist but her remark about "nobody but the doctors benefiting by vaccination" is a piece of silly rudeness We have no information as to what the board of guardians is doing to expected to interest itself in providing necessary safeguards against the abuse of this form of insurance. What measures may be best adapted to this end remains to be considered. We are of opinion that the present method, by which the insuring party receives a certain sum in the event of a child's death, is not the best possible On the other hand, every useful purpose would be served by an engagement which would guarantee the payment of all *bonâ-fide* expense incurred for burial up to a certain money value The parent could thus reap no advantage from the death of a child, while, on the other hand, the only legitimate object of insurance would be fully provided for

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[1] THE LANCET May 31st, 1902 p 1551

THE RELATIVE WHOLESOMENESS OF POTABLE SPIRITS

IT is generally admitted that age not only gives an agreeable or palatable character to potable spirits, such as genuine brandy or whisky, but also renders them more wholesome The chemistry of these spirits, however does not simplify with age, indeed, as a rule, it becomes more complex. Therefore, it can hardly be assumed that because a given spirit is chemically purer than another it is more wholesome. If the degree of wholesomeness of a spirit depends upon its simplicity of composition obviously the most wholesome would be chemically pure alcohol, and grain spirit approaches much more nearly to the composition of chemically pure alcohol than does malt whisky, rum, or genuine brandy Chemically speaking, starch, or what is nearly the same thing, grain, transformed by a hydrolytic agent such as sulphuric acid into sugar, instead of by the agency of an enzyme or ferment, yields a much purer alcohol than does barley that has been malted and converted into sugar by the diastasic process Still less pure, chemically speaking, is the spirit derived from the very complex fluid wine, and yet who will assert that genuine old brandy is less wholesome than whisky? In short, the alcohol obtained from grain by a rapid chemical process is much purer than that obtained from barley malt or the grape by what may be called a slow natural process After all, the natural process is a chemical one, but the distinction, however, remains that whereas in grain spirit the alcohol is the product of the fermentation of an artificially prepared sugar which is very pure, malt whisky and brandy owe their existence to more or less naturally derived sugar which is associated with other things These sugar associates contribute the characteristic flavour to the spirit. We may thus account for the differences between brandy, rum, and whisky, and malt whisky and grain spirit. Pure grain alcohol is without flavour and by itself unpalatable, and therefore for drinking purposes it must be flavoured by blending with it genuine old whisky or brandy This means, in other words, that the bulk of old whisky or brandy is considerably increased by adding grain spirit to it It is an act of dilution much as is the addition of water to milk. It is the old story of substitution, but we maintain that when malt whisky or brandy is demanded it should be supplied, apart altogether from the question whether grain spirit is more wholesome than malt or grape spirit. The physiological action of potable spirit though largely, of course is not entirely, that of alcohol. A carefully conducted chemical analysis distinguishes one spirit from another to some extent by revealing variations in the amounts, or it may be the absence of secondary constituents or what the French chemists call "impuretés" It is reasonable to suppose that if there are chemical differences there must be physiological differences also and experience shows that such is the case. Moreover, analysis also indicates differences existing between the composition of raw and matured spirits, but in this case the difference of physiological action is much more marked than chemistry is able at present to explain. What is needed in order to throw light upon the question is a series of physiological or personal experiments in which the effects of absolutely pure ethyl alcohol could be observed and compared with those obtained with all classes of potable spirit. So far however, experience is in favour of matured spirits being made from materials such as grape malt, and sugar, which are resolved slowly into alcohol by the aid of natural agencies and without resort to chemical operations, the only justification for which is to expedite the process and thus to cheapen the product.

IMPUDENT QUACKS AND THE NAME OF THE LANCET

IN THE LANCET of Sept. 20th, 1902, p 829, we exposed an improper attempt made in New Zealand to appropriate the name of THE LANCET in respect of a so called influenza cure. Our solicitors in due course communicated with the offending drug company who, in a very ungracious manner, have replied saying that they have destroyed all the labels and printed matter to which we took exception Later we had to complain[1] of the use of the name of THE LANCET by a firm of druggists at Bombay This firm on a communication being made to them promptly destroyed the labels in respect of which complaint was made and signed an adequate apology

HUMAN RUMINANTS

AUTHENTICATED cases of rumination in the human subject are of sufficient rarity to be interesting and worthy of note. Dr L. R. Müller of Erlangen, in the *Münchener Medicinische Wochenschrift* of August 5th, 1902, records three cases occurring in one family in the persons of a father and his two sons with a necropsy in the case of the former In this case the act first began at the age of six years and persisted till the death of the patient in his fiftieth year He had always been a rapid feeder, swallowing his food incompletely masticated, while about 15 to 20 minutes after the end of the meal the act of rumination commenced and lasted for from half an hour to one hour The food substances were returned to the mouth at intervals of from three to four minutes, were masticated and re swallowed, they possessed their natural taste, and only during and after this process did the patient derive any sense of enjoyment from his food. If the act were voluntarily prevented a disagreeable sensation in the stomach supervened. No other gastric symptoms occurred till about six months before the death of the patient, when pain with persistent vomiting and rapid cachexia led to a diagnosis of malignant disease of the stomach This was confirmed at the necropsy when an "hour glass" condition of the stomach was found, the septum being the site of the cancerous growth and the œsophagus and cardiac orifice of the stomach were dilated to such a degree as to admit three fingers From the appearances presented by the stomach Dr Müller concluded that the hour glass condition was not the result of the growth Two sons of the patient, the younger of whom was 22 years old, had also regurgitated and re-masticated their food, although the father was not aware of this Another case is recorded by Dr Ferrannini in the *Riforma Medica* of Oct. 11th, 1902, in a young man of neuropathic tendencies in whom both solids and liquids returned, as in the former case the regurgitated materials had their natural taste, they were alkaline in reaction. The motor, digestive, and absorbent properties of the stomach were otherwise natural. Cases of rumination or sanitary defects which exist in the large towns of America as well as in *those of the old world.*

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[1] THE LANCET, Dec. 13th 1902, p 1653.

CHOLERA IN EGYPT

THE following figures show the distribution of cases of, and deaths from, cholera throughout Egypt during the week ending Jan 5th. During this period 6 cases of *cholera occurred,* against 49 in the previous week, thus showing a diminution of 43 cases. During the same week 2 persons were found dead out of hospital and 3 persons died in hospital, against 13 *deaths out of* hospital and 19 deaths in hospital in the previous week, thus showing a total diminution of 27 in the number of deaths. The 6 cases of cholera mentioned above occurred at Alexandria, there having been the same number in the preceding week. During the week ending Jan. 12th no cases or deaths from cholera occurred throughout Egypt

THE WEATHER AND THE STREETS

DURING the *first frost of this winter we called* attention in THE LANCET of Dec 13th, 1902, p. 1645 to the disgraceful condition of the streets under the care of the City of Westminster With the recent return of cold weather the matter at last penetrated to the council chamber and at the meeting held on Jan 15th the question was discussed. Dr H. A. Des Voeux and Mr MacConnell both gave evidence as to the dangerous condition of the streets, the latter referring especially to Hyde Park Corner *He* had made inquiries and was told that there was no ballast As we have said before *Westminster* is addicted to the use of salt. This is an odious custom True it removes ice, but the removal only substitutes a cold slush, and owing to the hygroscopic qualities of salt the road never dries. Lord Doneraile said that he could not agree that there was no ballast We do not know whether there is ballast or not, but anyway the authorities of Westminster do not put it down. The matter was referred to the works committee and there we suppose it will stop, especially as the frost has for the present disappeared. It never seems to strike the authorities that damp greasy roads such as existed during the first four days at least of this week are *almost as slippery* as *frozen roads* and in the Strand and the adjoining streets no ballast has been put down, with the result that fallen horses have been many Not very far from Westminster is a place called Kensington, here is being erected a new building called the Victoria and Albert Museum Tons of gravel have been displaced to make way for the foundations of this building, and we have no doubt that the Westminster authorities could buy some of this if they so desired. One member said that the Westminster council was 'bossed" by its officials. All we can say is that if the Westminster *officials* do not do as they are told they had better, as Mr MacConnell suggested, be dismissed.

Mr Frederick James Quick of Eltham, and late of Trinity Hall, Cambridge, *senior partner of* the firm of Messrs. Quick, Beek, and Smith, of 148, Fenchurch street, London, E.C , coffee dealers, who died on Dec. 21st last, has left his residuary *estate to the University* of *Cambridge* in trust to apply the income in the promotion of the study and research of vegetable and animal biology The University will eventually receive about £50,000 or £60,000.

THE annual *dinner of* the British Gynæcological Society will take place at the Café Monico, Piccadilly-circus, London, W , *on Thursday,* Jan. 29th, at 7 for 7 30 P M. The President, Sir John Halliday Croom, will occupy the chair Tickets, price 10*s.* 6*d.* each, may be obtained from the secretary, Dr J H Swanton, 40, Harley street, Cavendish square, London, W Ladies may be invited as guests.

Sir Michael Foster has publicly announced that the answers which Sir John *Rotton has* received *to* the inquiry made on his behalf have fully assured him that he may feel justified in renouncing his intention to resign his seat as Parliamentary representative of the University of London.

THE usual course of post-graduate lectures will be delivered at the Brompton Hospital for Consumption on Wednesdays The opening lecture of this session will be delivered on Jan 28th, at 4 P M., by Mr Stanley Boyd, whose subject will be Pleural Effusions and their Surgical Treatment.

Mr Thomas Sutton Timmis of Allerton, near Liverpool, has vested a sum of *£10,000* in *trustees* for systematic research into the origin and cure of cancer The research will be undertaken at the Liverpool Royal Infirmary and in the laboratories of University College, Liverpool

TENTH ANNUAL REPORT (FOR 1901) OF THE MEDICAL OFFICER OF HEALTH OF THE ADMINISTRATIVE COUNTY OF LONDON

[FIRST NOTICE.]

THE *publication of the* local returns of the recent census has been promptly and judiciously *turned to account by* Mr Shirley Murphy in the compilation of his tenth annual report just issued. In this volume he has given an account of the vital statistics for 1901 of the administrative County of London, a record which derives additional value from the fact that all the rates are calculated on the population figures for that year The census returns have been still further utilised by him for the preparation of a life table for London, based on the enumerated population at the censuses of 1891 and 1901, and on the mortality in the county during the intervening period. The report before us, with diagrams and appendices, covers about 150 closely printed folio pages and, like its predecessors, it is divided broadly into two sections the first mainly statistical and the second administrative It is impracticable, within the space at our disposal, to do more than to notice the former of these sections and this we propose *to do by distributing the* matter over two articles, the first dealing with the recent outbreak of small-pox *in London and the second treating* of the general vital statistics and *sanitary condition of the metropolis* during the year 1901 and its nine immediate predecessors.

The epidemic of small pox, which is now *practically* at an end in London, although the disease still continues to spread in certain other parts of England, commenced in 1900 During the period which has since elapsed the presence of the disease in the midst of the densely crowded and ill-vaccinated populations of our poorer districts has caused grave anxiety and very serious trouble and expense to the Metropolitan Asylums Board and to the county and borough councils and their officers, all of whom appear to have *performed their various duties in a manner* worthy of high praise In his ninth annual report Mr Shirley Murphy gave an account of the occurrences of small pox in the course of that year Inasmuch as the epidemic extended far into the summer of 1902 it is not as yet possible to discuss completely the behaviour of the outbreak as a whole. Nevertheless, it is instructive to review the manner in which small pox became diffused throughout the metropolis in 1901, causing some 1700 cases in that year alone. As Mr *Shirley Murphy has devoted* considerable attention and no small portion of his space to this subject we propose to summarise very briefly *his account of it for* the information of our readers. By the help of statistical tables and a useful diagram the history of small pox in stay the spread of small pox, but powers should be given for the compulsory vaccination of every tramp who could not prove that he had been vaccinated within the past seven years The Local Government Board for Scotland intimates that during the period from Jan 1st to 15th inclusive only one case of small pox has been notified to them—viz , the the case of a seaman on board a ship which arrived at Glasgow on Jan 1st Several cases of small-pox have occurred in Nottingham and it is stated that four of the patients are totally unvaccinated.

THE DISTRIBUTION OF PLAGUE

THE medical officer of health of Cape Colony reports that for the week ending Dec 27th, 1902, 2 cases of plague were discovered at Port Elizabeth, the one being in a native male adult who was found dead on Dec. 24th and the other being that of a European male adult notified on Dec 26th At the end of the week 2 cases remained under treatment at the Plague Hospital at Port Elizabeth. The last preceding case of plague notified occurred on Dec 19th. No case of plague has been discovered or was under treatment in any other place in the Colony during the week in question As regards Hong Kong, a telegram from the Governor received at the Colonial Office on Jan 16th states that for the week ending Jan. 15th there had been 18 cases of bubonic plague and 10 deaths from the disease.

DANGEROUS GAS-HEATERS AND COAL-GAS POISONING

CARBON monoxide is rapidly becoming a modern terror, for undoubtedly the number of victims to carbon monoxide poisoning is decidedly on the increase Sometimes the gas occurs as a product of incomplete combustion owing to a defect in the gas heater, as was the case in the regrettable death of Mr Quintin Hogg in a bathroom at the Polytechnic Institute last week, and sometimes it reaches its victim through the escape of coal gas from a defective gas pendant. Two children lost their lives last week by this latter means there was no water in the seal of the chandelier and gas freely escaped into the room in which they were sleeping We unequivocally condemned this wretched gas appliance a long time ago Gas companies, we maintain, should be compelled to supply all their customers using gas stoves with printed directions as to their management, and it seems to us that the increasing proportion of carbon monoxide in coal gas calls for serious investigation

THE KING S SANATORIUM A NOVEL SCHEME

ONE of the schemes sent in for competition, which the author has permitted us to see, involved principles entirely at variance with the successful ones in its suggestions for treating tuberculous patients. The gist of it lay in an attempt to furnish the patients—who would be completely isolated, collectively and individually, within the sanatorium on the hillside—with a plentiful supply of air, fresh from the summit of a hill, of regulated temperature and moisture The air, for instance, would need drying when a cloud or heavy mist capped the hill top , it would require moistening and warming when easterly and north easterly winds prevailed, and toning down when too "shrewd" or frosty This scheme advised that the air (modified when necessary) should flow continuously up through the perforated floor of the patient's cubicle, rising evenly throughout the room, and should pass away through the perforated ceiling to a foul-air chamber, whence it would be drawn away to feed the flames at the destructor A great point in the scheme was the complete destruction by heat of all liquid, solid, and gaseous refuse The writer believes that his method of ventilation could be superseded by flooding the rooms with fresh air from the top and drawing it away from the bottom of the cubicle, a plan already successfully adopted in some places, he thinks that there should be a double foul air system in order to keep separate the ward and drainage ventilation and that all the patients' cubicles should face the front The author of the scheme has founded his plan upon a view that the treatment of weak, sensitive patients by the open air method will eventually break down in England. This, of course, is not accepted opinion, but undoubtedly it is necessary that we should remember that when we have placed a tuberculous person, regardless of his individual condition, in the open air, and not paid sufficient attention to the quality of that air, we may not have done our best for him or her.

THE INDEX MEDICUS SECOND SERIES.

THE Index Medicus, which was established in 1879 and discontinued in 1899, has now been resumed. The present publication, which is undertaken by the Carnegie Institution in Washington, will be known as Index Medicus, Second Series, Volume I , commencing in January, 1903 It consists of the titles in full of books, pamphlets theses, contributions to coöperative works, and original articles in journals, transactions of medical and scientific societies, and the like arranged under subject headings. On the completion of the volume an "Annual Index of Authors and Subjects" will be issued. The subject part of this annual index will be elaborately subdivided, the classification closely resembling that of the Index Catalogue of the Library of the Surgeon General s Office. The annual subscription, payable in advance, is $5, or 25s All communications relating to subscriptions should be addressed Carnegie Institution, Washington, D C Letters relating to the editorial department should be addressed Editors, Index Medicus, Washington, D C

STRONG MEASURES AGAINST SMALL-POX AT PHILADELPHIA

THE city of Philadelphia seems constantly in difficulties. When there is no epidemic of typhoid fever then small pox breaks out, and when small pox ceases typhoid fever returns Now both these diseases have come together and this in spite of an improved water supply and energetic measures to vaccinate the whole population Indeed, small pox has broken out among those engaged as it were in the prevention of typhoid fever There are some 500 negro labourers employed at a filtration conduit and filter beds At shaft No 8 one negro was seized with small pox and removed at once to the hospital, but at almost the same time two other cases occurred at shaft No 6 The huts which these patients occupied have been quarantined" and their inmates—there are generally ten negroes in each hut—are kept prisoners The police are stationed round the huts to prevent all intercourse with their inhabitants who are thus kept in idleness in a confined space waiting for small pox to attack them or for their daily allowance of food to be handed to them through the windows of their huts We are now told that all the coloured men are to be vaccinated, which assuredly is a better precaution. Ten policemen are told off to watch each hut, and this display of force has naturally helped to spread a panic among the labourers engaged at the waterworks which it is anticipated will be the means of preventing typhoid fever by giving the inhabitants of Philadelphia pure water to drink Throughout the town the police have been paying house to house visits to ascertain how many inhabitants have not been vaccinated within the last five years Arrangements are made for the immediate vaccination or revaccination of such persons. These precautions are useful, but they should be supplemented by measures to prevent overcrowding and to remedy structural e opposition to vaccination mainly associated itself with fects of administration of the Vaccination Acts. He held rongly the opinion that by a thorough investigation of the fects of the machinery of vaccination legislation could be ost safely promoted

Dr J C McVail urged the importance of the revaccination children before leaving school. When a child was proaching 12 years of age the duty should be impressed pon the parent of seeing that the child was protected gainst small pox before entering further on his or her reer He ventured to think that the President of the ocal Government Board, who had abolished rabies in this untry, had a great opportunity of conferring an enormous oon on the country in connexion with an infinitely more nportant subject—namely, small pox.

Mr Devitt, representing commerce, gave instances of the eavy loss which had fallen upon ship-owners owing to a ngle case of small pox having occurred on board a ship

Mr E. Debenham, representing the clothing, furnishing, nd allied trades presented a petition signed by firms mploying about 30,000 persons in favour of revaccination.

Dr Adler, the Chief Rabbi, speaking of the strenuous fforts which were made to secure the revaccination of all ewish children attending voluntary and board schools, nd he was certain that no case of small pox occurred mong the children attending three board schools in e East-end, which had an aggregate of over 2000 ames on the register The managers secured the help f the public vaccinator who was good enough to ttend twice a week at an institution near the schools. he confidence reposed by the parents in the managers and eachers was so great that they brought or sent their children n large numbers, so that at least 75 per cent. of scholars ver eight years of age were vaccinated In fact so anxious ere the parents that the children should be protected that n many cases they brought children below the age at which evaccination was deemed needful and begged that they hould be vaccinated. He laid special stress upon the fact hat it was of the utmost importance that children should be evaccinated while at school before they attained the age of 2 or 13 years

Alderman Menlove chairman of the Liverpool Health Committee, said that power should be given to health uthorities to vaccinate or to revaccinate anyone who had ome in contact with a case of small pox.

Mr R. Brudenell Carter said he had been asked to say a few words on the question of cost in relation to the prevention of small pox. They naturally looked to Government to protect the property as well as the persons of its subjects, nd the property of the people of this country had been njuriously affected by small pox epidemics in an amazing manner If they took London alone, the expenditure of the Metropolitan Asylums Board in the recent epidemic was estimated to have been at least half a million sterling that sum not including the expense to which the different boroughs of the metropolis were put for the conveyance away of the different cases within their limits, or the disinfection of the houses in which small pox had occurred The hospital ships on the Thames cost something like £15 000 a year Yet this expenditure of money large as it was, did not equal the loss which was inflicted on the various localities by the disturbance of trade and of the ordinary events of life which an epidemic of small pox invariably caused. The Government ought to take into account not only individual loss but the great loss in national wealth due to disease.

Dr T D Acland urged the necessity for a liberal supply of the glycerinated lymph.

Sir William Broadbent, Bart., K.C.V.O., said that he thought the difficulties of the conscientious objector would be lessened by pressure of public opinion as expressed by the great employers of labour

Dr J G Glover said that Mr Barnardo had had under his care in Stepney between 6000 and 7000 children during the 18 months of the recent epidemic and that these children having been vaccinated, there had not been one case of small pox among them.

Copies of the following declaration were handed to Mr Long —

> Believing that in vaccination and revaccination we possess the best protection against epidemic small pox I should heartily welcome legislation making revaccination at school age obligatory on all but the children of conscientious objectors or those who may be for a time excused on the ground of ill health.

The signatories included Sir Thomas Dyke Acland, Sir Thomas Barlow, Mr T J Barnardo, Mr H. Rider Haggard, Professor D MacAlister, Sir William Turner, Sir John Williams, the head masters of many large public schools, the head mistresses of important public girls' schools, the heads or honorary secretaries of colleges for women, the Lord Mayors and mayors of a number of important cities and boroughs, the representatives of a number of large employers of labour and of many ship-owners and owners of lines of steamers, several firms of ship builders, the chairman and secretary of Lloyd's Registry, City solicitors, and many others

Mr Long said that it was unnecessary for him to refute either the allegations or the arguments which had been advanced by the speakers. No one, he need hardly say, in the office of the Local Government Board would attempt to dispute either the assertions which had been made in support of vaccination or the gravity which had been rightly attached to the successful performance of that operation throughout the country At the Local Government Board they had a constant and growing experience of the advantages of vaccination, and the only wonder they felt at all was that it should be necessary at this period of the world's history for a great deputation so representative in character and gathering its members from all parts of the country to come there in order to support that which they, in that office at all events, believed ought to receive the unqualified support of every intelligent person. He hoped that that remark would not be misunderstood by those who did not believe in vaccination. He did not desire to say anything which would offend the susceptibilities of those who believed that vaccination was wrong, but he felt bound to say that the more he had studied the question the more difficult he found it to understand how anyone could refuse to give hearty support to that which he believed to be one of the greatest instruments of preventive medicine that had ever been given to the world. Germany had practically eliminated the disease altogether and the effect of vaccination in India was well worthy of study It was a common remark often heard from people of a certain age who said that in their young days it was quite an every day occurrence to meet men and women one after another in the daily avocations of life who were disfigured by small pox whereas now it was the exception What was the reason? It was not a process of nature which had been going on of itself without any assistance from science. It was not an accident, but it was due to some cause. What was the cause? Those who did not believe in vaccination said that the proper remedy for small pox was isolation. Isolation was, no doubt, an excellent thing, but could any man in his senses believe that if in this country nothing but a process of isolation had been adopted the remarkable change in the condition of the people which had occurred since the days when small pox was a common disease would have been brought about? It was surely not unfair for the adherents of vaccination to believe that this remarkable and beneficent change in the health of the people was due to revaccination in spite of all the obstacles which in this country had been placed in its way They must not expect him on that occasion to state in any definite terms what the intentions of the Government were. In the first place, it was not usual to do that on such occasions, and in the second place, even if it were usual so active were the opponents of vaccination that he thought it would be very undesirable to make them a present of the Government proposals beforehand, because then they would get themselves into line of battle much earlier than was desirable He could not help regretting that a great society like the Imperial Vaccination League had not come into existence many years ago and become as active in the constituencies of the country as the Anti-Vaccination League had been. Such a society would have been able to render invaluable assistance to Parliamentary candidates who were pressed on that question by those who were hostile to vaccination and told harrowing tales of the suffering, death, and misery which had resulted from vaccination. He hoped that that deputation was evidence of the fact that they had put their hands to the plough and that they did not mean to turn back until the work was done. The strongest Government could not carry legislation in the teeth of strong public opposition, but he believed that the great majority of the country were with those who held the views of the deputation and that if the facts were made known and the evidence was only put before the people of the country there would be a much larger majority in favour of vaccination If the vaccination laws were going to be amended so as to make them effective it was necessary that an influential body the metropolis is traced through a long series of years both as regards incidence and mortality We note that until the recent outbreak the disease had not been seriously prevalent amongst us since 1893, in which year 2815 cases were reported, whilst the total number notified in 1901 did not exceed 1700 But although the attack incidence during the latter year was considerably lower than that of the former, the mortality in proportion to population was nevertheless considerably higher, the small pox death rates being 0 040 per 1000 in 1893 and 0 051 per 1000 in 1901 Until the history of the recent epidemic can be considered as a whole it is perhaps unsafe to attempt an explanation of this remarkable difference, age distribution may have had something to do with it but it is far from improbable that it is due mainly to differences in the degree of vaccinal protection against fatal small pox possessed by the population generally at the respective periods Very early in his account of the recent outbreak Mr Shirley Murphy gives prominence to the fact that in a relatively large number of instances cases of illness were erroneously notified as small pox and were actually removed from their homes to hospital under the mistaken impression that they were suffering from that disease. As a consequence the persons referred to were unnecessarily exposed to infection and in this way further diffusion of the disease is not unlikely to have occurred We have before drawn the attention of our readers to the fact that in recent years, in consequence of the disappearance from amongst us of certain formerly common infectious diseases—typhus fever for example—medical practitioners enjoy at the present day fewer opportunities of becoming familiar, clinically, with these diseases, and we see in this fact a danger to the public health of our crowded districts against which it behoves us as a profession to be on our guard. This is notably the case with regard to small pox also, but we certainly were not prepared for the statement, which we have on the authority of the county medical officer of health, that in so large a proportion as 13 3 per cent of the notified cases the diagnosis of small pox had turned out on investigation to be incorrect.

It is gratifying in these circumstances to place on record the admirable temper in which the authorities, under Mr Shirley Murphy's guidance, dealt with this unsatisfactory state of things There is no doubt that in certain cases there exists a real difficulty in distinguishing variola from varicella, especially when as is frequently the case, the former disease is modified by vaccination. Recognising this difficulty, and with praiseworthy determination to meet it, several of the metropolitan vestries, and ultimately the County Council, agreed to schedule chicken pox among the infectious diseases, notification of which should be for a time required under the Local Act. The last-mentioned authority further made arrangements by which the services of medical men specially familiar with small pox were made generally available in obscure cases for purposes of diagnosis There can be no doubt whatever that the prompt adoption of these prudent expedients has had the effect of bringing to an early close an epidemic which at one time threatened to assume unmanageable proportions. The compulsory notification of chicken pox has been turned to account statistically by Mr Shirley Murphy to show the age distribution of chicken pox and incidentally its relation in time and place to the prevalence of the graver disease From the year 1901 up to the present time the county medical officer of health has published week by week particulars of the local distribution of *varicella* in each of the London boroughs, and also of the notified attacks of this malady at the various ages from early infancy onwards This information, which is now available in England for the first time, will, if we mistake not, be shown at no distant date to possess considerable scientific importance from the point of view of preventive medicine.

The history of recent metropolitan small pox diffusion from initial attacks is given with sufficient fulness in Mr Shirley Murphy's report, the details do not differ essentially from those which have been experienced in previous epidemics elsewhere, whenever record has been preserved with equal minuteness

It is the old story of unrecognised and unsuspected cases obtaining entrance into elementary schools common lodging houses, and even into workhouses and into the wards of general hospitals Mr Shirley Murphy gives an account of the steps taken by the medical officers of health of infected districts with the object of limiting the spread of the disease In some districts these included an inspection of the children in schools, with a view of ascertaining whether or not they had been vaccinated. Some of the local medical officers of health show in their reports the proportion of children whose parents posed as "conscientious objectors" to vaccination and also the proportion of children found on examination to be unvaccinated. Thus, in Greenwich between 7000 and 8000 children were inspected, of whom less than 10 per cent. exhibited satisfactory marks of vaccination and the parents of more than 5000 of these refused to submit their children to the operation

Throughout London generally there was during the epidemic, and probably from fear of it, considerable resort both to vaccination and to revaccination. In Islington 1866 children were vaccinated in consequence of the action of the authorities, and in Westminster nearly 10,000 were revaccinated by the public vaccinators alone, leaving a probably larger number who resorted for protection to their private medical attendants.

THE IMPERIAL VACCINATION LEAGUE.

DEPUTATION TO THE PRESIDENT OF THE LOCAL GOVERNMENT BOARD

AN influential deputation from the Imperial Vaccination League was received by Mr Walter Long, the President of the Local Government Board, on Jan 14th.

At the commencement of the proceedings Sir JAMES CRICHTON BROWNE read a letter from the Duke of Northumberland, President of the League, who was unavoidably absent, in which His Grace strongly urged careful administration of the present Acts relating to small pox and their extension and improvement

Sir WILLIAM CHURCH, Bart, K.C B, who introduced the deputation, pointed out that the Imperial Vaccination League was not a medical association, naturally a large number of medical men were included among its members, but the main strength of the Imperial Vaccination League consisted in the support which it received from the general public. The points which the League particularly desired to bring to Mr. Long's notice were these the necessity for efficient infant vaccination and for revaccination at a later period of life and the removal of the administration of the Act from the guardians of the poor to some other body They also desired to draw attention to the very large expense which was entailed upon districts and upon the country at large in the event of an epidemic of small pox either taking place or being feared. They also wished to draw attention to the necessity for the making of arrangements by which a larger supply of lymph prepared under efficient observation might be obtained

Professor CLIFFORD ALLBUTT, M.D, after referring to the dislocation of the business of the country which a small pox epidemic caused, said that the deputation consisted largely of men of business—ship-owners, bankers, presidents of chambers of commerce, and large employers of labour It was they who came there that day to explain that the beneficent effect of vaccination had not been carried far enough. The time had come when others than medical men were pressing upon the Government that the Vaccination Acts ought to be revised Statistics had recently been shown to him he said, which indicated that among the population of Berlin small pox had virtually ceased. The sporadic cases which occurred in Berlin had come virtually from other countries If these were extracted from the small pox statistics of Berlin small pox might be said to be non existent in that city If children were revaccinated at the ages of 10 or 12 years there was a probability that the protection which vaccination afforded would extend to the end of their lives and he urged that parents should be helped to carry out such needful protection to their children. He welcomed the conscientious objector who had caused them to examine their arguments, to revise their methods of research, and had kept them awake. They had not the smallest desire to interfere in any way with those who had conscientious objections on that matter In the face of criticism, however it was absolutely necessary that lymph should be beyond suspicion

Dr F T BOND, secretary to the Jenner Society, said that

ROYAL COLLEGE OF SURGEONS OF ENGLAND

A QUARTERLY meeting of the Council was held on an 15th, Sir HENRY G HOWSE, the President, being in he chair

Mr. Clinton T Dent was introduced and having made a declaration in the terms of the oath prescribed by the Charter of 1800 was admitted a member of the Court of Examiners

The best thanks of the Council were given to Mr. Bolton Glanvill Corney for his gift to the museum of 16 skulls of members of the Melanesian, Malayo-Polynesian and hybrid Fijian) races

The PRESIDENT reported the award of the Sir Gilbert Blane medal to Christopher Louis White Bunton M.B., B.Ch. R.U I. Surgeon R.N, H.M.S *Forte*, 1901, and John Falconer Hall, M.B., C M. Aberd. Staff-Surgeon R.N, H.M Naval Brigade in North China, 1900.

A letter was read from Mr. Frederick Canton resigning his seat on the Board of Examiners in Dental Surgery —The PRESIDENT stated that the vacancy thus occasioned would be filled at the ordinary meeting of the Council in March. (Applications for the post must be sent in before Feb. 7th)

A letter was read from the Secretary of the University of Birmingham reporting the expiration on Jan. 1st, 1903, of the term of office of Sir Henry G Howse on the court of governors of the university The Council recommended Sir Henry G Howse for re-election

A letter was read from Mr Reginald Harrison reporting his attendance as the delegate of the College at the Medical Congress at Cairo The best thanks of the Council were given to Mr Harrison for representing the College at the Congress.

A letter was read from the Foreign Office inclosing a copy of a despatch from Lord Cromer to Lord Lansdowne expressing the appreciation felt by the Khedive and the Egyptian authorities at the action taken by the College in sending Mr Harrison to the Cairo Congress and to inspect the Cairo School of Medicine.

A letter was read from Dr H. P Keatinge, director of the Cairo School of Medicine, reporting that he had furnished Mr. Harrison with all the information in his power respecting the curriculum of the school, thanking the Council for the interest taken by it in the institution, and expressing the hope that the result of Mr Harrison's investigations might lead to the recognition of its teaching

THE PREVENTION OF CONSUMPTION AND OTHER FORMS OF TUBERCULOSIS

RECOMMENDATIONS WITH REGARD TO PROPHYLAXIS.

AT a meeting of the council of the National Association for the Prevention of Consumption and other Forms of Tuberculosis held on Jan. 12th, Sir WILLIAM H. BROADBENT, Bart., K.C.V O being in the chair, the motions printed below were passed. The attention of the council having been called to the fact that notwithstanding the numerous notices against spitting which have been placed in various railway carriages, tramcars, and places of public resort, this disagreeable and dangerous habit still continues and also in view of the fact that spitting on the cars of certain tramway companies and in covered places of public resort in the county of Glamorgan has already been made a penal offence, it was decided that some further action was called for The following motion was therefore proposed by Mr MALCOLM A. MORRIS seconded by Dr. L. A. WEATHERLY supported by Dr. ARTHUR RANSOME, and carried unanimously —

> That spitting on the floors of public buildings, on platforms, corridors, staircases, and public carriages or passenger boats or in any covered place or public resort should be forbidden by law

The council at the same meeting also resolved —

> That the council of the National Association for the Prevention of Consumption, having read the report of the Tuberculous Committee of the Medico-Psychological Association of Great Britain are of opinion that the suggestions therein expressed are most valuable, and they urge the Commissioners in Lunacy to do their utmost to get the committees of the county and borough asylums to carry these suggestions into effect

The attention of the council has also been called to the report of a departmental committee on the ventilation of factories and workshops, 1902 (Blue-book, Cd. 1302) The chief recommendation in the report is (p. 5) that such a standard of ventilation should be prescribed for all classes of factories and workshops not otherwise dealt with The proportion of carbonic acid in the air at about the breathing level and away from the immediate influence of any special source of contamination shall not rise during daylight or after dark when only electric light is used beyond 12 volumes of carbonic acid per 10 000 of air, and that when gas or oil is used for lighting the proportion shall not exceed 20 volumes after dark or before the first hour of daylight ' The council of the association understands that, in accordance with the views of a previous committee, an Act was passed in 1897 fixing the standard of nine volumes of carbonic acid in all humidified cotton cloth factories and that this Act had been very successful in improving the condition of the workers in these factories.

> The council therefore beg to express their opinion that the newly suggested standard of ventilation should not be adopted by the Government as it would probably prove detrimental to the public health and would tend to increase the prevalence of tuberculous diseases.

SWANSEA.

A meeting convened by the Mayor of Swansea and Sir John Llewelyn (president of the Swansea Charity Organisation Society) was held at the town hall, Swansea, on Dec. 22nd, 1902, to consider the question of establishing a sanatorium for consumptive patients at Swansea.—The Mayor referred to the recent formation of a Swansea branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis and said that there were two alternatives before them—namely, whether they would apply to the county council to erect a sanatorium for that district or would themselves endeavour to raise public subscriptions. He thought that there was a general feeling that the provision should fall on the county council.—Sir John Llewelyn said that in his opinion they should go to a larger area than the borough of Swansea for the necessary capital if they depended upon voluntary subscriptions.—Mr J A. Rawlings M.R.C.S. Eng, suggested that they should establish a sanatorium for consumptives in connexion with, or as a wing of, the convalescent home now being built in connexion with the Swansea Hospital. He thought that the Swansea corporation might be willing to contribute £1000 towards such a scheme. The disease would not be infectious in a proper sanatorium.—Councillor R. Dommett said that the Swansea Trades Council was strongly of opinion that the proposed institution should be supported by the corporation and he proposed a motion as follows —

> That this meeting is of opinion that a convalescent home for consumptive cures should be provided by the Swansea corporation and maintained out of the rates under the powers conferred by the Public Health Act 1875.

Sir John Llewelyn seconded and the motion was adopted.—A deputation to wait on the corporation was appointed from amongst those present.—In reference to this aspect of the matter it may be stated that the corporation has for years refused to build a permanent hospital for the isolation of cases of infectious disease although repeatedly urged to do so by the medical officer of health, Mr Ebenezer Davies, and although the buildings which have served the town during the recent epidemic of small pox are anything but creditable, so that it will be interesting to see what action will be taken with regard to this latest proposal

CUMBERLAND

The work of providing a tuberculosis sanatorium for the county of Cumberland is being actively carried on and the executive committee has issued a public appeal which is signed by the Bishop of Carlisle as president, as well as by the honorary treasurer and secretary In this appeal the committee states that it has collected funds and purchased what is pronounced by experts to be one of the most suitable sites in England on the southern flank of Blencathra. Sheltered from winds facing the sun, with a good water-supply and exhilarating air, it is at the same time centrally situated and reached easily from west or east. The committee has also arranged for the planting of shelter-belts of fir and larch and for the converting of the adjacent farmhouse into an administrative building with dining-hall attached. From £3000 to £4000 must yet be raised before the erection of the sanatorium can be undertaken. The actual inclusive cost of each patient per week like the Imperial Vaccination League should bring to bear upon the people the knowledge and experience of its members. The first and most important of the proposals made by the deputation was whether the existing authority should be continued The history of our local government in England was a very remarkable one. Fresh powers had been created by Parliament and had been handed over to existing authorities who were not particularly adapted to the work of carrying them out. Could anything be more inconsistent with the proper functions of a board of guardians than that they should be charged with the general duty of vaccinating the people in their neighbourhood? What had vaccination against a terrible disease to do with the proper maintenance of the paupers? The guardians had done their best very often and very often the efficient administration of the Poor law had been interfered with by the agitation got up in connexion with vaccination at the time of the election of the guardians He believed that the proper line to adopt in reform of local government was that of centralising in the great central bodies of the country, as far as they could, those special parts of the government which had special application to the whole area and not special application to any parts of the area, therefore he inclined towards making the county councils and the borough councils the authorities in future With regard to revaccination he agreed with the remark made by Dr J C McVail and emphasised by him in a very interesting article which he had had the advantage of reading within the last day or two, that primary vaccination of itself was really almost a farce—to vaccinate the children and then to believe that everything had been done that was necessary in order to secure the proper effects of vaccination was almost a farce and was really almost a deception It would be a very great advantage if a practicable scheme of revaccination during adolescence or later life could be devised. Statistics were widely circulated by the opponents of vaccination in which allegations were frequently made that people had died from small pox who had been vaccinated, but in those statistics the period of lives at which these persons had been vaccinated was not stated, or whether they had ever been revaccinated, or whether it were not the fact that it was because they had only been vaccinated some 20 or 30 years before and had not been revaccinated that they had died from small pox. Vaccination in infancy, unless it were repeated at proper intervals, was not a certain safeguard Vaccination reduced the virulence of small pox, lessened the risk of infection, and if it was repeated at proper intervals it afforded a great safeguard against the contraction of the disease. There were those who would still say that vaccination was no remedy, and that the attempt to spread vaccination was to do that which was wrong and antagonistic to the liberties and the privileges of the people. He stood aghast in the face of statements of that kind. He could not understand why it was that a certain section of the community took so strong a view about the dangers of vaccination. Recently he had read an article in The Lancet[1] in which the hope was expressed that a Bill of a non-contentious nature dealing with vaccination might be introduced into Parliament. He was very doubtful whether the ingenuity, even of the Local Government Board, could devise a Bill which would be so regarded by the opponents of vaccination. With regard to the question of lymph, that was a very difficult question, and at present, although they had largely increased their vaccine establishment, it would be impossible to undertake to supply that lymph generally to the whole country He agreed that if vaccination was to be made general the supply of lymph should be of the best possible description, but he thought that they should be satisfied that the commercial lymph was unsatisfactory before they attempted to embark on so large a business as the supply by the Government of lymph for general use. That was a question he preferred to reserve for more careful consideration, because, naturally, it would involve a discussion between the Board and the Treasury and was not one on which he could now say what his final view would be He had tried to indicate in very general terms what his views were as Minister responsible there. He had not had any opportunity of consulting his colleagues, but he had tried to indicate what would be the general principles that would guide him in this matter Of this the deputation might rest assured, that they would do nothing at the Local Government Board which would be calculated in any way to lessen what they believed to be one of the greatest benefits enjoyed by this country—the general adoption throughout the country of vaccination as a preventive against one of the most terrible of our diseases

Sir James Crichton Browne briefly thanked Mr. Long, and the proceedings terminated.

Looking Back.

FROM

THE LANCET, *SATURDAY, JAN* 22, 1825.

REVIEWS FROM THE WEST

Under this title shall be noticed, from time to time, everything Medical coming within our reach, remarkable for stupidity or distinguished by excellence Nothing, destitute of one of these two qualities shall arrest our attention Mediocrity only, therefore, shall escape our vigilance, because from this negative, neither-one-way-or other, sort of thing, so prevalent at the present moment, there is no danger to be apprehended, or any advantage to be derived. This nondescript species of composition, in which the elements of good and evil are so happily blended that, like certain chemical compounds, every trace of the original constituents is lost in the neutral insipidity of the product, seems to us to be totally unworthy of observation. Our critical barometer admits of only two degrees—zero, and the boiling point, to one or other of these signs shall be referred whatever works we review, and on the same principle that we are told to read history, to be admonished by error and instructed by acts of prudence, we shall fearlessly expose absurdity and judiciously point out excellence for imitation. In no other form can we think that criticism may be rendered conducive to the interests of a science the professors of which should ever recollect, that, "to do good and to avoid evil" ought to be their motto, and the object of their lives.

The *Times* of Jan 19th, 1903, has the following interesting excerpt from its issue of Jan 19th, 1803 —

Extermination of the Small Pox.

London, Jan. 10 18

The invaluable Discovery of Dr JENNER for the Extermination of the Small Pox, having undergone the most rigorous investigation and received the sanction of Parliament a Meeting will be held at the London Tavern, Bishopsgate-street on Wednesday the 19th instant, at 12 o clock to consider of the best means of carrying the same into effect when the company of every Gentleman disposed to concur in this laudable Undertaking is earnestly requested The Chair will be taken by the Lord Mayor, precisely at one o clock.

William (Duke of Clarence)
Berkeley
Egremont
Darnley
Somerville
G C Berkeley M P
J W Anderson M P
William Wilberforce M.P
Henry Thornton M P
Richard Carr Glyn Ald
George Hibbert, Ald
William Leighton Ald.
John Julius Angerstein
E G Boldero
Thomson Bonar
William Bentham
Henry Hoare
John Maitland
William Vaughan
Nathaniel Fenn
Richard Sharpe
Benjamin Travers
Joseph Travers
Timothy Brown
J H Tritton
Robert Cowie
John Gurney
Thomas Wilson
Robert Barnewall
Casten Rhode
Jacob Wrench
Samuel Thorpe
John Nichols
Samuel Parker
Ebenezer Johnston
James Bell
William Bell
Joseph Benwell
Henry Waymouth

Walter Farquhar M.D
J C Lettsom, M.D
Thomas Denman M.D
Richard Croft, M.D
Thomas Bradley, M.D
Gilbert Blane M.D
Alexander Crichton M.D
William Hawes M.D.
William Babington M.D
Robert Willan M D
Richard Powell M.D
William Lister M.D
James Hamilton, M.D
James Sims M.D
Alexander Marcet M.D
W P Dimsdale, M D
Samuel Pett M D
Henry Cline
John Ring
John Abernethy
Astley Cooper
Edward Ford
John Pearson
John Griffiths
C R Aikin
John Addington
William Chamberlain
James Simpson
Joseph Fox
Charles Johnson
William Allen
George Johnson
J Potts
John Christie
Joseph Leaper
John Buxton
Ives Hurry
Thomas Walker
E L. McMurdo

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[1] The Lancet Jan 10th 1903 p 110

our, and three in the three preceding weeks, increased again o four last week. The deaths from measles, which had een seven, nine, and two in the three preceding weeks, ose again last week to three. The 218 deaths in Dublin last week included 38 of children under one year of age and 7 of persons aged 60 years and upwards, the deaths of nfants were slightly fewer than those recorded in the preceding week, while those of elderly persons showed a considerable excess; 12 inquest cases and seven deaths from violence were registered, and 87, or 40 per cent., of the deaths occurred in public institutions. The causes of 11, or more than 5 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel Sidney H. Carter retires on retired pay. Dated Jan. 17th, 1903.

Lieutenant-Colonel D. F. Franklin has embarked for India. Lieutenant-Colonel W. Dick is ordered to proceed to the Straits Settlements. Major J. B. Wilson joins at Woolwich.

INDIAN MEDICAL SERVICE.

The King has approved of the following promotions among the officers of the Indian Medical Service made by the Government of India:—To be Surgeon General, Bombay Establishment: Colonel William McConaghy (dated Oct. 30th, 1902). To be Colonel, Bengal Establishment: Lieutenant-Colonel Henry Hamilton, retired. Dated Oct. 1st, 1902. Majors to be Lieutenant Colonels (dated Sept. 30th, 1902), Bengal Establishment: Albert William Denis Leahy and Richard Rose Weir. Madras Establishment: Robert Evans Stuart Davis and William Henry Neilson. Bombay Establishment: William Henry Burke and John Crimmin, C.I.E., V.C.

The King has approved of the retirement from the service of the undermentioned officers:—Bengal Establishment: Colonel Geoffrey Craythorne Hall (dated Nov. 1st, 1902), Lieutenant-Colonel Joshua Duke (dated Nov. 1st, 1902), and Lieutenant-Colonel William Edwin Griffiths (dated Jan. 6th, 1903). Madras Establishment: Lieutenant-Colonel Henry FitzLawrence Plunkett French Esmonde-White (dated Dec. 28th, 1902). Bombay Establishment: Surgeon General George Bainbridge (dated Oct. 30th, 1903) and Lieutenant-Colonel Henry Pruce Jervis (dated Nov. 27th, 1903).

The India Office publishes the following list of candidates for the Indian Medical Service who were successful at the competitive examinations held in London on Jan. 17th and following days:—

	Marks		Marks
C. S. Parker, M.B. Lond.	3413	E. C. Taylor, M.B., B.Ch. Cantab.	2890
P. N. White, M.B. Lond.	3063	D. P. Goll, M.B., B.Ch. Edin.	2505
T. C. Rutherfoord, M.B., B.S. Durh.	3037	H. C. Keates, M.B., B.S. Lond.	2330
D. Heron, M.B., B.Ch. Edin.	3018	R. A. Needham, M.B., B.S. Vict.	2327
L. Reynolds, B.Ch. Cantab.	2937	J. Kirkwood, M.B., B.Ch. Edin.	2312
H. H. Broome, M.B., B.Ch. Edin.	2930	A. Whitmore, M.B., B.Ch. Cantab.	2282
C. G. Seymour, M.R.C.S., L.R.C.P. Lond.	2930		

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Ayrshire and Galloway: Surgeon Lieutenant T. Harper to be Surgeon-Captain. Dated Jan. 17th, 1903. 1st Cheshire and Carnarvonshire: Surgeon Lieutenant T. G. Lusk to be Surgeon Captain. Dated Jan. 17th, 1903.

Submarine Miners: The Tyne Division: Surgeon-Captain W. H. Brown to be Surgeon-Major. Dated Jan. 17th, 1903.

Rifle: 3rd (The Blythswood) Volunteer Battalion the Highland Light Infantry: Peter Mackellar Dewar to be Surgeon Lieutenant. Dated Jan. 17th, 1902. 1st Dumbartonshire: The undermentioned officer resigns his commission:—Surgeon-Captain T. J. Burton. Dated Jan. 17th, 1903.

THE UNION JACK CLUB.

A scheme for founding a club for the United Services is, we are glad to say, to be carried out and a building is shortly to be erected at a cost of £50,000 in the vicinity of Waterloo Station to act as a club for the use of our soldiers and sailors. The idea is to provide a building available for all belonging to the Imperial Forces where they can obtain comfortable beds, good food, and wholesome recreation at moderate rates. This strikes us as a very good idea and we do not think that a more suitable or better site than that proposed could have been chosen for the purpose. Apart from the obvious hygienic and economical advantages offered by such an institution everything should be done nowadays to render the public services attractive to intending soldiers and sailors. The plans of the building allow for 400 bedrooms, a restaurant, smoking rooms, billiard rooms, reading room, and other club accommodation. Although the club is in no way started under official auspices it has the warm approval of the Admiralty and War Office.

Correspondence.

"Audi alteram partem."

THE RISE OF BLOOD PRESSURE IN LATER LIFE.

To the Editors of THE LANCET.

SIRS,—I much regret that I was unable to be present at the reading and discussion of Professor T. Clifford Allbutt's paper brought before the Royal Medical and Chirurgical Society, which is reported in THE LANCET of Jan. 17th, p. 170. There are one or two points on which with your permission I should like to comment. Doubtless Professor Allbutt's remark with regard to fatalism in medicine begotten in the post-mortem room is of historic value, but it has ceased to be applicable for many years, and I think even at the present time there are valuable lessons to be learned in that gloomy but interesting chamber, and especially in two directions—viz., (1) lessons of humility as well as greater exactness in diagnosis which every clinical physician who attends there must have learned and which those still in student life would do well to take more to heart; and (2) a useful examination into what I may in brief call "collateral pathology," an examination into all the compensatory, reparative, and substitution processes that may be discerned amidst the "wreckage" in the dead body, will teach us much and will enable us to appreciate those processes of repair and possibilities of compensation which in clinical medicine enter so largely into both diagnosis and prognosis. I regret, therefore, that Professor Allbutt of all men should say anything in discouragement of post-mortem work.

Whilst generally agreeing with the views so interestingly put by Professor Allbutt on the conditions affecting blood pressure, there are some points with regard to its mechanism upon which I should have ventured to remark. Professor Allbutt tells us that the two antecedent conditions upon which blood pressure must depend (ventricular force and valve competency being understood) are diminution of the calibre of the vessels and increased viscosity of the blood. Whilst he, I think rightly, expresses doubt as to narrowing of the vessels being present with sufficient uniformity in arterial degeneration to cause rise in blood pressure and consequent hypertrophy of heart, he, on the other hand, maintains a tantalising silence with regard to "viscosity of blood," as to the nature of which one would much have desired information.

Professor Allbutt only makes a passing reference to loss of elasticity in the vessels as concerned in the altered conditions of circulation—viz., that it is not proved to have any effect with regard to their capacity. Now it seems to me that loss of elasticity in degenerate vessels is a most important deprivation which increases the burden of the heart in maintaining circulation. The other factor which may precede, and often attends, degeneration is arterial contraction.

We cannot, of course, speak of vessel elasticity as a force in aid of circulation, but it is a most important factor which by perpetuating, in conjunction with competent aortic valves, the ventricular force helps to maintain the blood current. Deprived of elasticity as in the leathery vessels spoken of by Professor Allbutt, the vessels give a dead resistance to the blood movement which causes the waste of much cardiac force and tends to a low blood pressure and at the same time to cardiac hypertrophy. Arterial contraction is, in morbid degrees with which we are now alone concerned, also an opposing force to the blood current. Its full consideration would be a thesis of itself. I would regard it as in part a reaction to the toxic influence will be 30*s* The committee asks young and old, rich and poor, to coöperate in this work of mercy Contributions should be sent to the treasurer, Mr W L R. Crowder, jun., of 4, Portland square, Carlisle.

BRISTOL.

At a meeting of the Bristol health committee held at the council house on Jan. 6th the medical officer of health (Dr D S Davies) stated that he was at present engaged in the preparation of a report relative to a letter from the guardians on the treatment of consumption Any notification of this disease that might be secured would be voluntary, as the Government was not prepared to assent to the inclusion of any form of tuberculosis in a compulsory notification scheme.—The Chairman (Mr F G Barnet) said that at the council meeting recently a resolution was unanimously adopted asking the committee to report on the subject of consumption hospitals and notification. He thought that if Dr Davies reported on the size and general upkeep of such a hospital as Bristol would require the report could be sent to each member of the committee and they could ask the board of guardians to meet them in committee and see what could be done —Mr Pembery said that the council had voted a large sum to the Winsley sanatorium and so much a year for the allocation to the city of several beds —Mr Pope replied that the accommodation at Winsley would go but a little way towards meeting Bristol's need.—The medical officer was eventually asked to report as the chairman had suggested.

AUSTRIA

A public meeting was held in Vienna on Jan. 5th for the purpose of forming an anti tuberculosis union in Austria. Count Lützow was elected president and nearly £5000 were subscribed.

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN 76 of the largest English towns 8487 births and 5072 deaths were registered during the week ending Jan. 17th. The annual rate of mortality in these towns, which had been 16 9, 20 0, and 18 5 per 1000 in the three preceding weeks, declined again last week to 17 5 per 1000 In London the death rate was 17 5 per 1000, and was equal to the average rate in the 75 other large towns. The lowest death rates in these towns were 5 3 in Hornsey 5 7 in King s Norton, 8 1 in Tottenham, 9 7 in Barrow in Furness, 9 9 in Bournemouth 10 0 in Rotherham, 10 1 in Burton on Trent, and 11 0 in Warrington , the highest rates were 21 7 in Birmingham 21 8 in Wigan, 22 3 in Stockport, 22 4 in Swansea, 23 5 in Ipswich, 23 7 in Norwich, 24 3 in West Bromwich 24 8 in Tynemouth, and 31 8 in Bootle. The 5072 deaths in these towns last week included 450 which were referred to the principal infectious diseases, against 494, 602, and 504 in the three preceding weeks , of these 450 deaths 130 resulted from measles, 105 from whooping cough, 69 from diphtheria, 57 from diarrhœa 52 from scarlet fever, 31 from "fever" (principally enteric), and six from small pox. No death from any of these diseases was registered last week in Southampton, Reading, King's Norton, Smethwick, Aston Manor, Wallasey, Rochdale, Middlesbrough, or Rhondda , in the other towns these principal infectious diseases caused the highest death rates in Hanley, Walsall, West Bromwich, Stockport, Manchester Salford, Preston, Tynemouth, and Swansea. The greatest proportional mortality from measles occurred in Wolverhampton, West Bromwich, Wigan, Manchester, Salford Hull, Tynemouth Newport (Mon), and Swansea , from scarlet fever in West Bromwich and St. Helens , from diphtheria in Coventry, Stockport, and Bury , from whooping cough in Hanley, Stockport and Preston , and from diarrhœa in Walsall, Burnley, and Swansea. The mortality from "fever" showed no marked excess in any of the large towns. The six fatal cases of small pox registered in these towns last week belonged respectively to London, Hanley, Liverpool, Bootle, Manchester, and Huddersfield. The number of small pox patients under treatment in the Metropolitan Asylums hospitals, which had declined from 21 to 10 on the four preceding Saturdays, had further decreased to five on Saturday, Jan. 17th , two new cases were admitted during last week, against one and four in the two preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital at the end of the week was 2128, against 2523, 2378, and 2219 at the end of the three preceding weeks , 195 new cases were admitted during the week, against 205, 214, and 223 in the three preceding weeks The deaths referred to diseases of the respiratory organs in London, which had been 343, 415, and 354 in the three preceding weeks, further declined last week to 310, and were 249 below the corrected average number Influenza was returned as the primary cause of death in 34 cases last week, against 28, 37, and 39 in the three preceding weeks The causes of 75, or 1 5 per cent., of the deaths in the 76 large towns were not certified either by a registered medical practitioner or by a coroner All the causes of death were duly certified in Croydon, West Ham, Leicester, Nottingham, Cardiff, and 40 other smaller towns , the largest proportions of uncertified deaths were registered in Birmingham Liverpool, Bootle, St. Helens, Sheffield, Middlesbrough, Sunderland, South Shields, and Gateshead

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 21 3, 21 6, and 22 6 per 1000 in the three preceding weeks, further rose to 23 4 per 1000 during the week ending Jan 17th, and was 5 9 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 17 8 in Edinburgh and 19 8 in Dundee to 25 3 in Glasgow and 29 8 in Aberdeen The 766 deaths in these towns included 32 which were referred to whooping cough, 18 to diarrhœa, 12 to measles, six to diphtheria, five to scarlet fever, and three to "fever," but not one to small pox. In all 76 deaths resulted from these principal infectious diseases last week, against 59, 77, and 78 in the three preceding weeks. These 76 deaths were equal to an annual rate of 2 3 per 1000, which was 0 7 per 1000 above the mean rate last week from the same diseases in the 76 large English towns The fatal cases of whooping cough, which had been 33 and 24 in the two preceding weeks, rose again last week to 32, of which 23 occurred in Glasgow, three in Edinburgh three in Leith, and two in Aberdeen The deaths from diarrhœa, which had been 14 and 22 in the two preceding weeks, declined again to 18 last week, and included six in Glasgow, four in Dundee, two in Edinburgh, two in Aberdeen, and two in Greenock The fatal cases of measles, which had risen from five to 15 in the four preceding weeks, decreased again last week to 12, of which five were registered in Edinburgh, five in Aberdeen, and two in Leith. The deaths from diphtheria, which had been 13 and seven in the two preceding weeks further declined to six last week, and included five in Glasgow The fatal cases of scarlet fever, which had been three in each of the three preceding weeks, increased last week to five, of which two occurred in Glasgow, where two of the three deaths from "fever" also were registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 193, 158, and 152 in the three preceding weeks, rose again last week to 174, but were slightly below the number in the corresponding period of last year The causes of 27, or nearly 4 per cent., of the deaths in these eight towns last week were not certified

HEALTH OF DUBLIN

The death rate in Dublin, which had been 24 6, 29 4, and 26 8 per 1000 in the three preceding weeks, rose again to 30 0 per 1000 during the week ending Jan. 17th During the past four weeks the death rate has averaged 27 7 per 1000, the rates during the same period being 18 5 in London and 19 2 in Edinburgh. The 218 deaths of persons belonging to Dublin registered during the week under notice showed an increase of 23 over the number in the preceding week, and included 16 which were referred to the principal infectious diseases, against 21, 23 and 14 in the three preceding weeks , of these six resulted from "fever," four from diphtheria, three from measles, two from whooping-cough, and one from scarlet fever, but not one from either small pox or diarrhœa. These 16 deaths were equal to an annual rate of 2 2 per 1000, the death-rates last week from the same diseases being 1 5 in London and 1 9 in Edinburgh The deaths referred to different forms of "fever," which had been four, two, and two in the three preceding weeks, rose again last week to six. The fatal cases of diphtheria, which had been three, myself while in Calcutta on the Royal Society s Malaria mission examined 80 such *cases of malarial cachexia,* n none of these did we find parasites, pigmented cytes, *or an increase of the large mononuclear leuco-* Post mortem there was pigment in the organs but no parasites *It can serve no useful purpose to classify* cases with those in which there is an active infection para ites in the blood Those who are responsible for statistics, civil and military have at present no option them. They would as a whole, I think, welcome a ge which would give to the figures a more definite ning than they now bear

I am, Sirs, yours faithfully,
J W W STEPHENS
17th 1903 Lecturer Liverpool School of Tropical Medicine.

WEATHER AND SMALL-POX

To the Editors of THE LANCET.

RS,—Thinking that the subjoined fact taken from Mr liam *Digby's lately published* work, "Natural Law in estrial Phenomena" (William Hutchinson and Co), may rest your readers I venture to send it to you. The above or has given a full and remarkable account of Mr Hugh nents's investigations on "weather forecasting" for many rs past, and whilst treating of lunar cycles makes the follow statement ' The next lunar cycle in order is that of 130 rs. This cycle contains the lunar node cycle of 18 6 years seven times and is a multiple of the 10 and 13 years' ar cycles *The weather* of 1902 and of 1772 is so similar t there were ***small-pox epidemics*** in both years" (p 321)

I am, Sirs, yours faithfully,
n. 15th 1903. ALFRED HAVILAND

A DISCLAIMER

To the Editors of THE LANCET.

IRS,—*Some weeks since I received* a book of testimonials ating to a product known as "odol," and I was astounded see that one of *them purported* to have been given by me t once wrote to the proprietors pointing out that I had er given the *testimonial* in question, nor, in fact, pressed any opinion of my own about their product, and uesting that it should at once be cancelled I received in ly a courteous letter acknowledging that I had never given estimonial or *authorised* the use of my name in connon therewith and promising to take steps to prevent its ther publication.

n a copy of the book which reached me from the office t night the testimonial again appears, the proprietors parently considering that I ought to be satisfied with a y "erratum" in a corner of the last page. In order to clear self of any complicity in the matter I trust that you will w me to repudiate all responsibility in connexion with s unauthorised use of my name, an abuse which has drawn n me the notice of the Censors of the Royal College of ysicians of London. It is within my knowledge that at st one other testimonial therein contained has also been blished without authority

I am, Sirs, yours faithfully,
ALFRED S GUBB, M.D Paris.
ower-street W C Jan. 17th 1903

⁂ The proprietors of "odol" will, we trust, see the reme impropriety of the conduct imputed to them and ll take steps to remedy the mischief and to obviate its urrence.—ED L.

THE HUNTERIAN MUSEUM

To the Editors of THE LANCET

SIRS,—I would like to invite the attention of the museum mmittee to the growing practice of holding tutorial classes the Hunterian Museum, a practice which makes almost possible the study and research for which such a museum intended Sometimes I notice that the instruction or ther coaching, has no reference to the specimens, and the useum thus becomes a class-room for the unattached ammer As the various medical schools are equipped with useums for the purpose of elementary instruction I would k that the Hunterian Museum be reserved for silent study ly

I am, Sirs, yours faithfully,
Jan. 17th 1903. M.D LOND , F R.C S.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT)

The Great Coronation Durbar some of the Medical and Sanitary Arrangements —The Plague Mortality

IT is no small thing to make medical and sanitary arrangements for a camp containing 150,000 people and covering an area of nearly 40 square miles. Practically the whole of this vast undertaking is in the hands of a special staff, with Colonel C J Bamber, I.M.S , as administrative sanitary officer , Colonel H. B Thornhill I.S O , as executive sanitary officer , Major F Wyville Thomson, I.M S , as chief assistant administrative officer , and Captain C H. James, I.M S , as special plague officer The numerous camps, including the military are grouped into six sanitary circles, *each with its* sanitary inspector and large staff *of sweepers* There is a medical *officer in charge of each camp* , a *hospital* tent with staff has also been arranged for each camp For *infectious diseases, including* plague, there are four segregation hospitals. For ordinary illness provision is *made for treating* cases in *their* own tents by the medical officer in charge, but if serious there is the Civil *Hospital* in the city For natives there is a hospital of 50 beds in addition to the camp tent hospitals which also act as outdoor dispensaries. Those are very briefly the medical arrangements The water supply is partly from the water works of the city and partly from wells The latter have been utilised because many natives will not use pipe water The chief supply has been *distributed* from the water works in iron pipes This has amounted to nearly 2,000 000 gallons a day—about double the ordinary supply Running through the huge camp is a canal from the river Jumna which has been largely availed of for the purposes of watering the roads. The water from the works is pumped up to a reservoir on the "ridge," from which it is distributed throughout the camp at a fairly good pressure, standposts being very numerous The water supplied for drinking is, I am told, of satisfactory purity The wells have all been cleaned out and treated with permanganate of potash and each well has a guard of two men to prevent its being contaminated Bathing, except where special arrangements are made in tents, has to be done in the Jumna or canal and the washing of clothes is only permitted in the river The excreta are removed from the tents to iron receptacles, one of which is supplied for every 50 persons. The receptacles are carted some distance off and the night-soil is deposited in trenches. This is the general rule but some of the camps have arranged for trenching close at hand. Latrines are provided for servants and public urinals, consisting of a mat-screen surrounding a heap of sawdust or pulverised dry earth, are freely distributed. These latter have been found inoffensive, but the material *requires to be* stirred up from time to time. Waste water and other refuse from the kitchens are disposed of in absorption pits, *consisting* of holes dug in the ground and filled with broken bricks, and bath water from tents is thrown on grass plots or flower beds. It is not the individual details which are of interest but the vastness of the collective preparations and up to the present (Jan. 2nd) all the arrangements have worked exceedingly well, but the strain on the staff *during* the *present* busy week is tremendous.

I regret to have to record the death from appendicitis of Dr E C Pettifer one of the special plague medical officers in Calcutta He formerly practised in Essex, but *since 1897* has been doing plague work in India.

The mortality from plague throughout India *continues to* rise. For the week ending Dec 20th 14,203 deaths are recorded, compared with 13,415 in the *preceding* seven days and 9198 in the corresponding week last year The Bombay Presidency returns 7056 deaths , United Provinces, 1639 , the Punjab, 1734 , Mysore State, 871 , Hyderabad State, 641 , Madras Presidency 478 , Berar, 316 , Bombay City, 130 , Karachi, 16 , and Calcutta, 22. There is an increase in Madras, Bengal, and United Provinces but reduced numbers are returned for Bombay and the Punjab The epidemic, however, is spreading Plague has been officially declared at Jubbulpore and also for the first time in Lucknow In several important cities it is developing —viz., in Benares Allahabad, and Meerut. Inoculation for plague in the Punjab is to be recommenced during the second week in January at those places where the natives show a disposition to take advantage of it. Although there of that "viscosity of blood" spoken of by Professor Allbutt, which I take to be blood more or less charged with products of imperfect metabolism. But arterial contraction has also a more common cause, probably in the central nervous system. It is an intermittent condition that may long precede any definite cardio-vascular changes I doubt whether one meets with raised blood pressure in association with arterio sclerosis which is not due to associated arterial contraction and which cannot be relieved temporarily by a dose of a vaso-dilator drug or modified more permanently by other medicinal and dietetic treatment.

I am, Sirs, yours faithfully,

Wimpole-street Jan 17th 1903 R. DOUGLAS POWELL

RIGHT-HANDEDNESS AND LEFT-BRAINEDNESS

To the Editors of THE LANCET

SIRS,—I have no objections to make to Dr James More's communication on Right-handedness and Left brainedness in THE LANCET of Jan 17th p 200, except that it does not touch the point which most interests me It is true that my letter in THE LANCET of Dec 13th, 1902, p 1658, like all the others, was headed "Right-handedness and Left-brainedness" but neither of these subjects did I discuss, I did not, indeed, offer any speculations at all but dealt only with facts and common knowledge I maintained that in a large number of movements one could use only one hand or the other in a given way and therefore there was no such thing as ambidexterity in the sense in which many persons use the term. Dr More only alludes to the subject when he speaks of the weaver and calls him ambidextrous but does not inform us how the hands were used. I apprehend that, as usual, the two hands were employed for a common purpose and not that they were used in the same manner—which would have been purposeless—but mutually aiding each other by their own special action. I have no objection in using the term in this sense, that is, that the weaver was dextrous or skilled with both hands and not that he was doubly right-handed, although it is not usually employed in this sense for then a violin player would be the best example I know of an ambidextrous man, where each hand is educated for its own special movement.

I do not deny that when a person has lost his right arm he can learn to write in the usual manner with his left, but he does so only after a long time and effort as he is bringing into use quite another set of muscular movements. In the case of the screw, a left-handed workman acts with great disadvantage in having to use pronators for supinators, &c. Many children have a great difficulty in using different sets of muscles in playing the scale They easily enough accomplish it with the right hand, beginning with the thumb and proceeding outwards, but to accompany this with the left beginning with the little finger and proceeding inwards is often a difficult task. This in one sense is being ambidextrous

I think that ambidexterity is not intended to apply to the case where the left hand copies the right as happens in the left handed writer, nor does it apply to the pianoforte player, nor do I think it is ever used for the person who is skilled in the use of both hands for different purposes, as the weaver or violin player I think that it is generally understood to mean the case where a person can use equally well his left hand and his right for the same object If so he must employ the corresponding muscles with their similar nerve supply, the movements are necessarily different although the object to be obtained is the same An ambidextrous surgeon obtains an advantage in this by not moving his position, so does the ambidextrous waiter who carves the fowl without turning it round, and that the left-handed bowler goes out of the usual course is well known to the batsman. Would it be an advantage to educate the legs equally so that he could mount a horse as well on its right as on its left side?

I am, Sirs yours faithfully

Jan 20th 1903 SAMUEL WILKS.

CONGENITAL HYPERTROPHIC STENOSIS OF THE PYLORUS

To the Editors of THE LANCET

SIRS,—I was much interested in reading the paper upon Congenital Hypertrophic Stenosis of the Pylorus, communicated by Dr E. Cautley and Mr C T Dent at a recent meeting of the Royal Medical and Chirurgical Society[1] In the discussion which followed the majority of the speakers, in referring to the etiology of this remarkable affection, favoured the view that the increased muscular tissue encircling the pylorus was due to spasm or abnormal innervation, while others considered the condition to be one of primary hyperplasia and not of hypertrophy For my own part I believe the arguments advanced by Dr Cautley and Mr Dent in favour of a primary hyperplasia to be convincing But there still remains the question, What is the cause of the primary hyperplasia?

My object in writing is to make a suggestion. In many of the mammalia the pylorus is provided with an excessive thickening of its muscular wall for reasons essential to the welfare of the animal and which need not now be discussed This muscular pyloric collar is well marked in the Bruta and in Vol III of the "Anatomy of the Vertebrates," by the late Professor Owen, there is on p 448 a drawing of the stomach of the great ant-eater which resembles so closely the condition found in so called congenital hypertrophic stenosis of the pylorus that I venture to suggest, while the etiology of this condition is "still in the nebulous regions of hypothesis," that the primary hyperplasia may be due to a reversion to an original type.

I am, Sirs, yours faithfully,

Liverpool Jan 15th 1903 R. W MURRAY

HOSPITAL FINANCE

To the Editors of THE LANCET

SIRS,—The Local Government Board states that it is advised that phthisis is a disease for which hospital provision may be provided at the cost of the rates, there are thus three common diseases—phthisis, enteric fever, and diphtheria—for which provision is made and of which cases, if admitted into general hospitals, are admitted to the exclusion of cases for which no provision is made, unless, that is, the infectious cases are paid for, nevertheless, these cases are admitted into general hospitals and in considerable number, and that for three reasons (1) they are too ill to be sent away, (2) they cannot be diagnosed with certainty and therefore cannot be certified, and (3) the physicians take much interest in such cases. It is stated that the Metropolitan Asylums Board, though ready enough to pay for cases when its own hospitals are full, is not willing at other times to do so, but it is difficult to see why the Board should refuse (if indeed it does refuse) to pay at any time for cases under No 1 or under No 2, for patients are not benefited by a long ambulance ride The financial importance of the matter will be seen from an example in one general hospital during one year among 3138 admissions there were 63 cases of phthisis, 90 cases of enteric fever and 65 cases of diphtheria, under the head of in patient payments there is £233, most if not all of which, must be presumed to come from the Asylums Board, but if all the infectious cases had been paid for the amount should have been about £1097—a valuable set-off against the £2650 required for rates and taxes.

I am, Sirs, yours faithfully,

Devonshire-place W Jan 16th 1903 WALTER EDMUNDS

THE NOMENCLATURE OF MALARIA.

To the Editors of THE LANCET

SIRS,—It will interest Lieutenant-Colonel D Bruce to know that at the malarial conference held at Nagpur C.P., Christmas, 1901, resolutions similar in spirit to his proposals were passed by the members there present. The first resolution was to the effect that the classification of malarial fevers should be based where possible on a microscopical differentiation of the parasites. The limitation "where possible" was agreed to by some, including myself, with reluctance, although we fully realised that the doctor babu or hospital assistant, or even the village chowkidar, was responsible for a considerable portion of the figures that make up the Serbonian bog of Indian 'fever" statistics The conference was further almost unanimous that the term "malarial cachexia" should be reintroduced into the classification and a resolution to that effect was, I believe, forwarded to those responsible for the present nomenclature of ague or remittent fever Lieutenant S R. Christophers, I.M.S., ployed at the Mond nickel works at Clydach, near nsea, died from what appeared to be the effects of soning by some obscure substance given off during the cesses on which they were engaged. Both men were for several days before their death, and their symptoms e similar to those exhibited by other men who had been cked in the previous months but who had recovered. e most prominent features in all the cases were headache, diness, high fever and rapid breathing Post-mortem mination in the two fatal cases revealed a fatty and in instance a dilated heart. The Mond Nickel Company s very anxious to ascertain the cause of these fatalities and F W Tunnicliffe of King's College, London, and Mr H G mmer of St. Mary's Hospital were accordingly associated h Dr John Jones, the surgeon to the works, in making ull investigation. These gentlemen were later assisted Dr J F Payne, Dr F W Mott, and Dr Otto hner The conclusions which were arrived at, and which re given to a coroner's jury on Jan. 13th by Dr Tunni-ffe, were that ' death was caused by nickel carbonyl, substance inhaled from the dust given off during ployment, which, although the immediate symptoms of it re transient, caused after a short time degeneration of tain parts of the nervous system,' and that this subnce also in all probability produced a change in the con ion of the blood." Further investigations are being made h regard to the scientific aspect of the question.

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[1] THE LANCET Dec. 20th 1902, p 1679

an. 19th.

SCOTLAND

(FROM OUR OWN CORRESPONDENTS.)

The New Principal of the University of Edinburgh.

IR WILLIAM TURNER, President of the General Medical uncil and Professor of Anatomy in the University of nburgh has been appointed Principal of the University place of Sir William Muir

Inter-Universities Conference in Edinburgh.

The annual conference of students' representatives from Universities of Edinburgh, Glasgow, Aberdeen, and Andrews took place in Edinburgh at the end of last week. e conference was held in the hall of the Union and was sided over by the chairman of the students representative ncil of Edinburgh University who welcomed the repre-tatives from the other universities. Sir William Muir was present and extended a warm welcome to the repre-tatives. He stated in the course of his remarks that t was the last University function in which he uld take part before he laid down his office. This ference is the fifteenth which has been held alter ely in the different universities Amongst the motions posed and carried by the conference were some of dical interest One was that a petition should be sent the senatus of each university other than Aberdeen to titute a double final examination in medicine, as is at sent done in Aberdeen, the adoption of this by the versities would be a great boon to the students, for at sent failure means having to spend another year to be content with a college qualification Another tion dealt with the need of reform in the medical rriculum. The main point which made the curriculum satisfactory was the present position of surgery and teria medica. The proposer of this motion did not lerstand how any body of men allowed the curriculum at present arranged to be foisted on to the universities, the fact is this notion is erroneous for there can be no ubt that the place of surgery in the early part of the dical curriculum is a relic or survival of the old apprentice-p days and of the ideas which were then supreme. Now sted interests and conservative sentiment uphold what is ically untenable. Another motion approved of the division the academic year into three sessions or terms. The al motion put on record the opinion of the conference at more attention ought to be devoted to physical train g than is at present done in the universities. Another bject which was mooted, but not discussed, had for its ject the possibility of establishing a universities magazine d of approaching Mr Carnegie to see if he would endow ch an undertaking The conference wisely decided not to scuss this matter as it was not on the billet of business om this it will be seen that there is a growing democratic fluence in the Scottish universities which might become very powerful were it not that the students are only a few years at the universities and are senior students before their opinions on many subjects carry any weight. In this conference they have shown much judgment in the motions they adopted.

Edinburgh University Union Extension Scheme

A large public meeting in support of the Edinburgh University Union extension scheme was held in the M'Ewan Hall on the afternoon of Jan. 13th. The hall was crowded, the galleries being occupied by students who had been granted a half holiday Much disappointment was felt at the absence of the Prime Minister who, as Chancellor of the University, was to have presided over the gathering Mr Balfour's sudden indisposition had, however, made it impossible for him to be present The chair was taken by the Lord Rector, Sir R. B Finlay, K.C, M P, Attorney General for England. He was supported by, among others, Lord Robertson of Forteviot (a former Lord Rector of the University), Lord Kinross, Lord Kinnear, Lord Stormonth Darling, a large number of the professorial staff, and many citizens interested in the scheme. Apologies were read from the Chancellor, from the Principal, Sir William Muir, and others. The Lord Rector who was received with great applause referred with regret to the disappointment they had all received from Mr Balfour's enforced absence that afternoon Their only consolation was that their cause was so good a one that they trusted it would not suffer in consequence. He himself felt that he had perhaps one qualification for speaking on behalf of the Students' Union, that qualification being that he had known the Edinburgh University very well 40 years ago and was therefore pretty well qualified to recognise the enormous stride that had been made in the development of university life, thanks to the foundation of the union which they were there that afternoon to support In his student days the students were very much isolated, there being no collective university organisation for bringing them together In their Scottish universities they had not developed the college system of universities in England and what they had to aim at was the development of a collective university life. This was one of the great features of the union which they had met together for the purpose of supporting and extending The union also played the important part of forming a common meeting place for students of arts and medicine who in former days saw very little of each other The union had achieved a great success, but much remained still to be done, and if it had not been for its success in the past they would not be met there that day with the feeling that it was imperative in the interests of the University to do what in them lay to promote the extension of the union. The debating hall he considered a part of the building which could hardly be improved upon It was such as some senates might almost envy The University debates were to his mind a great feature of the life which the union promoted Extension was needed in the dining room, in the library and in the facilities for outdoor and indoor recreation The opportunity now presented itself for having those changes made They had the option of getting the ground required for the additional buildings and he trusted that in the near future they would be able to announce to the students of Edinburgh that they were at last in possession of a union adequately fulfilling all their requirements Lord Robertson who was cordially received, then read a motion in which the meeting pledged itself to do all in its power to assist in raising the necessary funds for the extension of the union. In subsequent remarks he dwelt specially on the value of the union as a social and educative centre for the students outside their classes and he struck an important note when he reminded them that as it was one of the honours of the University that there would be always a large number of poor men among the students any institution which was to reap the best and most complete thought of the University should do nothing which would make it difficult for a poor man to resort to the union. There would be, he was sure such a standard of living and such ideas of industry and of conduct as would not detract from but would merely develop and give fuller play to the old ideas that had done so much for the University The motion, which was seconded by the President of the Students Union, was put to the meeting and was carried by acclamation. An acting committee was then appointed. After a vote of thanks to Sir Robert were *statements* a short time ago that plague had broken out in Delhi there is no available information that it has as yet developed to any serious extent. There has not been any anxiety about the camp because even if introduced there it is not at all likely to spread We shall probably hear of it again in the city before long

The honours bestowed on Major Ross by a foreign Government have been noticed by the press in India and comment is made upon the absence of any recognition while on service in India It is also recalled that Major Freyer and Colonel Keegan who have so distinguished themselves on the surgery of the bladder, more especially for stone, likewise passed out of the service without notice.

Jan 2nd

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT)

Cancer Investigation

THE investigation into the origin and the cure of cancer is, thanks to the munificence of Mr T Sutton Timmis to become an important branch of local scientific pursuit That gentleman has vested in trustees a sum of £10,000 to initiate *systematic research*, which will be carried out at the Liverpool Royal Infirmary (according to the wish of Mr Timmis who is the President of the Royal Infirmary) and the new laboratories of experimental medicine at University College. The trustees of the fund are Mr H Wade Deacon and Mr Henry Timmis The committee which will carry out all the scientific arrangements consists of Dr James Barr, Dr William Carter, Mr F T Paul, Professor Rubert W Boyce, F R.S , Professor C S Sherrington, F R.S , together with the senior physician and the senior surgeon of the Royal Infirmary for the time being as members *ex officio*

Small-pox in Liverpool and its Neighbourhood.

The report of the medical officer of health of Liverpool showed that during the week ending Jan. 10th there were under treatment in the city hospitals 245 cases of small pox and that 59 cases had been reported during the week, as against 48 in the previous week. There were six fatal cases during the week. During the current week, I am informed, there is a slight diminution in the number of fresh cases notified. *The three cases of small* pox which occurred at St Helens on Jan 17th have been closely followed by one at the other side of the borough—viz., Thatto Heath. A collier working at the Sutton Heath Colliery was found on the 19th to be suffering from the disease in an advanced stage. This makes the eleventh case in St. Helens district Two of the earlier patients will be discharged from hospital this week

Memorial to the late Chairman of the David Lewis Northern Hospital

A series of beautiful pictures illustrating sacred subjects, which has been placed in the reredos of the chapel in the David Lewis Northern Hospital in memory of the late Mr J E Sheppard, for 16 years chairman of the hospital, was unveiled on Jan. 8th in the presence of a distinguished company References were made to the many excellent qualities of the deceased gentleman. The memorial has been provided by the committee, medical staff, and friends of the hospital.

Liverpool Country Hospital for Chronic Diseases of Children.

An interesting entertainment, arranged by the Misses Holt of Alexandra Drive, took place on the evening of Dec. 30th, 1902, at the Church Hall, Ullet-road, when an excellent dramatic recital was given by Mr John Harwood of Manchester in aid of the Country Hospital for Chronic Diseases of Children, now in course of erection at Heswall. Mr R. D Holt, the father of the Liberal candidate for the Parliamentary vacancy in the West Derby division of Liverpool, presided over a large and appreciative audience. At the close of the entertainment "free-will offerings" were invited, to which there was a generous response, and a pretty feature on the occasion was the collection by 12 young children each wearing a favour of pale blue ribbon and white heather Miss E. G Holt and Mr Andrew Gibson have contributed £500 each in aid of the building fund.

Jan 20th

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

The Mumbles Oyster Beds.

A GREAT deal of indignation is being expressed by the members of the Oystermouth district council, within whose area of administration are situated the celebrated Mumbles oyster beds, at the report submitted to the Worshipful Company of Fishmongers by Dr Klein upon the Mumbles oysters Dr Klein in his report stated that half of the oysters examined contained bacillus coli communis and one out of six *contained spores* of bacillus enteritidis and he concluded, therefore, that there was sewage pollution, but only to a limited extent. The sewage from the Oystermouth district is discharged into the sea about 200 yards beyond the oyster beds and it has been proposed that the outfall should be carried out still further, although, as the population of the district is less than 5000, *the safest and most practicable plan* would appear to be to treat the sewage on land and to discharge the effluent into the sea. At a special meeting of the Glamorgan sea fisheries board a disposition was shown to dispute the accuracy of Dr Klein's conclusions, one member even hinting that it was to the interest of the Fishmongers' Company who are large oyster planters, to pollute the samples examined "Some one," he said, 'might have dipped the oysters into a sewer for all they knew" The interests of the district are not likely to be served but by such utterances as this. Further bacteriological examinations are now being made independently by the Board of [illegible] and by the Glamorgan sea fisheries board.

Examination of Water supplies

Although it is no part of their duties as prescribed by the Local Government Board many medical officers of health in rural districts are expected to make an analytical examination of samples of water sent to them for the purpose. As no special payment is made for this additional labour *it is hardly to be expected* that a [illegible] detailed examination can be made and the experience of a medical officer of health in a rural district of Somersetshire may serve as a warning to those medical officers of health who in the past have made preliminary analyses of samples of water procured from supplies within their districts A water which this gentleman had analysed and had found to be free from the impurities ordinarily found in polluted samples was subsequently submitted by the county analyst to a more extended examination and was found to contain strychnine and traces of arsenic suggestive in the opinion of the analyst of rat poison.

Notification of Measles

The Pontypool rural district council has *added* measles to the list of diseases compulsorily notifiable within the district the addition to remain in force for at least five years—a condition insisted upon by the Local Government Board, the period in the opinion of the Board being necessary to allow a fair time to judge of the results

Newport Workmen's Hospital Fund

A sum of over £1200 was subscribed last year to the Newport and County Hospital through the weekly collections of the workmen in the town of Newport

Bristol University College Colston Society

The annual dinner of this society was held on Jan. 13th *under the presidency of the* Bishop of Bristol. There was a large gathering, including Sir J Crichton Browne who was the guest of the evening and *delivered an* interesting speech in the course of which he alluded to the pressing need there was for Bristol to take up the movement for initiating a university for the west of England with its seat at Bristol The collection amounted to £374

Medicine or Refreshment?

The recorder of Bristol had a somewhat curious point to decide on Jan. 10th A refreshment-house keeper had been fined by the bench of magistrates for selling refreshments after 11 P M The "refreshments" consisted of "sarsaparilla and dandelion stout," which the defendant contended were medicinal compounds. The recorder upheld the conviction.

Nickel Carbonyl Poisoning

During the first week of December last two workmen

PARIS

(FROM OUR OWN CORRESPONDENT)

Medicine at a Discount.

THE increasing difficulty which a present-day medical man periences in making a living by the exercise of his profession ds expression in concessions which are not only regrettable t are also seriously compromising to the dignity of that ofession The council of the Syndicate of Medical Men the Department of the Seine has just been consider g certain circulars sent out by some newly qualified dical practitioners which have been distributed to tain families in well to-do circumstances living within said practitioners' sphere of work These circulars offer dical attendance on a whole family by contract, the arly subscription being very small. The council of the ndicate decided that such practice was both culpable and ngerous and resolved that the said practitioners should be mmoned before the syndicate and that the president ould endeavour to make them understand the gravity their position This procedure is, unfortunately the only e in the power of the syndicate to carry out At Tarbes the endly societies, encouraged by the Government which nsiders that their action is a moderate and practical rm of Socialism, have increased to about 20 in number d include a quarter of the whole population, the maining three-quarters of the inhabitants being classed as digents. These friendly societies succeeded in imposing the medical men of Tarbes, whose only paying patients ey were, the condition that they should attend a family r 10 francs per annum, exclusively of major operations and idwifery cases. At the beginning of the year however, the iendly societies made a further stride and reduced the pay eight francs per family per annum, to include major erations and midwifery Thereupon the medical men of arbes unanimously struck and the friendly societies imorted from Toulouse two newly qualified medical men who st no time in accepting the reduced pay These two ractitioners now look after the health of the whole town of arbes—that is to say, so far as regards paying patients hile the other medical men see no one but gratuitous atients. There are, however, two exceptions—namely, the edical officers to the arsenal who receive 2400 francs each er annum from the War Office. But, encouraged by the xample of the people of Tarbes, the director of the arsenal et about revising the annual payment of his medical officers nd put the post up to auction, so to speak. The two actual olders of the post stood out for the old salary, while the two oung practitioners from Toulouse tendered their acceptance f the post at 1200 francs per annum, an offer which the uthorities promptly accepted. The Tarbes syndicate of edical men thereupon sent in a protest to the Minister of Var but most probably they will gain nothing by this action.

Further Results of the Workmen's Compensation Act

I have at various times given your readers some account of he working of the Workmen's Compensation Act which nakes the employer responsible for accidents sustained by a vorkman in the course of his employment and obliges him to rovide medical aid at his own cost. A new point has ecently arisen—namely, when a workman refuses medical id. Sundry decisions have been given by the courts on this oint, as, for instance, the following The court of Rennes has ecided that if a workman refuses medical aid and finds himself thereby incapacitated, the employer is released from any obligation to repair the wrong which the workman has inflicted on himself. The court of Amiens has refused to adjudge a pension to an injured workman who refused medical aid, but has simply allotted him an indemnity for temporary disablement. The court considered that his permanent disablement was due entirely to his refusal to submit to measures which the medical men considered would have completely cured him. Other courts have adjudicated on cases in which a workman refused to submit to an operation which would have enabled him to do at least some work The court of Besançon has decided that if a workman upon whom an operation had been performed refuses to allow any further treatment which would be neither dangerous nor productive of pain he cannot hold his employer responsible for any complications which may arise The court of Aix has decided that a workman is within his rights in refusing to submit to an operation, even a slight one, which it is considered necessary to perform for his cure or relief, but that in such case the employer cannot be held responsible for any complications which may arise. The employer in such case is only to be held responsible for the actual wound, and the court in such cases has only awarded the workman a pension on the very lowest scale.

Obituary

Dr Henri Varnier recently died at the early age of 43 years. Born at Epernay in 1859, he became *interne* in 1882, *chef de clinique* in 1891, *agregé* in 1892, and obstetric physician to the hospitals in 1894 He succeeded in attracting the notice of Pinard, who besides admiring his work had for him a warm personal friendship and who gave him a great deal of work at the Baudelocque clinic. Varnier wrote much , his chief works, besides his thesis for the degree of Doctor the subject of which was "The Musculature of the Inferior Pelvic Strait from an Obstetrical Point of View," were the following—' An Introduction to the Clinical Study and Practice of Labour," written in collaboration with Professor Farabœuf" , "*Every day Obstetrics*" (*Obstétrique Journalière*) , " Studies in Normal and Pathological Obstetrical Anatomy," written in collaboration with Pinard , an ' Anatomical Study on Vicious Implantation of the *Placenta*," written in collaboration with Champetier de Ribes , numerous papers on Symphysiotomy , and Researches on Radiography as applied to Obstetrics For 13 years Dr Varnier directed the *Annales de Gynécologie*, on which publication he succeeded Pinard as editor of the obstetrical department. For many years, too, he wrote all the obstetrical articles in the *Revue Pratique d Obstétrique et Pédiatrie* which he himself founded in 1888.

Jan. 20th

EGYPT

(FROM OUR OWN CORRESPONDENT.)

The Medical Congress the Anatomical Museum.

ONE of the most successful items of the Medical Congress at Cairo was the collection of human remains which have recently been arranged by Dr G Elliot Smith who is working in conjunction with others for the University of California and the Egyptian Medical School. The remains date from the earliest known pre-historic times and must therefore be more than 7000 years old, and side by side with them can now be seen human relics from all the most important dynasties of Egyptian history together with Roman, Ptolemaic, Coptic, and other mummies, until we reach the modern preparations taken from the dissecting room of to-day Of these it is only natural that the greatest interest should centre round the specimens of pre-historic man. They were buried in the sand in the neighbourhood of Girgheh in Upper Egypt, without any attempt at mummifying They lie now in glass cases crouched on the left side with knees bent, preserved to us only by having been buried in dry sand. The men were buried with goat-skin aprons tied round their waists with rope and many of the women have long, curly brown hair No great anatomical differences from men of our own time have yet been discovered, but the skull was distinctly a small one, having an internal capacity of one litre, which compares unfavourably with the one and a half litres of the modern Egyptian peasant's skull or with the usual European skull of two litres.

It will take a year or two to study the anatomical peculiarities, but it appears at first sight that the prehistoric sacrum resembles that of the gorilla rather than that of man. The collection is made more interesting by photographs taken *in situ* of the cemetery and of many of the bodies lying huddled up together before removal Dr Reissner is still working on the spot and has some 70 additional graves to examine during this winter The men and women seem to have been buried together and most of the graves have been plundered in bygone times in order to steal ornaments, especially from the women. Many of the latter have been decapitated in order to remove the ivory ring which they wore round their necks. Some of the soft parts can be seen with the greatest ease. The shrunken brains lying within the skulls still show well marked convolutions, the eyes of many have been preserved, and the lens in some eyes can be distinctly seen, probably due to senile cataract. Dr Smith has been able to demonstrate instances of the subclavian artery, diaphragm, larynx, trachea, and bronchi, sigmoid flexure of the colon, false ligaments of the bladder sacral plexus, &c Many of the intestines contain lumps of fæces which could easily be recognised and

Finlay the proceedings terminated Tea was served in the union at the close of the meeting

Small-pox in Leith

Two cases of small pox are reported as having occurred in Leith. The infected persons are a seaman and a fireman who were engaged on board a steamer which arrived from Riga on Jan. 13th The circumstances connected with the outbreak are that at Riga one of the crew was landed and taken to hospital as he was believed to have small pox. Two days later the authorities said that he was suffering from chicken pox and he was allowed to return to his ship Another of the crew became ill and went to his own home in Leith where he was seen by a medical man who reported him to the medical officer of health as a suspected case of small pox. The sick man was at once removed to the small pox hospital and the medical officer of health visited the steamer and found the man who had been seized at Riga at work on the ship and also learned that he had been engaged in discharging the steamer's cargo This first patient was also removed to the small pox hospital but if he continued to be infective it is impossible to calculate the possible harm that may have been done in the meanwhile Those who have been in contact with the two men have been either isolated or are under medical supervision

Aberdeen University Medical Society

At a meeting of this society on Jan 16th Mr G Grant Macdonald, M A., read a paper on Conservatism in Surgery Mr F Hernaman-Johnson followed with a paper on the Pros and Cons of Vivisection. Both papers were most interesting and were awarded hearty votes of thanks

The Notification of Measles and Whooping cough in Aberdeen

The public health committee of Aberdeen town council has recommended the discontinuance of notifying measles and whooping cough. 1100 cases were notified last month, and it considered that £400 thus annually paid to medical men might be more beneficially expended Dr Matthew Hay in his report stated that during the past ten years measles and whooping cough have caused 1451 deaths in Aberdeen, while during the same period the total deaths from the whole of the other principal zymotic diseases have amounted to 671, any step which might affect the great mortality from measles and whooping cough demanded the fullest and most serious consideration.

Dr C D F Phillips has resigned the assistant examinership in materia medica at Aberdeen University owing to ill health.

Jan 20th

IRELAND

(FROM OUR OWN CORRESPONDENTS.)

Public Health of Dublin.

A NEW case of small pox has appeared in the Hardwicke Hospital whence the patient who imported the disease from Liverpool was removed for treatment. The matter seems to be rather serious on account of the congested condition of that part of the city and of the proximity of large public institutions such as the Richmond Surgical Hospital and the Richmond Lunatic Asylum. On Jan. 10th another meeting of the public health committee was held under the presidency of the Lord Mayor to fix a site for the long-deferred isolation hospital After considering the local opposition to several proposals the committee made no selection but decided that if another urgent case of small pox presented itself the patient should be isolated at the Pigeon House· Sir Charles Cameron is reported to have said that he thought it improbable that any outbreak of small pox would take place in the city in the immediate future The report of the Cork street Fever Hospital is generally a good index of the health of Dublin as regards zymotic disease The committee met on Jan. 8th and the registrar's report is not very satisfactory It stated that the admissions were very high owing to the continued prevalence of scarlet fever and diphtheria, which diseases were of a severe type. Several cases of typhus fever were admitted, being in excess of any previous month for several years. Enteric fever shows continued abatement in numbers and severity The measles epidemic has nearly entirely ceased.

Dublin University Biological Association

At the opening meeting of the Dublin University Biological Association the incoming president, Dr T P C Fitzpatrick, chose as the subject of his address the Public Health Control of Consumption, and described the measures for checking the spread of the disease which have been adopted with very good results in Manchester and in New York. Sir John W Moore proposed that the best thanks of the association be accorded to the President for his address and in the course of his speech remarked that he himself did not agree with the Dublin authorities—that it was not possible to have separate wards for the treatment of consumption in general hospitals Sir Charles A. Cameron C B, in seconding the motion, pointed out that the public health committee was in favour of compulsory notification, but that the corporation itself opposed it

The Incorporated Orthopædic Hospital of Ireland.

The annual meeting of the friends and supporters of the Incorporated Orthopædic Hospital of Ireland was held on Jan. 14th in the hospital premises, Great Brunswick street, Lord Justice Walker being in the chair. It was announced that much larger and more suitable premises for the hospital had recently been acquired in Upper Merrion street at a cost of considerably more than £2000. It may interest some readers of THE LANCET to note that the house which is about to be transformed into a hospital was until quite recently one of the finest of the old residential mansions of Dublin. It is separated only by one building from the house which is, perhaps, the most famous in Ireland—Mornington House in which the Duke of Wellington was born in 1769 where Lord Cloncurry and Lord Castlereagh lived, and where "Pamela" was staying when her ill-fated husband, Lord Edward Fitzgerald, was arrested

The late Mr James O Shaughnessy, M R C S. Eng, J P., D.L.

Mr James O Shaughnessy, whose death took place in Limerick on Jan 14th in his ninety third year, was long ago a highly popular and respected medical practitioner in that city For the last two generations, however, his name has been known rather as a philanthropist and as a leader in every social project for the advancement of his fellow countrymen. Several local charitable institutions have long benefited by his care and by his open purse. He was the senior of the magistrates of Ireland and a deputy lieutenant, and he had served in the office of high sheriff and on many occasions as foreman of the grand jury of Limerick. His only son, Mr Richard O'Shaughnessy, B L., who represented the borough of Limerick in Parliament for several years, resides in Dublin and is a distinguished graduate and former scholar of the University of Dublin. He is now one of His Majesty's Commissioners of the Irish Board of Public Works.

Derry Lunatic Asylum.

At a special meeting of the committee of management of the Derry Asylum held in Coleraine on Jan 16th it was decided to adopt the report of the subcommittee which was appointed to consider the plans for the proposed new buildings at Gransha. It recommends that two villas for 3[illegible] patients each, a residence for the medical officer, and administrative, sanitation, and cooking buildings, should be erected and furnished with electric lighting, at a cost not exceeding £15,000

The Mater Infirmorum Hospital, Belfast

From the printed statement of the accounts of the Mater Infirmorum Hospital, Belfast, for the year from Nov 1st, 1901, to Oct 31st, 1902, it appears that the receipts (including a sum of £206 14s 3½d, cash overdrawn from the bank) were £4583 12s 6d Last year the overdraft was £300, so that there is a slight financial improvement this year.

Down Lunatic Asylum

In his report of inspection of this asylum Sir G P O'Farrell, inspector of lunatics, says "Each succeeding visit of inspection to this asylum satisfies me more completely of the excellent management of the resident medical superintendent and of the amount of time and thought which he devotes to the efficient and economical working of the institution. The difference between able and careful and lax and inefficient administration of an asylum means a difference of several thousand pounds a year in the cost of management, and it would be difficult to find a stronger proof of this fact than Downpatrick, where the resident medical superintendent, by formulating for his committee and for the county council an economical scheme for providing for the chronic and harmless insane of the district, and by the minute attention which he gives to the details of his duties, has effected a considerable saving to the ratepayers.

Jan. 20th

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DAY (27th)—ROYAL MEDICAL AND CHIRURGICAL SOCIETY 1, Hanover-square, W).—8.30 P.M. Papers:—Mr B G A. oynihan The Operative Treatment of Gastric and Duodenal lcers.

ESDAY (28th).—HUNTERIAN SOCIETY (London Institution, insbury-circus, E.C)—8.30 P.M. Pathological Evening

TISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY (20, Hanover-uare, W).—5.30 P.M. Paper:—Dr Buckley (Buxton) Local actors influencing Climate, with Special Reference to Subsoil.

RSDAY (29th).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED INGDOM (11, Chandos street W)—3 P.M. Card Specimens:—Mr . Warner Mr F A. C Tyrrell, Major Yarr and Mr E. T Collins. 30 P.M. Papers:—Mr J H. Parsons Primary Extra-dural Tumours the Optic Nerve.—Mr T. Snowball: Ossification of the Choroid.— r A. S Morton and Mr J H. Parsons Hyaline Nodules on the ptic Disc.—Mr L Warner: Two Cases of Tumour of the Optic erve in one of which Krölein's Operation was Performed with reservation of the Eye.

AY (30th).—ANATOMICAL SOCIETY OF GREAT BRITAIN AND RELAND (Westminster Hospital Medical School, S.W).—4 P.M. rdinary Meeting Papers:—Mr F G Parsons Mr Cameron, and r B. Harman.

TISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSO-IATION (11, Chandos-street, Cavendish-square, W)—3.45 P.M. ases:—The President, Dr Abercrombie, Mr Nourse Mr Stuart-ow and others. Paper:—Dr J Horne.

ECTURES, ADDRESSES, DEMONSTRATIONS, &C

DAY (26th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC 2, Chenies-street, W C.)—4 P.M. Dr J Galloway Clinique. Skin.) 5.15 P.M. Dr K. Grube: Hydro-therapeutics and Balneo-therapeutics.

ST-GRADUATE COLLEGE (West London Hospital, Hammersmith oad, W)—5 P.M. Mr Lloyd: Anæsthetics in Abdominal Cases.

SDAY (27th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC 2, Chenies-street, W C.)—4 P.M. Dr J E. Squire: Clinique. Medical.) 5.15 P.M. Dr D Grant: The Diagnosis and Treatment f the Various Forms of Chronic Non-suppurative Inflammation of e Middle Ear

T-GRADUATE COLLEGE (West London Hospital, Hammersmith-ad, W)—5 P.M. Mr C. Williams: X Rays in Medicine and urgery

VERSITY OF LONDON (Physiological Laboratory)—5 P.M Dr D Halliburton On the Chemistry of Muscle and Nerve. ecture on Advanced Physiology)

IONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen uare, Bloomsbury)—3.30 P.M. Dr Tooth Cranial Nerves.

ESDAY (28th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC Chenies-street, W C)—4 P.M. Mr F C Wallis Clinique. urgical.) 5.15 P.M. Dr W Lewis Jones: Recent Advances in dical Electricity

-GRADUATE COLLEGE (West London Hospital, Hammersmith d, W)—5 P.M. Mr McAdam Eccles Surgical Anatomy

ITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Bromp-)—4 P.M. Mr S Boyd Pleural Effusions and their Surgical atment. (Post-Graduate Lecture.)

DAY (29th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC Chenies-street, W C.)—4 P.M. Mr J Hutchinson, jun.: Clinique. gical.) 5.15 P.M. Dr W S Colman: The Nervous Manifesta s of Rickets

GRADUATE COLLEGE (West London Hospital, Hammersmith W)—5 P.M. Mr A. Baldwin: Treatment of Some Injuries and rgencies.

RSITY OF LONDON (Physiological Laboratory)—5 P.M Dr Brodie On the Circulation. (Lecture on Advanced Physio-)

NG CROSS HOSPITAL.—4 P.M. Mr Wallis Demonstration of ical Cases. (Post-Graduate Course.)

HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street W C)— L. Dr Penrose Demonstration of Selected Cases.

(30th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC Chenies-street, W C)—4 P.M. Mr M. Gunn: Clinique.) 5.15 P.M. Dr H. W G MacLeod: House Ventilation Drainage.

GRADUATE COLLEGE (West London Hospital, Hammersmith W)—5 P.M Dr Beddard: Angina Pectoris.

RSITY OF LONDON (Physiological Laboratory)—5 P.M. Dr Waller On the Action of Anæsthetics and Narcotics. ure on Advanced Physiology)

IAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen e, Bloomsbury)—3.30 P.M. Dr Ormerod: Disseminated osis.

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nost important that communications relating to the l business of THE LANCET should be addressed *ly* 'TO THE EDITORS,' and not in any case to any an who may be supposed to be connected with the l staff. It is urgently necessary that attention be this notice.

ecially requested that early intelligence of local events g a medical interest or which it is desirable to bring the notice of the profession, may be sent direct to ffice

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THE INDEX TO THE LANCET

THE Index to Vol. II. of 1902, which was completed with the issue of Dec 27th, and the Title-page to the Volume, were given in THE LANCET of Jan. 3rd.

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METEOROLOGICAL READINGS

(*Taken daily at 8.30 a.m by Steward's Instruments*)

THE LANCET Office, Jan. 22nd, 1903

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rain-fall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Jan. 16	30·33	S.E.	...	49	33	27	Frn.	28	Fine
17	30·13	S.E.	...	45	35	27	Frn.	29	Overcast
18	30·14	E.	0·25	45	42	29	33	35	Foggy
19	30·17	S.E.	0·06	45	45	35	41	41	Foggy
20	30·26	S.E.	0·05	52	46	41	42	42	Foggy
21	30·26	S.E.	...	47	45	40	40	41	Foggy
22	30·12	S W	...	51	46	41	42	43	Cloudy

During the week marked copies of the following newspapers have been received *Staffordshire Sentinel, Times of India Aberdeen Weekly Free Press, Daily Mail, South Wales Echo, Pioneer Mail (India) Devon and Exeter Express, Dublin Evening Telegraph Echo Bradford Observer Daily Express Globe, Trade Protection Journal Ross Gazette Medical Brief (St Louis U S.A) Knowledge Westminster Gazette Lambeth Mercury Lincoln Herald Windsor and Eton Express Derbyshire Courier Manchester Weekly Chronicle, Derbyshire Times, Yorkshire Mercury Reading Mercury Herts Advertiser Hong-Kong Telegraph, Daily Telegraph, Revue Française de Médecine et de Chirurgie, &c.*

the ethnology will be quite good enough for the class of inquirer like the gentleman who was so disappointed on going to Albania to find that the Albanians had not got pink eyes Lying in a case in the centre of the room was an almost life-sized carefully executed model of a young lady in a frilled chemise undergoing the Cæsarean operation The abdomen and the uterus were opened but the uterus had not contracted All the same its walls were rigid and seated in the interior like a water baby in a shell was a small fœtus of about seven months Passing over such strange diseases as noemus masculaire amicloplaxe tumour and gummatum we were invited upstairs to an inner sanctum to which only adults are admitted Here were shown to adults only the recent and remote effects of syphilis in both sexes the series commencing from the virgin Other exhibits included a forceps delivery a normal confinement and an embryological series of carefully made wax models Another carefully made model was one showing the sympathetic system. On the whole however the exhibition is merely a catch penny appeal to the prurient It cannot be good for all and sundry to be able to see Cæsarean sections even inaccurately represented or models of spermatozoa and the development of the fœtus Even if the upper room is strictly confined to adults we doubt the wisdom of the exhibition It *may* keep both men and women in the straight path to see a phagedænic vulva or penis or a face rotting away, but we doubt it

ZOX.

M R C S has written to us as follows — I enclose a powder which you may not have yet had experience of in your laboratory A patient of mine having taken three such powders one at 6 P.M another at 8 P M and a third at midnight woke his wife about 3 A.M thinking that he was dying He had great depression in the præcordial region, was pale with cold sweats and muscular twitchings. An analysis of these powders called Zox powders might be of service We examined the substance sent to us but not sufficient material reached us to enable us to say definitely which antipyretic or analgesic the powder contained It is very clearly an anilin synthetic either antifebrin or phenacetin but not antipyrin and we need hardly say that its ingestion without medical direction is dangerous. The directions on the box say that one powder can be taken in a cup of anything hot and that [illegible] dose can be repeated in two hours if necessary The patie[illegible] to have followed the instructions on the box

THE PROGRESSIVE MEDIC[illegible]

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practice varies The Church Missionary Society and various societies recognise a medical missionary not only as a medical man as a missionary He is responsible for the superintendence of medical mission as an agency for spreading Christianity He therefore be a member of the Church of England if he wishes to the Church Missionary Society or the Society for the Propagatio the Gospel a Presbyterian, Baptist, or Wesleyan if he goes ou connexion with their societies Your columns are hardly the plac a more detailed description of the requirements of a medical sionary in this respect. I shall be glad to answer any further quest if your correspondent will write to me direct

I am Sirs, yours faithfully,

HERBERT H. LANKESTER M.D Lond,
Physician to C M S and Secretary to Medic
Committee C.M S

Church Missionary Society Salisbury square,
London E C Jan. 13th 1903

◆

F G B will find a note on the composition of heroin that may useful to him in our issue of Dec. 3rd, 1898 p 1486. In the s issue our Berlin correspondent gives the German experience heroin An annotation in THE LANCET of Jan 20th 1900, p. deals with the value and dosage of the drug in certain cases a our issue of May 18th 1901 p 1410, there is a further note on heroin preparations

E H R—The fact that such instruments have their legitimate makes it difficult for us to denounce the advertisements. Of cou they are offensive.

R U B—In our opinion the fees no other arrangement having b made should go to the lecturer

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Medical Diary for the ensuing Week

OPERATIONS

METROPOLITAN HOSPITALS

MONDAY (26th)—London (2 P M) St Bartholomew's (1.30 P.M.) St Thomas's (3 30 P M) St George's (2 P M) St. Mary's (2.30 P.M Middlesex (1.30 P M) Westminster (2 P M) Chelsea (2 P.M Samaritan (Gynæcological by Physicians 2 P.M) Soho (2 P M) Royal Orthopædic (2 P.M) City Orthopædic (4 P.M Gt. Northern Central (2.30 P M) West London (2.30 P.M), Lond Throat (9.30 A.M) Royal Free (2 P.M), Guy's (1.30 P.M.)

TUESDAY (27th)—London (2 P.M) St Bartholomew's (1.30 P.M.)

o Cases of Congenital Dislocation of the Hip one treated by the nipulation Method of Lorenz and the other by the Open Method Hoffa.—Mr J Sherren: (1) Ankylosis of Hip following Gonoreal Arthritis (2) Secondary Syphilitic Synovitis of Elbows.— F J Poynton: Case of Atavism.—Mr J Hutchinson jun se of Macrodactylism.

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AY (30th).—Anatomical Society of Great Britain and eland (Westminster Hospital Medical School S W)—4 p.m. dinary Meeting Papers:—Mr F G Parsons Mr Cameron and r B Harman

tish Laryngological, Rhinological, and Otological Association (11 Chandos-street, Cavendish-square W)—3 45 p.m. ses:—The President Dr Abercrombie, Mr Nourse, Mr Stuart w and others Paper:—Dr J Horne.

CTURES, ADDRESSES, DEMONSTRATIONS, &c

DAY (26th).—Medical Graduates' College and Polyclinic 2, Chenies-street, W C)—4 p.m. Dr J Galloway: Clinique. kin.) 5 15 p.m. Dr K. Grube Hydro-therapeutics and Balneoerapeutics.

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DAY (30th).—Medical Graduates' College and Polyclinic 22, Chenies-street, W C)—4 p.m. Mr M. Gunn Clinique Eye.) 5.15 p.m. Dr H. W G MacLeod: House Ventilation nd Drainage.

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(Taken daily at 8.30 a.m by Steward's Instruments)

THE LANCET Office, Jan. 22nd, 1903

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Jan. 16	30·33	S.E	...	49	33	27	Fzn.	28	Fine
17	30·13	S.E		45	35	27	Fzn.	29	Overcast
18	30 14	E.	0·28	45	42	29	33	35	Foggy
" 19	30·17	S E.	0 06	45	45	35	41	41	Foggy
20	30·26	S E.	0·05	52	46	41	42	42	Foggy
21	30·26	S.E.	..	47	45	40	40	41	Foggy
" 22	30·12	S W	..	51	46	41	42	43	Cloudy

During the week marked copies of the following newspapers have been received *Staffordshire Sentinel, Times of India Aberdeen Weekly Free Press Daily Mail, South Wales Echo Pioneer Mail (India) Devon and Exeter Express Dublin Evening Telegraph Echo Bradford Observer Daily Express Globe Trade Protection Journal Ross Gazette Medical Brief (St Louis U S.A) Knowledge Westminster Gazette Lambeth Mercury Lincoln Herald Windsor and Eton Express Derbyshire Courier Manchester Weekly Chronicle Derbyshire Times Yorkshire Mercury Reading Mercury Herts Advertiser Hong Kong Telegraph, Daily Telegraph Revue Française de Médecine et de Chirurgie &c.*

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An Address

ON

ASEPTIC AND ANTISEPTIC SURGERY.

elivered at the Annual Meeting of the Harveian
London on Jan 8th, 1903,

By W WATSON CHEYNE, C B, F.R.S.
F R C S Eng,
AMINER IN SURGERY UNIVERSITIES OF LONDON
SENIOR SURGEON TO KING'S COLLEGE HOSPITAL
OF CLINICAL SURGERY KING'S COLLEGE,

Mr President and Gentlemen,—In
dential chair I have to congratulate the
ondon on the successful session which
igh standard of work which has been
linical evenings have been more
e have also had two discussions of
t seems to me that the most useful
would be in the direction of the
nd set discussions on topics of
he contribution of papers, which
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During this session we have
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delivered by Mr Alban

At the present time
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y marine sponges. These be thoroughly disinfected if for several days, the solution then during the operation sublimate solution and wrung reason whatever why marine oyed I presume that they were because they could not be dis- he second place because they were of contamination which evidently One must not, however, get into the heat is the only possible method of l experience shows that the method infecting these sponges by prolonged carbolic acid solution is perfectly satis- so no one will doubt the advantage of as a means of removing blood from a rom the advantages of marine sponges bs are really a very considerable source first place, one must be quite sure that sterilised and unless the surgeon or an o can trust does that he is very likely, as I to be offered swabs which are either not or have been only imperfectly treated. Now, perfectly sterilised or if any mistake in the l methods takes place during the operation the s a source of great danger, because however pared there is always not only the possibility bility of threads of wool being detached from nd left behind in the wound. As long as these aseptic they do not matter, but if they become they, like the stitches, become sources of irritation ent healing

STITCHES.

gery without Antiseptics

ly materials which can sterilised by heat are ployed, and apparently at trouble is taken in erilising these ligatures Apparently, also, in the practice of many surgeons catgut is entirely given up and the use of silk is diminished as far as possible Indeed, some surgeons instead of employing silk to bring together the edges of the wound have given that up and fix the edges together by metal clamps. The ligatures after removal from the steriliser are placed in salt solution till required.

Limited Use of Antiseptics

On the other hand, we employ catgut for all purposes for which we formerly used it and have no hesitation in burying silk, silkworm gut, &c. Any of these materials which can be disinfected by boiling we disinfect in that way and subsequently keep them till required for use in 1 in 20 carbolic acid solution. As catgut cannot be easily sterilised by boiling, we generally treat it by prolonged immersion in repeated changes of 1 in 20 carbolic lotion. I generally immerse the catgut in pure carbolic acid in the first instance for about 24 hours, and then subsequently in 1 in 20 carbolic lotion. The ligatures, like the instruments, are rinsed in 1 in 2000 sublimate solution before use.

By giving up catgut it seems to me that surgeons have lost one of the most important advances in wound treatment, and I regard the giving up of buried sutures for uniting divided muscles, &c., as an extremely retrograde step Apparently, the reason why catgut was given up was that as suppuration still occurred in the wound and as catgut as it comes into the surgeon's hands is a septic material the suppuration was attributed to the catgut. But as a matter of fact, in my experience there is no real difficulty in the disinfection of catgut, and as regards silk, which is now held to be guilty of many of the septic accidents which occur, I cannot conceive what there is in silk which should make sterilisation more difficult than in the case of swabs, gauze dressings, &c. There is this, however, in silk that explains the difficulty—namely, that if a wound becomes infected the silk, being an inert material and being soaked with putrescible substances, forms a favourable nidus in which the bacteria can multiply and ultimately infect the whole woun On the other hand, a wound which does not contain an t putrescible material may be able in some cases to g of a considerable number of pathogenic organisms d that they are not particularly virulent, and so tl d will heal by first intention. It is not imperfect ation of these materials which is the

the area of operation to the dust which is necessarily raised by their entrance into the operating theatre Elaborate precautions must be taken to avoid any risk of infection during the operation, the surgeon wears a mask and cap to cover his hair, is completely covered with aseptic clothing, he has always the same assistants or, at any rate, assistants who are very largely experienced in these methods, and he is intent on avoiding every possible source of infection from outside In the hands of surgeons who are skilled bacteriologists and who are thoroughly impressed with all the precautions necessary and who have skilled assistants no objection can of course be made to the method employed, if they think that they can obtain better results than they otherwise could My criticism is that the results are not in any way better than those obtained with the limited use of antiseptics, that the precautions necessary are very much more troublesome, the risks of error very much greater, and that as a means of instruction and as a method to be employed by practitioners generally it is totally impracticable. Further, it must be remembered that all practitioners, or even all surgeons, are not skilled bacteriologists and the greater the precautions necessary for carrying out the treatment the greater are the chances of error and the risks of failure. In former days the materials employed, and not the principles and details of the method, were looked on by many as the essential points, and thus Listerism was often spoken of as "carbolic acid treatment," the "spray and gauze method," &c Needless to say, with the neglect of the details and the erroneous and usually very excessive application of antiseptics the hoped-for result—viz, an aseptic wound—was not always obtained. And so at the present time the same mistake is very likely to be made and most stress laid on the external surroundings, on the marble operating room, the beautifully tessellated floors, the absence of corners or angles in the room, the washing basins provided with foot-taps, and so forth, while the real essentials of the treatment—namely, the careful disinfection of the skin and and the avoidance during the operation of any possi- contaminating instruments, ligatures, stitches, the wound itself—tend to be overlooked. And I is the chief reason why we hear of so much th ligatures.

difficulties in the way of success by this method, , are not limited to the surgeon himself, but also ve his assistants and to an even greater extent the nurses. No doubt in some hospitals where this treatment is rigorously carried out the assistants and nurses are very thoroughly trained, but nurses especially, not being skilled in bacteriology, are very liable to error, and, after all, they can only reflect the impression which is produced on the ordinary intelligent mind by the precautions employed and which they have been enjoined to enforce. In many cases, no doubt, one comes across nurses who understand a great deal about the precautions which are required and who have evidently been very carefully drilled. But even these are sometimes apt to commit errors which tend to vitiate the whole procedure For example, if the patient move during the operation the nurse replaces him in the proper position on the table, rearranges the blankets, and without any fresh purification of her hands proceeds to hand swabs, &c Indeed, if she wanted to disinfect her hands again she has in all probability no antiseptic at hand for the purpose. Or an instrument falls on the floor and she picks it up, or the surgeon wishes something out of his bag, and she opens his bag and gets what is required and either forgets or has not the opportunity of disinfecting her hands As a matter of fact, after such an accident, if no antiseptics are present she should take no further part in the operation, but it is seldom possible to dispense with her services. On the other hand, if she were washing sponges out of an antiseptic or had antiseptics in the neighbourhood her hands would be disinfected for her even though she forgot the necessity of doing it. And even the best trained nurses are apt to place too much confidence in the precautions that they take, especially in the boiling of instruments. An instrument falls on the floor, the nurse disinfects it again, she takes it to the steriliser, puts it in for a second or two, and brings it back within the minute, as she says, sterilised. It has not been drilled into her that sterilisation cannot be accomplished at this lightning speed. And very likely the steriliser was in another room and she has to turn the handle of the door and touch various articles which have not been disinfected before she comes back, and then she has no facilities for disinfection of her hands again And so I could go on enumerating many sources of infection which may seem trivial but are nevertheless essential to a certain result and where the absence of antiseptics completely handicaps those engaged in the operation But, on the other hand, many nurses who come from so called "aseptic" hospitals have evidently been very imperfectly drilled, and indeed have not the faintest glimmering of what asepsis really means, and one is constantly in peril of employing dressings, swabs, &c., which have not been properly sterilised. I need not take up space in enumerating these grosser errors, they strike the eye at once. It is very common to find that the nurse has spent no end of time and trouble in preparing a basin full of rolls of beautifully white wool with or without some gauze around them, but has not sterilised them in any way, indeed, has not realised that they needed to be sterilised as they are made of "medicated" cotton-wool. She will also have probably got in various antiseptic dressings, opened the packets, cut them into beautiful squares, and wrapped them all up in a clean but not sterilised towel along with bandages, medicated cotton wool, &c. To sterilise the skin one will probably be presented with a basin containing a boiled nail brush, soap, and boiled water, but no antiseptic, or if one asks for, say, carbolic acid a dash of 1 in 20 is put into the water Indeed, the mixture of asepsis and sepsis is most ludicrous, but, at the same time, extremely dangerous. That errors of this kind can be committed and that the nurse is nevertheless perfectly satisfied that she is contributing to the asepsis of an operation is an example of the impression made on many untrained minds with regard to the precautions necessary to carry out this treatment.

While, therefore, as I said at the commencement, the method is one with which I have no fault to find in theory or if carried out by a trained bacteriologist it is not one which I think can by any possibility be recommended for general use, and I do not think that students, who will not necessarily have all the arrangements at hand in after life, should be instructed in it as the only or chief method which they should employ As a matter of fact, for the proper carrying-out of asepsis without antiseptics a regular institution is required and assistants and nurses who have been long trained in the methods are necessary In our hospitals, where we are constantly changing our house surgeons, dressers, and nurses, the difficulties in the way of obtaining constant success are very great and unless in the hands of a few who are earnestly impressed with the precautions necessary constant success is practically unattainable. In private work the conditions are still more difficult. As a matter of fact, operations in private houses without antiseptics are hardly practicable and they must involve the taking of the same assistant and the same nurse to all cases No doubt if this sort of treatment is really necessary nothing further can be said than that everyone must try to carry it out, but it is not really necessary, because those who employ antiseptics in a limited manner on the Listerian principles obtain equally good results—indeed, I venture to assert, more constant results, and one cannot get better results than rapid and constant union by first intention without any local or general disturbance. For my own part I take a very pessimistic view of the present state of matters with regard to wound treatment and I believe that if this so-called aseptic treatment is continued a time will come when the frequency of sepsis in wounds will be very considerable, and when the thoroughness that is characteristic of surgery at the present time will become diminished, as, indeed, is already happening in various ways, such as the careful stitching up of the deeper parts of abdominal wounds. On the other hand, the intelligent use of antiseptics saves a great deal of trouble, makes the result more certain and does not interfere in any way with the after progress of the wound. If I contrast the methods employed the differences will be seen to be really very slight but at the same time, I venture to think, of very great importance.

DISINFECTION OF THE SKIN

Surgery without Antiseptics and Limited Use of Antiseptics.

This ought to be the same in both cases The actual antiseptics employed, the length of time for which they are allowed to act, and so forth, vary according to the fancy of the surgeon but antiseptics must be used for the purpose. At the same time there is a tendency to less thorough disinfection in the so-called "aseptic" surgery and some surgeons, indeed, are satisfied with violent scrubbing of the skin with a nail brush and clean water without the use of antiseptics. This, of course, at once takes the method out of he region of asepsis. A common error that I find nurses ommit is that the night before the operation the skin is washed with soap and water and then with ether, and then a ine piece of lint very firmly wrung out or 1 in 40 carbolic cid is applied over the skin and left on. It is quite clear hat here there is no disinfection of the skin, the lint is ractically wrung dry and there is no carbolic acid to come n contact with the skin.

Disinfection of Instruments.

Surgery without Antiseptics	*Limited use of Antiseptics*
Instruments boiled just efore the operation and laced in sterilised salt soluion till required.	Instruments boiled, placed in 1 in 20 carbolic acid lotion till required Before use the carbolic acid is rinsed away with weak sublimate solution or in the case of abdominal operations with sterilised salt solution.

Disinfection of instruments, &c. by heat instead of by ntiseptics is without doubt a great improvement on former nethods, but when the instruments, ligatures &c., are emoved from the steriliser unless they are kept in an antieptic solution till they are required there is always, specially in hospital work, a risk of their becoming nfected In spite of the fact that the organisms present n the dust floating in the air are essentially non pathogenic, ne must not reckon on that too completely and it is much etter to avoid the introduction as far as possible of any rganisms than to take one's chance that those that do enter re non pathogenic.

Aseptic Area around the Seat of Operation

Surgery without Antiseptics	*Limited Use of Antiseptics*
Towels which have been oiled or steamed are placed round the area of operation. They are practically dry, indeed often completely dry, and contain no antiseptic.	Towels which have been boiled and subsequently placed in 1 in 2000 sublimate solution are lightly wrung out and arranged around the area of operation.

In the two cases the only difference is that in the method which I advocate the towel retains some moist antiseptic, whereas in the other it is absent. The advantage of the ormer in my opinion, is that dust falling on the towel or getting on it from other sources is, at any rate, fixed and may very possibly be disinfected, and also that the hands or nstruments resting on the towels are not so likely to pick up lust. Further, infective material which may have got on to he hands or instruments during the course of the operation nay also become disinfected.

General Precautions during the Operation

Surgery without Antiseptics	*Limited Use of Antiseptics.*
There is no antiseptic material present in which the hands may be re-disinfected should accidental contamination take place. The surgeon must consequently devote extreme attention to the avoidance of any possible contamination of hands or instruments during the course of the operation, and where the operation lasts a long time it is evident that this must entail a very considerable strain and a very considerable possibility of failure	A basin of 1 in 2000 sublimate solution is at hand in which the hands and instruments are rinsed from time to time. In this way accidental contamination is rectified. The few drops of sublimate solution which may enter the wound in these circumstances are quite insignificant and are probably at once completely neutralised by the blood present in the wound, and as a matter of fact do not produce any noticeable irritation.

Sponges.

Surgery without Antiseptics	*Limited Use of Antiseptics.*
Dry swabs which have been steamed or boiled and dried are employed. Here everything depends on the completeness of the sterilisation and on the avoidance of contamination during the operation	If swabs are used they are disinfected by heat and subsequently placed in a 1 in 2000 sublimate solution and wrung out as required. Here the sterilisation is the same, but the risk of contamination during a prolonged operation is diminished from the fact that the sponges are lying in an effective antiseptic solution till required for use.

For my own part I still employ marine sponges. These cannot be boiled, but they can be thoroughly disinfected if kept in carbolic acid (1 in 20) for several days, the solution being changed frequently and then during the operation they are kept in a 1 in 2000 sublimate solution and wrung out as required. I see no reason whatever why marine sponges should not be employed. I presume that they were given up in the first place because they could not be disinfected by heat and in the second place because they were supposed to be the source of contamination which evidently occasionally occurred. One must not, however, get into the habit of thinking that heat is the only possible method of disinfection and practical experience shows that the method which we employ of disinfecting these sponges by prolonged immersion in a strong carbolic acid solution is perfectly satisfactory That being so no one will doubt the advantage of sponges over swabs as a means of removing blood from a wound But apart from the advantages of marine sponges I consider that swabs are really a very considerable source of danger. In the first place, one must be quite sure that they are properly sterilised and unless the surgeon or an assistant whom he can trust does that he is very likely, as I generally am, to be offered swabs which are either not sterilised at all or have been only imperfectly treated. Now, if they are imperfectly sterilised or if any mistake in the bacteriological methods takes place during the operation the swab becomes a source of great danger, because however carefully prepared there is always not only the possibility but the probability of threads of wool being detached from the swab and left behind in the wound. As long as these threads are aseptic they do not matter, but if they become infected they, like the stitches, become sources of irritation and prevent healing

Stitches.

Surgery without Antiseptics	*Limited Use of Antiseptics*
Only materials which can be sterilised by heat are employed, and apparently great trouble is taken in sterilising these ligatures Apparently, also, in the practice of many surgeons catgut is entirely given up and the use of silk is diminished as far as possible Indeed, some surgeons instead of employing silk to bring together the edges of the wound have given that up and fix the edges together by metal clamps. The ligatures after removal from the steriliser are placed in salt solution till required.	On the other hand, we employ catgut for all purposes for which we formerly used it and have no hesitation in burying silk, silkworm gut, &c. Any of these materials which can be disinfected by boiling we disinfect in that way and subsequently keep them till required for use in 1 in 20 carbolic acid solution. As catgut cannot be easily sterilised by boiling, we generally treat it by prolonged immersion in repeated changes of 1 in 20 carbolic lotion. I generally immerse the catgut in pure carbolic acid in the first instance for about 24 hours, and then subsequently in 1 in 20 carbolic lotion. The ligatures, like the instruments, are rinsed in 1 in 2000 sublimate solution before use.

By giving up catgut it seems to me that surgeons have lost one of the most important advances in wound treatment, and I regard the giving up of buried sutures for uniting divided muscles &c., as an extremely retrograde step Apparently, the reason why catgut was given up was that as suppuration still occurred in the wound and as catgut as it comes into the surgeon's hands is a septic material the suppuration was attributed to the catgut. But as a matter of fact, in my experience there is no real difficulty in the disinfection of catgut, and as regards silk, which is now held to be guilty of many of the septic accidents which occur, I cannot conceive what there is in silk which should make sterilisation more difficult than in the case of swabs, gauze dressings, &c. There is this, however, in silk that explains the difficulty—namely, that if a wound becomes infected the silk, being an inert material and being soaked with putrescible substances forms a favourable nidus in which the bacteria can multiply and ultimately infect the whole wound. On the other hand, a wound which does not contain any inert putrescible material may be able in some cases to get rid of a considerable number of pathogenic organisms provided that they are not particularly virulent, and so the wound will heal by first intention. It is not imperfect sterilisation of these materials which is the

the area of operation to the dust which is necessarily raised by their entrance into the operating theatre Elaborate precautions must be taken to avoid any risk of infection during the operation, the surgeon wears a mask and cap to cover his hair, is completely covered with aseptic clothing, he has always the same assistants or, at any rate, assistants who are very largely experienced in these methods, and he is intent on avoiding every possible source of infection from outside In the hands of surgeons who are skilled bacteriologists and who are thoroughly impressed with all the precautions necessary and who have skilled assistants no objection can of course be made to the method employed, if they think that they can obtain better results than they otherwise could My criticism is that the results are not in any way better than those obtained with the limited use of antiseptics, that the precautions necessary are very much more troublesome, the risks of error very much greater, and that as a means of instruction and as a method to be employed by practitioners generally it is totally impracticable Further, it must be remembered that all practitioners, or even all surgeons, are not skilled bacteriologists and the greater the precautions necessary for carrying out the treatment the greater are the chances of error and the risks of failure. In former days the materials employed, and not the principles and details of the method, were looked on by many as the essential points, and thus Listerism was often spoken of as "carbolic acid treatment," the "spray and gauze method," &c Needless to say, with the neglect of the details and the erroneous and usually very excessive application of antiseptics, the hoped for result—viz, an aseptic wound—was not always obtained And so at the present time the same mistake is very likely to be made and most stress laid on the external surroundings, on the marble operating room, the beautifully tessellated floors, the absence of corners or angles in the room, the washing basins provided with foot-taps, and so forth, while the real essentials of the treatment—namely, the careful disinfection of the skin and hands and the avoidance during the operation of any possibility of contaminating instruments, ligatures, stitches, sponges, or the wound itself—tend to be overlooked. And I believe this is the chief reason why we hear of so much trouble with ligatures

The difficulties in the way of success by this method, however, are not limited to the surgeon himself, but also involve his assistants and to an even greater extent the nurses No doubt in some hospitals where this treatment is rigorously carried out the assistants and nurses are very thoroughly trained, but nurses especially, not being skilled in bacteriology, are very liable to error, and, after all, they can only reflect the impression which is produced on the ordinary intelligent mind by the precautions employed and which they have been enjoined to enforce In many cases, no doubt, one comes across nurses who understand a great deal about the precautions which are required and who have evidently been very carefully drilled. But even these are sometimes apt to commit errors which tend to vitiate the whole procedure. For example, if the patient move during the operation the nurse replaces him in the proper position on the table, rearranges the blankets, and without any fresh purification of her hands proceeds to hand swabs, &c Indeed, if she wanted to disinfect her hands again she has in all probability no antiseptic at hand for the purpose. Or an instrument falls on the floor and she picks it up, or the surgeon wishes something out of his bag, and she opens his bag and gets what is required and either forgets or has not the opportunity of disinfecting her hands As a matter of fact, after such an accident, if no antiseptics are present she should take no further part in the operation, but it is seldom possible to dispense with her services On the other hand, if she were washing sponges out of an antiseptic or had antiseptics in the neighbourhood her hands would be disinfected for her even though she forgot the necessity of doing it. And even the best trained nurses are apt to place too much confidence in the precautions that they take, especially in the boiling of instruments An instrument falls on the floor, the nurse disinfects it again, she takes it to the steriliser, puts it in for a second or two, and brings it back within the minute, as she says, sterilised It has not been drilled into her that sterilisation cannot be accomplished at this lightning speed. And very likely the steriliser was in another room and she has to turn the handle of the door and touch various articles which have not been disinfected before she comes back, and then she has no facilities for disinfection of her hands again And so I could go on enumerating many sources of infection which may seem trivial but are nevertheless essential to a certain result and where the absence of antiseptics completely handicaps those engaged in the operation But, on the other hand, many nurses who come from so called "aseptic" hospitals have evidently been very imperfectly drilled, and indeed have not the faintest glimmering of what asepsis really means, and one is constantly in peril of employing dressings, swabs, &c., which have not been properly sterilised. I need not take up space in enumerating these grosser errors, they strike the eye at once. It is very common to find that the nurse has spent no end of time and trouble in preparing a basin full of rolls of beautifully white wool with or without some gauze around them, but has not sterilised them in any way, indeed, has not realised that they needed to be sterilised as they are made of "medicated" cotton-wool She will also have probably got in various antiseptic dressings, opened the packets, cut them into beautiful squares, and wrapped them all up in a clean but not sterilised towel along with bandages, medicated cotton wool, &c. To sterilise the skin one will probably be presented with a basin containing a boiled nail brush, soap, and boiled water, but no antiseptic, or if one asks for, say, carbolic acid a dash of 1 in 20 is put into the water Indeed, the mixture of asepsis and sepsis is most ludicrous, but, at the same time, extremely dangerous That errors of this kind can be committed and that the nurse is nevertheless perfectly satisfied that she is contributing to the asepsis of an operation is an example of the impression made on many untrained minds with regard to the precautions necessary to carry out this treatment.

While, therefore, as I said at the commencement, the method is one with which I have no fault to find in theory or if carried out by a trained bacteriologist it is not one which I think can by any possibility be recommended for general use, and I do not think that students, who will not necessarily have all the arrangements at hand in after life, should be instructed in it as the only or chief method which they should employ As a matter of fact, for the proper carrying-out of asepsis without antiseptics a regular institution is required and assistants and nurses who have been long trained in the methods are necessary In our hospitals, where we are constantly changing our house surgeons, dressers, and nurses, the difficulties in the way of obtaining constant success are very great and unless in the hands of a few who are earnestly impressed with the precautions necessary constant success is practically unattainable. In private work the conditions are still more difficult. As a matter of fact, operations in private houses without antiseptics are hardly practicable and they must involve the taking of the same assistant and the same nurse to all cases No doubt if this sort of treatment is really necessary nothing further can be said than that everyone must try to carry it out, but it is not really necessary, because those who employ antiseptics in a limited manner on the Listerian principles obtain equally good results—indeed, I venture to assert, more constant results, and one cannot get better results than rapid and constant union by first intention without any local or general disturbance. For my own part I take a very pessimistic view of the present state of matters with regard to wound treatment and I believe that if this so-called aseptic treatment is continued a time will come when the frequency of sepsis in wounds will be very considerable, and when the thoroughness that is characteristic of surgery at the present time will become diminished, as, indeed, is already happening in various ways, such as the careful stitching up of the deeper parts of abdominal wounds. On the other hand, the intelligent use of antiseptics saves a great deal of trouble, makes the result more certain, and does not interfere in any way with the after progress of the wound. If I contrast the methods employed the differences will be seen to be really very slight but at the same time, I venture to think, of very great importance.

DISINFECTION OF THE SKIN

Surgery without Antiseptics and Limited Use of Antiseptics.

This ought to be the same in both cases The actual antiseptics employed, the length of time for which they are allowed to act, and so forth, vary according to the fancy of the surgeon but antiseptics must be used for the purpose. At the same time there is a tendency to less thorough disinfection in the so-called "aseptic" surgery and some surgeons, indeed, are satisfied with violent scrubbing of the skin with a nail brush and clean water without the use of antiseptics. This, of course, at once takes the method out of the region of asepsis. A common error that I find nurses commit is that the night before the operation the skin is washed with soap and water and then with ether, and then a fine piece of lint very firmly wrung out of 1 in 40 carbolic acid is applied over the skin and left on. It is quite clear that here there is no disinfection of the skin; the lint is practically wrung dry and there is no carbolic acid to come in contact with the skin.

DISINFECTION OF INSTRUMENTS.

Surgery without Antiseptics.	*Limited use of Antiseptics.*
Instruments boiled just before the operation and placed in sterilised salt solution till required.	Instruments boiled, placed in 1 in 20 carbolic acid lotion till required. Before use the carbolic acid is rinsed away with weak sublimate solution or in the case of abdominal operations with sterilised salt solution.

Disinfection of instruments, &c., by heat instead of by antiseptics is without doubt a great improvement on former methods, but when the instruments, ligatures, &c., are removed from the steriliser unless they are kept in an antiseptic solution till they are required there is always, especially in hospital work, a risk of their becoming infected. In spite of the fact that the organisms present in the dust floating in the air are essentially non-pathogenic, one must not reckon on that too completely and it is much better to avoid the introduction as far as possible of any organisms than to take one's chance that those that do enter are non-pathogenic.

ASEPTIC AREA AROUND THE SEAT OF OPERATION.

Surgery without Antiseptics.	*Limited Use of Antiseptics.*
Towels which have been boiled or steamed are placed around the area of operation. They are practically dry, indeed often completely dry, and contain no antiseptic.	Towels which have been boiled and subsequently placed in 1 in 2000 sublimate solution are lightly wrung out and arranged around the area of operation.

In the two cases the only difference is that in the method which I advocate the towel retains some moist antiseptic, whereas in the other it is absent. The advantage of the former in my opinion, is that dust falling on the towel or getting on it from other sources is, at any rate, fixed and may very possibly be disinfected, and also that the hands or instruments resting on the towels are not so likely to pick up dust. Further, infective material which may have got on to the hands or instruments during the course of the operation may also become disinfected.

GENERAL PRECAUTIONS DURING THE OPERATION.

Surgery without Antiseptics.	*Limited Use of Antiseptics.*
There is no antiseptic material present in which the hands may be re-disinfected should accidental contamination take place. The surgeon must consequently devote extreme attention to the avoidance of any possible contamination of hands or instruments during the course of the operation, and where the operation lasts a long time it is evident that this must entail a very considerable strain and a very considerable possibility of failure.	A basin of 1 in 2000 sublimate solution is at hand in which the hands and instruments are rinsed from time to time. In this way accidental contamination is rectified. The few drops of sublimate solution which may enter the wound in these circumstances are quite insignificant and are probably at once completely neutralised by the blood present in the wound, and as a matter of fact do not produce any noticeable irritation.

SPONGES.

Surgery without Antiseptics.	*Limited Use of Antiseptics.*
Dry swabs which have been steamed or boiled and dried are employed. Here everything depends on the completeness of the sterilisation and on the avoidance of contamination during the operation.	If swabs are used they are disinfected by heat and subsequently placed in a 1 in 2000 sublimate solution and wrung out as required. Here the sterilisation is the same, but the risk of contamination during a prolonged operation is diminished from the fact that the sponges are lying in an effective antiseptic solution till required for use.

For my own part I still employ marine sponges. These cannot be boiled, but they can be thoroughly disinfected if kept in carbolic acid (1 in 20) for several days, the solution being changed frequently and then during the operation they are kept in a 1 in 2000 sublimate solution and wrung out as required. I see no reason whatever why marine sponges should not be employed. I presume that they were given up in the first place because they could not be disinfected by heat and in the second place because they were supposed to be the source of contamination which evidently occasionally occurred. One must not, however, get into the habit of thinking that heat is the only possible method of disinfection and practical experience shows that the method which we employ of disinfecting these sponges by prolonged immersion in a strong carbolic acid solution is perfectly satisfactory. That being so no one will doubt the advantage of sponges over swabs as a means of removing blood from a wound. But apart from the advantages of marine sponges I consider that swabs are really a very considerable source of danger. In the first place, one must be quite sure that they are properly sterilised and unless the surgeon or an assistant whom he can trust does that he is very likely, as I generally am, to be offered swabs which are either not sterilised at all or have been only imperfectly treated. Now, if they are imperfectly sterilised or if any mistake in the bacteriological methods takes place during the operation the swab becomes a source of great danger, because however carefully prepared there is always not only the possibility but the probability of threads of wool being detached from the swab and left behind in the wound. As long as these threads are aseptic they do not matter, but if they become infected they, like the stitches, become sources of irritation and prevent healing.

STITCHES.

Surgery without Antiseptics.	*Limited Use of Antiseptics.*
Only materials which can be sterilised by heat are employed, and apparently great trouble is taken in sterilising these ligatures. Apparently also, in the practice of many surgeons catgut is entirely given up and the use of silk is diminished as far as possible. Indeed, some surgeons instead of employing silk to bring together the edges of the wound have given that up and fix the edges together by metal clamps. The ligatures after removal from the steriliser are placed in salt solution till required.	On the other hand, we employ catgut for all purposes for which we formerly used it and have no hesitation in burying silk, silkworm gut, &c. Any of these materials which can be disinfected by boiling we disinfect in that way and subsequently keep them till required for use in 1 in 20 carbolic acid solution. As catgut cannot be easily sterilised by boiling, we generally treat it by prolonged immersion in repeated changes of 1 in 20 carbolic lotion. I generally immerse the catgut in pure carbolic acid in the first instance for about 24 hours, and then subsequently in 1 in 20 carbolic lotion. The ligatures, like the instruments, are rinsed in 1 in 2000 sublimate solution before use.

By giving up catgut it seems to me that surgeons have lost one of the most important advances in wound treatment, and I regard the giving up of buried sutures for uniting divided muscles, &c., as an extremely retrograde step. Apparently, the reason why catgut was given up was that as suppuration still occurred in the wound and as catgut as it comes into the surgeon's hands is a septic material the suppuration was attributed to the catgut. But as a matter of fact, in my experience there is no real difficulty in the disinfection of catgut; and as regards silk, which is now held to be guilty of many of the septic accidents which occur, I cannot conceive what there is in silk which should make sterilisation more difficult than in the case of swabs, gauze dressings, &c. There is this however, in silk that explains the difficulty—namely, that if a wound becomes infected the silk, being an inert material and being soaked with putrescible substances, forms a favourable nidus in which the bacteria can multiply and ultimately infect the whole wound. On the other hand, a wound which does not contain any inert putrescible material may be able in some cases to get rid of a considerable number of pathogenic organisms provided that they are not particularly virulent, and so the wound will heal by first intention. It is not imperfect sterilisation of these materials which is the trouble—it is that they are present in a wound to which bacteria have been admitted by the employment of imperfect bacteriological methods

DRAINAGE OF THE WOUNDS

Surgery without Antiseptics	*Limited Use of Antiseptics*
No drainage is required unless in exceptional circumstances. Then what are called gauze wicks, little twisted pieces of gauze, are left in the wound.	No drainage is required unless in exceptional circumstances. In that case the use of a suitably sized drainage-tube is most efficacious

In this respect there is no difference except that for some curious reason those who practise aseptic surgery prefer to introduce a piece of gauze into their wounds as a drain instead of a drainage-tube. It is a fact that years ago Lord Lister not uncommonly employed capillary drainage in cases where he did not expect any great amount of discharge and he carried that out by introducing strands of catgut, horsehair, silkworm gut, &c., into one corner of the wound and pulling them out in a few days when the drainage was no longer necessary At the present time the exudation is much less and drainage is chiefly necessary only in cases where a cavity is left under the skin where the deep surfaces do not come together In such circumstances I can see no advantage whatever in the employment of gauze over a drainage tube. On the contrary, I think that the serum will be more readily carried away by a small tube. That, however, is purely a matter of fancy of the surgeon But the question is different when the drainage is carried out in suppurating cavities or in the case of septic wounds. In suppurating cavities the employment of gauze wicks is, to my mind, a very objectionable procedure The capillary drainage does not act when thick fluid like pus has to be removed and if gauze wicks are introduced into an abscess cavity they not only do not allow the pus to escape properly, at any rate not nearly so efficiently as a drainage tube would, but, becoming themselves soaked with the pus, they form septic foreign bodies which interfere with the healing of the wound and tend to keep up sepsis I have on several occasions had cases of septic wounds referred to me which would not heal and which I found were being drained by gauze wicks Healing was at once obtained on dilating the opening, removing the gauze wick, and introducing a drainage-tube

DRESSINGS

Surgery without Antiseptics	*Limited Use of Antiseptics*
The dressings consist of sterilised gauze or wool without any antiseptic in them. They are disinfected by heat in metal cases which are not opened till the material is required. No doubt the dressings so applied, provided the hands and skin are aseptic, are quite satisfactory from the aseptic point of view	The dressings consist of sterilised gauze or wool containing antiseptics stored up in them The method of sterilisation does not materially matter although I generally sterilise gauze in antiseptic solution The stored up antiseptics which one generally employs are the double cyanide of mercury and zinc, salicylic acid, &c These substances becoming mixed with the blood which escapes from the wound render it, for a time, at any rate, incapable of decomposition

I can see no logical reason whatever for giving up the use of antiseptic substances in the dressings. The antiseptics contained in the dressings, provided they are not of an irritating nature, can do no harm They cannot possibly affect the wound itself, through the closely stitched line of incision, while on the other hand they possess a great advantage over simple sterilised materials on the principles which led Lister to employ them. It is true that if the skin is aseptic and the wound is left aseptic and an aseptic dressing containing no antiseptic is applied decomposition will not occur so long as the discharge does not reach the surface, because the wool or gauze will act as a filter to the dust But so soon as the exudation reaches the surface of the dressing the bacteria will multiply in it rapidly spread up to the wound, and may then infect the skin stitches and from the skin stitches the wound itself. On the other hand, if the dressing contains an antiseptic material which, when dissolved in the blood and serum which ooze into the dressing prevents their undergoing at any rate a rapid decomposition the fact of the discharge coming through the dressing does not necessitate immediate change of the dressings, nor does the sepsis spread back to the wound. I see no reason whatever why the aseptic dressings applied over the wound should not contain an antiseptic which is unirritating to the skin and which adds such a great advantage to the dressing

It will thus be seen that after all there is comparatively little difference between the two methods employed but such differences as exist will help very much to correct unconscious errors on the part of the surgeon or his assistants, while the training of these assistants and of the nurses in these methods will, I believe, leave a very lasting and thorough impression on their minds

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The Harveian Lectures

ON

FIBROIDS OF THE UTERUS AND ITS LIGAMENTS CONSIDERED FROM A CLINICAL AND SURGICAL STANDPOINT

Delivered before the Harveian Society of London on Nov 6th, 13th, and 20th, 1902,

BY ALBAN H G DORAN, F R C S ENG,

SURGEON TO THE SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN MARYLEBONE ROAD, N W

LECTURE I

Delivered on Nov 6th 1902

MR. PRESIDENT AND GENTLEMEN,—In calling upon me to deliver these lectures you have conferred upon me an honour which I deeply appreciate and for which I most sincerely thank you. I have chosen for their subject certain questions of clinical and surgical interest in relation to fibro myoma of the uterus and its ligaments and my remarks will be mainly based on my own experience The different subjects will, no doubt, appear to you rather disconnected, but you will not expect me to deliver a systematic course of lectures on a subject so well known as the pathology, diagnosis, and treatment of uterine fibroid disease.

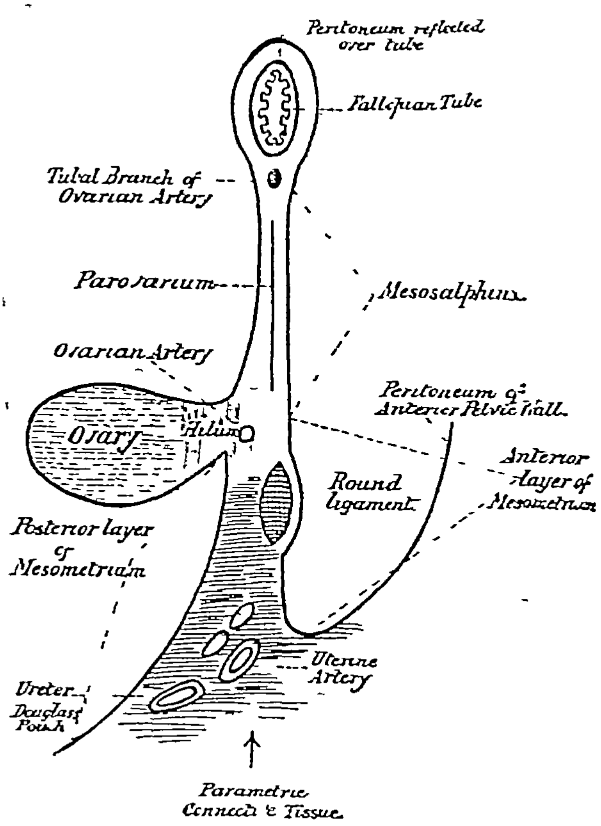
On the pathology of fibroids I need not say much, as we all know that a tumour of this class is essentially a myoma and contains more or less white fibrous tissue. The surgical anatomy of fibroids of the uterus and its ligaments is a matter of more pressing interest. Demonstrations of the anatomy of the triangles of the neck and of the structures concerned in hernia are very familiar to us. We who have to diagnose and to treat abdominal and pelvic tumours and are sometimes called upon to remove fibroids ought to make clear the anatomy of the parts concerned both in their origin and their development. On that account I shall first direct your attention to the surgical anatomy of the broad ligament and to the seat of origin of fibroid tumours associated with it. Next I shall turn to my own experience as to the treatment of the ovaries when the uterus is removed for fibroid diseases and say some words on the question of removal of the ovaries as a remedy in cases of that disease—an operation which still has distinguished advocates, as we learnt last summer at Manchester Then I will say something on some more or less purely clinical subjects in association with fibroid disease—namely, family history, hæmorrhage, absorption (another matter that was talked about at Manchester), ascites, necrotic changes "cup and ball" fibroids, disease of the appendages associated with fibroids, and, lastly, large vessels and the souffle in fibroids The concluding lecture will consist of my views and experience as to several surgical questions—namely, the management of capsules, adhesions in fibroid disease post-operative ileus in hysterectomy, rupture of the abdominal wound, and cancer of the stump I shall terminate with some observations on the danger of pushing impacted fibroids out of the pelvis You can now see beforehand that I shall not dwell on many subjects pertaining to uterine myoma and its treatment I shall omit all mention of those subjects, not only because I have not sufficient time to discuss them, but also because they have been so much talked about of late that some other matters, I mean those on which I intend to dwell, will probably interest you more or at the worst weary you less. For the most recent opinions about the more important subjects which I cannot discuss—namely, prognosis of fibroids, expectant treatment, and the merits of different operations—I refer you to the well-known writings of Dr F. H. Champneys,[1] Dr O J Cullingworth,[2] Dr M. A D Scharlieb [3] and Mr E Stanmore Bishop,[4] and to the recent discussion on total abdominal hysterectomy at the Manchester meeting of the British Medical Association.[5]

THE SURGICAL ANATOMY OF THE BROAD AND OVARIAN LIGAMENTS.

Since the establishment of pelvic and abdominal surgery a great deal has been written by Sir F. Treves, Mr. C. B Lockwood, and others about the folds of the peritoneum. In dealing with fibroids, clinically or surgically, we have specially to consider one fold, the broad ligament, and certain other bands, also dignified by the name of ligament, in its vicinity The more thoroughly we understand these folds and bands the better. The literature of the broad ligament is already very voluminous, but it has up to the present been mainly devoted to the question of burrowing cysts and extra uterine fœtal sacs, with which we are not directly concerned.[6] Still we make mistakes, or we may operate under conditions where diagnosis is uncertain, hence, whilst it is necessary for us to understand how fibroids may burrow into the folds of the broad ligament, it is also imperative for us to be aware what other kinds of tumour may be found insinuating themselves into these very same folds

We all know how the peritoneum is reflected over the Fallopian tube. Meeting below it, the layers lie close together until they reach the level of the ovary This reflexion is the upper portion of the broad ligament now universally known as the *mesosalpinx*. It contains the parovarium and an anastomosis of the uterine and ovarian arteries. Its connective tissue is scanty but loose, hence the Fallopian tube can be easily peeled off when its folds are opened up. The mesosalpinx is invaded by broad ligament cysts, by burrowing ovarian tumours, and also by many subserous fibroids of uterine origin that grow outwards Last month when removing a large fibroid uterus I was puzzled by a swelling in the left mesosalpinx of the size of an almond. I had to open the posterior layer before I could apply a ligature to the broad ligament Then I found a body like an extra-ovary, but Dr C H. J Lockyer pronounced it to be a pedunculated subserous uterine fibroid. Sessile fibroids of broad ligament origin do not, as a rule, develop in the mesosalpinx but rather in the mesometrium, presently to be described Hence the tube, mesosalpinx, and ovary often lie unaltered on the top of a big fibroid of the broad ligament—a most characteristic appearance and a useful guide to the operator I can show you, however, a specimen of a minute pedunculated fibroid attached to the posterior layer of the mesosalpinx. This specimen, to which I shall again refer at greater length, implies, I believe, that even a sessile fibroid independent of the uterus may develop in the mesosalpinx.

Owing to the small amount of connective tissue which it contains the mesosalpinx is not so much involved in para metritis as is the lower part of the broad ligament and it bears manipulation and ligatures much better It includes in its folds large lymphatic vessels which when obstructed, as frequently happens in cases of large uterine fibroids, appear as irregular yellow bullæ, sometimes concealing the Fallopian tube so as to confuse the relations of the tumour A branch of the ovarian artery which anastomoses with the uterine runs in the mesosalpinx close under the inner half of the tube. When the ligature slips from the inner part of a pedicle after removal of an ovary it is this artery which bleeds and in enucleating a uterine fibroid which has opened up the mesosalpinx the same vessel is cut or torn. It bleeds very sharply but is easily secured In concluding these observations about the mesosalpinx I must add that the operator should remember that when the fibroid burrows in the mesosalpinx the tube will lie stretched in the tumour, as in the case of parovarian cyst, whilst when it opens up only the lower part of the broad ligament, now to be described, the mesosalpinx and tube will project from the upper surface of the tumour


Peritoneum reflected over tube
Fallopian Tube
Tubal Branch of Ovarian Artery
Parovarium
Mesosalpinx
Ovarian Artery
Peritoneum of Anterior Pelvic Wall
Ovary
Hilum
Anterior layer of Mesometrium
Round ligament
Posterior layer of Mesometrium
Uterine Artery
Ureter
Douglas Pouch
Parametric Connective Tissue

Vertical section through the broad ligament showing relations of mesosalpinx and mesometrium, as distinguished by Waldeyer

Posteriorly the ovary projects into the peritoneal cavity, anteriorly the round ligament, in its course from the uterus to the inguinal canal passes under the anterior layer of the broad ligament. Below the level of the ovary the broad ligament is best distinguished by the name *mesometrium* sanctioned by Waldeyer[7] The layers of the mesometrium as they descend part widely the gap being filled by the parametrium, part of the pelvic connective tissue. The anterior layer soon turns sharply upwards over the corresponding side of the bladder and pelvic wall, to become the parietal peritoneum of the abdomen. Hence this fold forms the lateral continuation of the utero vesical pouch. Its relation to the bladder is very important and is often greatly altered by fibroids which develop in the anterior part of the uterus and grow outwards. Broad ligament fibroids cause yet greater displacement of this fold Hence in operating on such cases the surgeon must make sure where the fundus of the bladder lies Even when the fold is normal the bladder may be round in abnormal relation to it. Tandler and Halban describe and figure a case where the bladder otherwise normal, was invested by the layers of one broad ligament.[8]

When a fibroid of the broad ligament or uterus grows forwards and upwards, displacing this fold, it not only draws up the bladder on its anterior aspect but also insinuates itself between the abdominal parietes and the parietal peritoneum The same happens when a pelvic cyst and when a tubo ligamentary pregnancy advances anteriorly, constituting the "anterior ligamentary pregnancy" of Taylor[9] In all cases the tumour lies in front of the peritoneal cavity The parietal peritoneum behind it protects it from infection from intestine

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[1] An Address on Some Points in the Natural History of Uterine Fibroids THE LANCET Jan. 20th 1900 p. 147

[2] An Analysis of 100 Cases of Uterine Fibro-myoma, Journal of Obstetrics and Gynæcology of the British Empire. January 1902, p. 3.

[3] An Analysis of 100 Cases of Fibro-myoma Uteri, ibid., October 1902, p 323.

[4] Uterine Fibro-myomata: their Pathology Diagnosis, and Treatment 1901.

[5] Herbert R. Spencer: Total Abdominal Hysterectomy (especially by Doyen's method) for Fibro-myoma Uteri with Discussion, Brit. Med. Jour., Oct. 11th 1902, p. 1131.

[6] See Capsules, False and Real, in Ovariotomy Brit. Med. Jour., vol. i. 1896, p. 960; and On the Management of True and False Capsules in Ovariotomy Transactions of the Obstetrical Society of London, vol. xxxix., 1897 p 265.

[7] Das Becken, 1893.

[8] Topographie des weiblichen Ureters, Plates xxxi. and xxxii.

I cannot understand why, in diagrams by Anderson and other anatomists of repute, drawings copied over and over again in text-books, the anterior layer of the broad ligament is represented as though it dipped down as low as the posterior We all know that the posterior layer, which below the ovary forms part of the mesometrium, passes deeply downwards into the pelvic cavity to form the anterior part of Douglas's pouch

Uterine and broad ligament fibroids sometimes grow backwards and upwards, displacing the posterior layer of the mesometrium. This complication, much more frequent than displacement of the anterior layer, brings the tumour into close relation with the ureter, vagina, and rectum, which may be adherent and therefore liable to damage at an operation. The neighbourhood of the rectum involves risk of infection, not so great, however, in the case of a fibroid as when an ovarian cyst or a tubo ligamentary pregnancy[10] displaces the posterior layer of the mesometrium. The "posterior ligamentary pregnancy" of Taylor usually becomes septic. But though fibroids in the same position are seldom infected ligatures applied to the capsule after their enucleation are especially liable to infection The mesometrium is the natural home, the seat of origin of most fibroids (fibro-myomata) of the broad ligament, which often do not open up the mesosalpinx even when they burrow extensively behind or in front of the peritoneum. Broad ligament cysts and ovarian tumours sometimes burrow in the mesometrium, after having already opened up the folds of the mesosalpinx, but I have noted instances where tumours of this class have, like a fibroid of the broad ligament, opened up the mesometrium alone, the tube and mesosalpinx lying free on the top of the tumour[11] A fibroid of the body of the uterus or of the cervix not rarely opens up the mesometrium. Enucleation in these circumstances is specially difficult. The parametrium, so abundant in the mesometrium, is subject to parametritis, either as the familiar "pelvic cellulitis" of childbed or as the inflammatory affection which sometimes follows hysterectomy through bruising of the tissues or from the irritation of ligatures The ureter and uterine vessels run in the lower part of the mesometrium. We know how the utero-sacral ligaments, which contain plain muscle fibres, form a kind of edge laterally to Douglas's pouch beneath them. They may cause the incarceration of a small ovarian tumour, a painful complication,[12] and I have found pedunculated fibroids springing from the back of the uterus similarly incarcerated, the uterus being drawn back I fancy, therefore, that they sometimes account for the pain caused by small tumours which occupy Douglas's pouch These ligaments may damage a backward displaced uterus by gripping it, but the amount of harm thus done is questionable A fibroid may develop in one of the utero-sacral ligaments

I now desire to turn special attention to a structure the importance of which has been underrated, I mean the *ovarian ligament* It is a fairly stout band of fibrous and plain muscular tissue which runs from the uterus to the ovary, causing a slight elevation of the posterior layer of the broad ligament. It is quite short, usually under an inch in length, but I have seen it nearly two inches long even when attached to a normal ovary The surgeon, for obvious reasons should remember that for practical—that is to say pedicle making—purposes it is short In cases of ovarian cyst, with which we are not directly concerned, it is elongated but in fibroid disease of the uterus it usually remains short. Histologically, and therefore anatomically, it is part of the uterus, it is a fibro muscular structure liable to become the seat of a fibroid, a true fibro-myoma. This specimen shows this form of tumour in a very early stage and more will be said presently about fibroma of this ligament. Such a growth is more than a pathological curiosity I shall have to speak of large ovarian ligament tumours. But such morbid growths are rare It is much more important for the surgeon to remember that a piece of detached ovarian tissue is occasionally to be detected in the ovarian ligament close to the uterus Operators of repute, such as Dr Murdoch Cameron and Mr Furneaux Jordan, still advocate oöphorectomy for the cure of fibroids, but I will show on the other hand that it is hard to remove all ovarian tissue in that operation owing to the nature of the ovarian ligament.

In July, 1901, I removed a large bleeding fibroid from a woman aged 41 years I sacrificed both ovaries as they were undergoing suspicious cystic degeneration. It happened, as is usually the case when an ovary is cystic, that the ovarian ligament was elongated, this was noted on both sides. Dr Lockyer examined the uterus and its appendages after the operation and found a distinct piece of ovarian tissue or "accessory ovary" in one ovarian ligament, close to the uterus. The patient recovered and the period was completely suppressed, not without very troublesome flushings. Had the case come under my care 15 years earlier I should probably have removed the ovaries alone Then the bleeding would almost certainly have continued as the "accessory ovary" would have lain in the pedicle. The occasional presence of ovarian tissue in the ovarian ligament and the natural shortness of that band need our serious consideration For it is, as a rule, impossible to remove the normal ovary entire with intent to check hæmorrhage from a fibroid or to prevent its further growth. The ovarian ligament is often hard to reach and if cut short after ligature there would be great risk of slipping of the silk and fatal hæmorrhage, whilst if cut long some ovarian tissue will be left behind and the object of the operation will be frustrated Whilst it is so difficult to remove all ovarian tissue with safety and to leave the fibroid uterus behind, there is no difficulty in taking away the ovaries entire at a hysterectomy They come away complete attached to the uterus by the ovarian ligaments. It is the outer, not the inner, attachments of the ovaries that are divided in that case The outer attachment of the ovary is the infundibulo-pelvic ligament, bearing the ovarian vessels, which does not contain detached portions of ovarian tissue and is readily divided at a point far external to the limits of the ovary Hence, when an ovary seems diseased, there need be no hesitation in removing it with the fibroid uterus Nor, on the other hand, is it difficult or dangerous to leave an ovary when the uterus is removed In that case the broad and ovarian ligaments are ligatured with the tube internal to the ovary and divided on the uterine side of the ligature which will hold well, the vessels on its distal side give no trouble after the big vascular uterus has been removed. Let it be noted how different is the case when the ovarian ligament is ligatured the ovary cut away, whilst the fibroid uterus full of large vessels is left behind.

Fibroid or Fibro myoma of the Broad Ligament

Fibroid tumour of the broad ligament has been shown by recent experience to be anatomically and surgically, though not pathologically and clinically, a disease distinct from fibroid of the body and cervix of the uterus. When of large proportions the proof that the tumour was not originally uterine may be contested. It happens, however, that several small broad ligament fibroids have been detected at operation or after death lying far from the uterus and separated from that organ by a wide tract of the parametric connective tissue. Streeter[13] removed a tumour of this kind weighing 10 ounces from the right broad ligament and I have recently reported a case[14] where I took away a large multilocular cyst of the left ovary and then found beneath it a very heavy little tumour, smooth, oval, and two and a quarter pounds in weight. It was enucleated with the greatest ease from the parametrium and was perfectly distinct from the uterus, it was made up of plain muscle cells and white fibrous tissue Vessels had to be secured in the parametrium, but no part of the uterus was wounded or ligatured and recovery was speedy

These broad ligament fibroids are really retro peritoneal. For clinical reasons I may note that Mr Marmaduke Sheild has reported a case of retro-peritoneal *fibroid* which he admits may have been of uterine origin.[15] It lay behind the mesentery, the position where large retro-peritoneal *lipomas* develop Now it happens that Sir Frederick Treves describes how he removed a *lipoma* from the broad ligament where we usually find *fibroids* of the kind which we are now considering[16] These rare conditions must be borne in mind when we attempt to diagnose a doubtful abdominal swelling

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[9] Extra uterine Pregnancy: A Clinical and Operative Study p 77 Also called "sub-peritoneo-pelvic" or "sub-peritoneo-abdominal pregnancy" As the tumour lies away from intestine the chance of infection is slight

[10] Taylor: loc. cit This variety is the "posterior ligamentary or 'retro-peritoneal" pregnancy of that author

[11] See Capsules False and Real in Ovariotomy with notes of six cases loc. cit Fig 3 No 4

[12] See Case 1 in my note on Ovarian Tumours simulating Inflamed Ovaries Edinburgh Medical Journal vol. iii. New Series 1898 p 450

[13] American Journal of Obstetrics vol xxi p 211

[14] Fibroid of Broad Ligament associated with an Ovarian Cyst Transactions of the Obstetrical Society of London vol xliii p 260. The specimen is in the Museum of the Royal College of Surgeons of England (Pathological Series A.4590, A a)

There remains one more subject of clinical and surgical importance in relation to fibroid of the broad ligament as a retro peritoneal tumour That class of morbid growth seems related to congenital displacement of the kidney Retro-peritoneal lipoma, properly so-called excluding lipoma of the omentum and broad ligament, is very rare. Yet in one case which occurred in my own operative practice[17] the right kidney lay on the brim of the pelvis its vessels being apparently derived from the common iliac artery and vein. Thus displacement of the kidney was detected in one out of about 30 reported cases of the most typical form of retro peritoneal tumour Turning to fibroid of the broad ligament, a less typical form, but pathologically retro-peritoneal, let it be noted that out of 39 cases which I have tabulated and published[18] in one there was a pelvic kidney The surgeon may as well remember that a kidney may lie much lower down than he suspects, so that he must be cautious while enucleating a fibroid of the broad ligament.

The surgical anatomy of a broad ligament fibroid is of much more importance to us than its pathology The tumour usually lies at first between the folds of the mesometrium. It is, as a rule, sessile, but it may be pedunculated. Whilst the mesometrium is always involved the mesosalpinx is seldom opened up, nor does this kind of tumour commonly originate between its folds which, unlike the mesometrium, include but little connective and muscular tissue. This specimen, to which I have already referred, shows that a broad ligament fibroid may be pedunculated and also that it may be connected with the mesosalpinx. Hence it is just possible that a sessile fibroid might originate in that part of the broad ligament. The specimen comes from the museum of the Royal College of Surgeons of England[19] and is thus described "A left broad ligament exhibiting a small pedunculated myoma, which is attached to the posterior surface of the mesosalpinx near the hilum of the ovary, *but unconnected with its ligament* From a middle-aged woman who had several pedunculated fibro-myomata attached to the serous surface of the fundus uteri.' It was found in the College stores. The fibroid is so small that its relations are evident—its pedicle has no connexion with the uterus, the ovary or the ovarian ligament The great majority of broad ligament fibroids, however are sessile tumours developing in the mesometrium The manner in which they open up that fold, push the intact mesosalpinx upwards, and come to lie in close relation with the bladder ureters, and rectum has been already explained when I spoke of the surgical anatomy of the mesometrium which must be thoroughly understood by all who attempt operations on pelvic tumours The perils of operative interference due to these relations are self evident. The rectum or ureters may be strongly adherent to the tumour and in all cases the parametric tissue is bruised. This tissue does not always tolerate ligatures, which are liable to infection from the neighbouring bowel The surgeon operating on a broad ligament fibroid must remember, on the other hand, that he has not to face other dangers inevitable when an equally large fibroid of the uterus itself is removed. In that case the cervix is often thick whilst the uterine cavity is dilated and lined with unhealthy endometrium. When the fibroid is confined to the broad ligament the uterus is usually small and flattened, it may be left behind as in the case where I removed a small tumour with an ovarian cyst or if advisable it may be removed with little addition to the risk of the operation

Such is the surgical anatomy of these tumours, but before speaking of treatment more must be said about the tumours themselves from a clinical standpoint They are proportionately much more frequent in young women than is any form of fibroid of the uterus and cervix proper According to my own tables 17 6 per cent. were observed in patients under 30 years of age. In one instance a fibroid of the broad ligament weighing over 18½ pounds was removed from a girl, aged 19 years, in another a tumour weighing 11 pounds was removed from a young woman, aged 22 years In a case where I operated the tumour was first observed already large when the patient was 23 years of age and it grew to enormous proportions in five years. On the other hand, fibroid of the broad ligament may appear after the menopause and, just as very big tumours have been found in young subjects, so very small growths of this class have been discovered in old women either at an operation or after death from some other disease. They may certainly take on growth after the menopause. It is interesting to find that, as in this kind of tumour, true fibroma of the ovary is not rarely seen in girlhood and in age[20] as well as in the mature This fact is of importance with respect to diagnosis.

We find anæmia not rarely in cases of fibroid of the broad ligament and it is of serious import otherwise than is the anæmic condition constant in bleeding uterine fibroids The anæmia in broad ligament fibroid is secondary to bad health. The impaired health may be due to the bulk of the tumour or to pressure effects on the vessels bowel, and ureters or to necrotic changes in the substance of the new growth which, just as when they occur in uterine fibroids, make the patient sickly When menorrhagia is present in a case of broad ligament fibroid there is probably a fibroid or polypus in the uterus as well.

The sessile fibroid of the broad ligament may attain a great size. As it is fixed it gives little trouble at first, it does not irritate the peritoneum by rolling about, nor does it worry the patient by setting up uterine hæmorrhage. Ascites is not a common complication. When it grows to its full proportions, however it is apt to cause grave pressure effects, whilst its maintenance is a tax on the patient. Ureteral obstruction may prove fatal even in cases where the tumour has not risen above the pelvic brim and has been overlooked during the patient's life (Gouget) Emaciation and anasarca of the lower extremities are extremely common. The larger tumours of this class range from 10 to over 40 pounds in weight.

The diagnosis of a fibroid of the broad ligament is not always difficult When the tumour is distinctly solid and sessile and the abdominal walls are thin the outline of the uterus on the anterior surface of the tumour can be defined or even seen. The uterus can sometimes be slid about laterally on the tumour The cervix lies high, close under the pubes, and is not rarely inaccessible.

In most cases diagnosis is difficult as the outline of the uterus cannot always be made out and the sound cannot in every case be passed owing to the elevation of the cervix and its compression against the pubes. Indeed it is not always easy to make out by dissection after the operation that the tumour has developed independently of the cervix. This section shows how doubtful the origin of the fibroid may be. I removed this tumour three years ago with satisfactory results One half is in the museum of St. Bartholomew's Hospital, the other in the museum of Charing Cross Hospital. I think that the tumour might have arisen in the parametrium behind the cervix. The practical importance of this question is clear—a broad ligament fibroid may sometimes be enucleated and the uterus spared, in fibroid of the cervix this cannot be done. It is a serious thing to remove the uterus of a young woman. The diagnosis of a soft or cystic sessile broad ligament fibroid is difficult even when the uterus can be clearly defined, it then closely resembles certain sessile tumours of ovarian or parovarian origin. Pedunculated fibroids of the broad ligament are usually impossible to diagnose from subserous fibroids attached to a uterus otherwise but little enlarged, or from fibroma of the ovary

The treatment of fibroid of the broad ligament should, I believe, be surgical in any case. A sessile tumour of this class is not likely to be harmless, after the fashion of many a fibroid uterus lying high above the pelvis and freely moveable. The dangers of operation steadily increase with the size of the tumour The removal of a sessile broad ligament fibroid of any size demands careful enucleation.

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[15] A Case of Large Solid Tumour removed with success from the Retro-Peritoneal Space Transactions of the Royal Medical and Chirurgical Society vol lxxx p 205.

[16] A Case of Lipoma of the Broad Ligament, Transactions of the Clinical Society of London vol xxvi p 101

[17] Retro-peritoneal Lipoma weighing 13 pounds 12 ounces Journal of Obstetrics and Gynæcology of the British Empire September 1902, p. 244

[18] Transactions of the Obstetrical Society of London vol. lxi., p 183, Case 7

[19] Museum of the Royal College of Surgeons of England (Pathological Series, No L. 4590)

[20] I have removed a fibroma of the ovary (weight 4 pounds 11 ounces) from a girl, aged 20 years, and another weighing 3 pounds from a woman, aged 52 years.

A small tumour of this class may be shelled out of the broad ligament, then, after the securing of all bleeding points and the uniting of the cut edges of the broad ligament by suture, the abdominal wound can be closed Thus the uterus is saved.

When the tumour is large enucleation is difficult. The necessary steps and precautions must be considered in detail Not only must asepsis be assured, but measures must be taken to anticipate or to minimise shock and hæmorrhage. No attempt should be made to draw the lower part of the tumour out of the pelvis by a sharp tug or by firm traction—such a manœuvre may cause laceration of the capsule and some of its vessels and damage to adherent rectum, bladder, or ureter The capsule must be divided first, but as the trunks of the ovarian and uterine vessels are very inaccessible, their preliminary ligature cannot always be effected Therefore the operator should never make a horizontal incision around the entire circumference of the tumour and then attempt rapid enucleation. Dangerous hæmorrhage would certainly ensue, however quickly and dexterously the enucleation be performed, even if the large vessels be caught on both sides, immediately after their division, by assistants Each vessel on the surface of the capsule must be secured by ligatures at two points about three inches apart. These ligatures can be passed under the vessels by means of blunt pointed pedicle needles Then the capsule should be divided horizontally between the ligatures for two or three inches The threads are drawn tight by assistants as the vessel is being divided. When all the vessels on the surface of the capsule have been thus secured the horizontal incisions can be joined so that the capsule is entirely divided. Then the lower part of the tumour can be enucleated The operator should never trust to pressure forceps when dividing the vessels on the capsule. The enucleation demands all the well known precautions required when a fibroid of the uterus proper is enucleated. Bladder, rectum, ureter, and other structures may be damaged by hurried, rough enucleation As for the vessels running into the tumour the pressure forceps applied at two points is useful at this stage. The vessel is divided between each forceps That instrument, unsafe when applied to vessels on the convex capsule before enucleation, is very convenient for securing vessels running across the space created by the separation of the tumour from its attachments to the capsule.

When the uterus is small and the tumour large it is advisable to amputate the body of the uterus above the cervix so as to take it away with the fibroid. The capsule may be closed as when the tumour is uterine Sometimes drainage or gauze-packing is safer, especially as regards certain after results of the operation. I intend to say more about the management of capsules in hysterectomy and allied operations

Of cases in my own practice one of the biggest, though by no means the heaviest, was observed in a woman, aged 44 years, who had borne three children, the youngest being 14 years of age She had suffered from swelling of the abdomen for over three years and it had recently increased in size The period appeared every three weeks and of late had lasted for about a week, but the show of blood was trifling Mr T A. Mulcahy of Portsmouth detected an elastic solid tumour which reached to the epigastrium and came down low in the pelvis I found that the os was drawn up too high to be reached, whilst the outline of the body of the uterus could plainly be felt above the pubes sliding on the tumour The catheter showed that the bladder was drawn up to the right groin I operated and managed to deliver the greater part of the tumour through a long abdominal wound The vessels on the capsule, much enlarged were tied in two places as described above. Then the capsule was divided horizontally and the fibroid enucleated, the uterus was removed, and the stump was treated intra peritoneally In this instance I was able to trim away much of the capsule, the edges of the remainder were sewn together The tumour was a very bulky fibro-myoma weighing 9 pounds 13 ounces, it had opened up the mesometrium, whilst the mesosalpinx lay intact with the tube and ovary on the top of the growth. The patient recovered. In this case the capsule, though thick, was not tensely stretched, and so its vessels were easily secured though enormously dilated. One big vein from the pampiniform plexus ran free from the infundibulo-pelvic ligament to the top of the tumour, the tissue connecting it to the broad ligament having been absorbed. This condition is more common in the dilated vessels of adherent omentum The capsule was easily pushed down so as to allow the bladder to fall to its normal level.

The largest fibroid which I have removed weighed 44½ pounds. It was in this instance that careful ligature of the vessels in the capsule, in the manner already described, proved so satisfactory Scarcely a drop of blood was lost. The patient gained flesh markedly after the operation, which took place in the autumn of 1898 One case, in a woman, aged 40 years, ended fatally The tumour was in part cystic and unfortunately had been tapped and drained three years before I operated. The cystic cavity discharged quantities of blood through the drainage track and was very septic, and small intestine adhered firmly to the surface of the tumour Pedunculated fibroids of the broad ligament are as a rule easily removed, but the pedicle may be thick and fleshy and great care is always needed to prevent hæmorrhage. Every bleeding point in the cut surface must be secured and the cut edges of the serous investment of the pedicle sewn over the raw surface When very thin, transfixion and ligature, as in ovariotomy, may be sufficient.

In these lectures I have endeavoured to confine my remarks as much as possible to my own experience. In relation, however, to the question of pedunculated fibroids independent of the uterus, I must here relate the instructive experience of Rosenstein,[21] who removed a fibro-myoma of the right utero-sacral ligament. The patient was 46 years of age The tumour was of "about the size of a man's head," tense, and freely moveable. It was diagnosed as a multilocular ovarian cyst. On one occasion, it is interesting to learn, the patient had a sharp attack of pain so that torsion of the pedicle was reasonably suspected At the operation the tumour was found to be perfectly free from the uterus but continuous with the middle of the right utero-sacral ligament by a distinct pedicle as thick as a lead pencil. It had no connexion with the Fallopian tube, ovary, ovarian ligament, or infundibulo pelvic ligament There was no difficulty in securing and dividing the pedicle which did not bear any large vessels No doubt other cases of fibroid of the utero-sacral ligament have been overlooked or rather mistaken for tumours of different origin

In conclusion, I have said enough to explain that a sessile broad ligament fibroid is a formidable kind of growth to remove and that its extirpation demands many precautions. I have already tabulated a series of operations on large tumours of this class[22] It is fair to say that enormous fibroids of the uterus itself may be successfully extirpated. Thus in Dr F Cole Madden's case, recently reported,[23] the tumour weighed 53 pounds. The patient was an Egyptian girl, aged 18 years—very young to be subject to fibroid. The tumour originated in the anterior wall of the uterus which was at once lifted out of the abdomen when the incision was made sufficiently large. Such a manœuvre is impossible in the case of a broad ligament tumour The patient was doing well according to the last report, six weeks after the operation.

FIBROID OF THE OVARIAN LIGAMENT

I will now say a few words about an interesting type of tumour closely related to the common uterine fibroid, although surgically it is akin to a pedunculated ovarian growth Many years ago I detected fibroid of the ovarian ligament in an incipient condition thus proving its possibility[24] Here is the specimen[25] and its relations are perfectly clear Microscopically it was composed of well formed plain muscular fibres mingled with white fibrous tissue. The tumour is plainly seen as a small spherical body about half an inch in diameter lying in the substance of the ovarian ligament midway between its uterine and ovarian extremities

Two years later I myself successfully operated on a tumour pathologically the same but over 16 pounds in weight.[26] Since then similar tumours have been removed by other operators Quite recently Dr Lockyer in examining two fibroid uteri which I had removed at the Samaritan Free Hospital for Women and Children found that in each there was a pedunculated fibroid of the ovarian ligament One of these tumours I exhibit this evening It is a firm, oval growth three inches in horizontal diameter, one and a half inches in vertical diameter, and two inches in antero posterior measurement The pedicle is very stout and about an inch in length. The base is attached to the uterine end of the ovarian ligament which appears to run from the pedicle to the ovary Being pedunculated the tumour was very moveable and as it was also heavy the severe pelvic pain from which the patient suffered seems to be comprehensible. I noted similar pain in a case of myoma of the ovary and in another of fibroid of an undeveloped cornu, in all these cases a small heavy, very moveable tumour hung down in the pelvis. This tumour may be instructively compared with the minute specimen which I have already demonstrated. It is only through a minute sample like the latter that we can feel sure of the origin of a tumour as big as the former

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[21] Ein Fibromyom der Douglasfalte Monatsschrift für Geburtshülfe und Gynäkologie vol xiv 1901

[22] Transactions of the Obstetrical Society of London vol xli

[23] Hysterectomy for a Soft Fibro-myoma weighing 53 pounds Brit Med. Jour vol i 1902 p 70

[24] Fibro-myoma of the Ovarian Ligament, Transactions of the Pathological Society of London vol xxxviii 1887 p 245. A microscopical drawing of the tumour will be found in the Transactions of the Obstetrical Society of London vol. xxx 1888, p 413 Part I Fig 2

[25] Museum of the Royal College of Surgeons of England (Pathological Series No 4644a)

[26] Fibroma of the Ovary and Ovarian Ligament, Transactions of the Obstetrical Society of London vol xxxviii, 1886, p 164

I am not surprised that when a careful observer like Dr Lockyer studies fibroids he occasionally detects a growth of this kind connected with the ovarian ligament, for they are probably more frequent than is generally supposed. Still, as I have already observed, this other specimen[27] shows that a pedunculated fibroid may arise from the mesosalpinx quite independently of the ovarian ligament. The surgical importance of the distinction between a fibroid of the ovarian ligament and a pedunculated fibroid of the broad ligament is evident When the tumour is of purely broad ligament origin the pedicle alone may be secured by ligature and divided and the tube and ovary saved. This conservative practice is not always safe when the fibroid springs from the ovarian ligament, though Doléris was able to save the adjacent appendages when removing an ovarian ligament fibroid. It is bad surgery to remove an ovary in the case of a girl or a young wife if the operator can save the organ without risk Experience has shown that whilst a fibroid of the ovarian ligament manifestly demands removal its extirpation does not offer much difficulty to the surgeon. In my own case, notwithstanding its enormous bulk, the tumour was well pedunculated and I was able to secure its pedicle with ease, leaving the uterus I considered, on the other hand, that it was safer to remove the tube and ovary

Myoma of the ovary is probably derived from the muscular elements in the ovarian ligament and hence is anatomically uterine In a case where I operated it was clearly a process of the ligament which seemed to run in between it and a cystic growth which involved the whole of the ovary proper Though small, this myoma was exceedingly heavy[28] and caused pelvic pain so that inflammatory disease rather than a new growth was suspected. This kind of tumour is exceedingly rare and has nothing to do with fibroma of the ovary As in the case of fibroid of the ovarian ligament, removal of a myoma of the ovary is surgically an ovariotomy As a rule it proves very easy, for there are seldom adhesions, and the tumour, probably owing to its seat of origin never seems to burrow into the folds of the broad ligament

In concluding these observations on tumours of the ovarian ligament I must repeat what I remarked when demonstrating the anatomy of that structure. These rare fibroid tumours are of considerable interest, but it is much more important for us to remember that a piece of detached ovarian tissue is occasionally detected in the ovarian ligament quite separate from the ovary and sometimes very near the uterus. I further dwelt on the importance of these pieces of ovarian tissue in respect to the surgery of the ovaries.

THE ROUND LIGAMENT AND FIBROIDS.

When the uterus is distorted by fibroids the round ligament on one or both sides may undergo great hypertrophy This change I have observed even when it was but little stretched As a rule, of course, the hypertrophy is associated with stretching There is a familiar feature of surgical importance in respect to the hypertrophied round ligament. I refer to the great increase in size of its artery On that account the ligament should be secured with its artery separately during hysterectomy This practice is advisable whenever the uterine fibroid is large and vascular, even when the round ligament has escaped hypertrophy I have found the artery of that ligament very large in such circumstances When the removal of the fibroid cannot be effected quickly without risk one precaution essential in such circumstances is the ligature of the enlarged round ligament and its artery in two places followed at once by division. I know it to be dangerous to trust the distal end to a clamp Some surgeons object to tying the round ligament separately when it has not shared in the hypertrophy of the parts of the uterus adjacent to the fibroid. One ligature, to include the ovarian vessels and the round ligament, may be sufficient in these circumstances when the broad ligament is also narrow and not involved in the growth. I cannot think, however, that the round ligament artery is safely secured in this manner, more than once I have seen it spout, after the division of the ligatured broad ligament, though the ovarian vessels did not bleed. In one case, after closing the flaps over the stump, I detected rather free bleeding from the artery of one round ligament which I at once secured

The operator will always seek both round ligaments as landmarks when the precise seat of any pelvic tumour is uncertain. The round ligament is very useful when there is any doubt about a growth being tubal or uterine. As the text-books teach, it will spring from the outer side of a fibroid or hæmatometric tumour of a separate or ill-developed uterine cornu and will lie on the inner side of a tumour of the Fallopian tube or a tubal gestation sac. In the case of a tubal gestation sac the round ligament is always an excellent guide, whilst in oddly shaped fibroids springing from the cornu the relation of the round ligament may be far from clear, as in one case in my own practice[29] to which I shall again refer in the course of my observations on necrotic fibroids But in the majority of cases of fibroids in an undeveloped cornu the relation of the round ligament, usually much hypertrophied, is perfectly clear

Fibroid tumours of the round ligament itself are of much interest, but differ greatly in clinical characters from similar growths in the broad and ovarian ligaments. The latter are closely allied to uterine fibroids, whilst tumours of the round ligament lie in very different anatomical relations, so that it is not necessary for me to dwell upon them.[30]

FIBROID IN AN UNDEVELOPED CORNU AND CONDITIONS WHICH SIMULATE IT

Malformations of the uterine cornua are of much importance owing to the difficulties which they throw in the way of diagnosis and to the grave effects of the atresia which often accompanies them. Hence the bibliography of the subject is very extensive It begins with reliable records published before the nineteenth century and ends with valuable recent work such as Josephson's[31] scientific monograph An undeveloped cornu seems predisposed to the development of a fibroid growth in its substance and the author just quoted discusses at length this remarkable association of pathology and teratology In a short note on the Removal of a Fibroid from a Uterus Unicornis in a Parous Subject,[32] published three years ago, I summed up most of the records of cases of this condition reported by contemporary authorities in this country

Whenever we have to do with the abdomen and pelvis in a woman we must remember that deformities of the uterus are not exceedingly rare. When detected, we can never feel certain how far other parts of the genito-urinary tract may be normal or malformed. In the case of fibroid of an undeveloped cornu diagnosis may be easy, a thin band being detected on palpation between the uterus and the tumour, whilst the uterus, or rather half uterus, is small and strongly deflected to the side of the pelvis opposite to the new growth. In other cases especially when the half uterus is well developed through past pregnancies and lies centrally, diagnosis is often impossible. Again, a normal uterus has been suspected to be bicornute or to consist of one cornu and

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[27] Museum of the Royal College of Surgeons of England (Pathological Series No A.90)

[28] Museum of the Royal College of Surgeons of England (Pathological Series No 4532 A a)

[29] Lockyer and Doran Sloughing Fibroid of the Left Uterine Cornu Abnormal Relations Transactions of the Obstetrical Society of London vol. xliii. 1901, p. 272.

[30] For records of fibroids and other tumours of the round ligament consult Sänger: Archiv für Gynäkologie und Geburtshülfe vol. xxi. p 279 J A. Amann Zwei Fälle von Fibromyoma Ligamenti Rotundi, Monatsschrift für Geburtshülfe und Gynäkologie vol. xiv p. 6 Frigyesi Fibrosarcoma Ligamenti Rotundi Centralblatt für Gynäkologie, No 31 1902, p 830 Lichtenstein and Herrmann Zur Pathologie des runden Mutterbandes Monatsschrift für Geburtshülfe und Gynäkologie vol. xv 1902, p 414 Vassmer Zur Pathologie des runden Mutterbandes und des Processus Vaginalis Peritonei, Archiv für Gynäkologie, vol. lxvii., 1902.

[31] Ueber die Neoplasmen der missgebildeten Gebärmutter Archiv für Gynäkologie, vol. lxiv

[32] Brit. Med. Jour vol. i. 1899 p 1339

most of us have come across doubtful cases of this kind Extreme lateral displacement of the body simulates uterus unicornis. The mistaking of a normal for a bicornute uterus is possible in certain conditions when the patient is pregnant Paul Bar[33] observed a case where in early pregnancy there seemed to be a soft tumour containing the fœtus and attached to a firm uterus, between the two there was a certain amount of mobility Yet the pregnancy proved to be perfectly normal. I relate this condition because the hard part of the uterus may be taken for a fibroid complicating pregnancy, I once witnessed the opening of the abdomen by an able operator who practised midwifery Cornual pregnancy with fibroid disease of the uterus was suspected. Yet the pregnancy was normal, the uterus was found to be less bilobed than it felt, it became quite regular when it emptied itself a few days later Bar reminds us that in these cases the ovum has become attached to the uterine wall close to the orifice of one tubal canal so that the adjacent part of the uterus develops at first much more rapidly than the remainder After the middle of pregnancy the rest of the uterus undergoes softening until the normal condition is attained. I am speaking, however, of fibroid in an undeveloped cornu rather than of cornual pregnancy, the above observations were simply made to warn us against diagnosing the coexistence of these two interesting conditions when it happens that neither is present. When, then this combination of two conditions each frequently associated with malformed cornu, is suspected we must watch the pregnancy for a month or two Still, diagnosis may be uncertain I recently operated on a most puzzling case where there was a bilobed tumour A fœtus lay in the right lobe which reached to the hypochondrium, whilst there was a loud souffle over the left as well as over the right tumour There was neither pain nor hæmorrhage and such is the rule in cornual as distinguished from tubal pregnancy I operated and, as you see, the left tumour proved to be a very vascular fibroid springing by a broad base from the posterior aspect of the inferior segment of the uterus to the left. The left ovarian vessels were rotated forwards by the growth of the tumour and accounted for the souffle. The bilobed tumour before it was exposed simulated in some respects pregnancy coincident in a normal uterine cavity and in a closed cornu, in other respects pregnancy in a normal uterine cavity and fibroid tumour in a closed cornu. Pregnancy of tubal origin was improbable, though Taylor and others have reported cases without a history of pain Without exploration diagnosis was impossible

There is much of interest in considering fibroid disease of a badly developed cornu independent of pregnancy I will put aside all cases of atresia where the fibroid becomes of secondary importance and only speak of cases where the opposite half of the uterus is normal. A small fibroid of this class lying loose in the pelvis may make itself known not so much by swelling and by the other conditions associated with a tumour as by pain and other symptoms indicating pelvic inflammation In this respect it may resemble a small heavy myoma of the ovary hanging down in Douglas's pouch. I happen to have had in my own operative practice a case of each of these forms of tumour where pain was the chief clinical symptom[34]

In my own case of fibroid in an undeveloped cornu the patient was 38 years old. She had been married for eight years and had been delivered five years before operation of a child who was then still living The forceps was used and after recovery she complained of falling of the womb Mr W O Aylward of Tunbridge Wells relieved this symptom by the aid of pessaries and detected a small, painful swelling in the hypogastrium The patient became pregnant again and aborted at the second month Then followed much pelvic pain without fever or high pulse Since the development of the painful swelling the period had been accompanied by sharp pain in the right iliac fossa and it recurred once after the miscarriage The patient then came under my care. I found the uterus markedly anteverted, the cervix was small but well formed. The sound passed three and a quarter inches. A freely moveable, hard, oval mass occupied the right fornix. It moved separately from the uterus On making an exploratory incision I was rather surprised to find no evidence of pelvic inflammation beyond a small adhesion which held down the left ovary The right appendages were not directly attached to the uterus but ran on to the outer surface of a firm tumour of the size of a hen's egg This tumour was connected internally with the uterus by a broad band, free above and continuous below with the pelvic peritoneum The cervix had no connexion with the tumour From the outer border of the anterior aspect of the tumour arose a very broad ribbon like structure which curved inwards and entered the inguinal canal. This structure was, of course, the round ligament The uterine artery, remarkably large and tortuous, ran up from below into the outer side of the tumour I performed a kind of enucleation by dividing the serous coat of the band after ligature of the right ovarian and uterine vessels, the tumour with the detached tube and ovary then came away There was a broad raw surface left on the divided band, the peritoneum was carefully sewn over it. A year later the patient became pregnant and was delivered of a well developed male child at term.

It is not clear why this little tumour caused pain, but as it was very heavy for its size it possibly set up the painful symptoms by dragging on surrounding structures. The remarkably thick round ligament has been noted in this anomaly before[35] The great size of the right uterine artery which supplied this little tumour was remarkable, the left artery which supplied the normal cornu, already once the seat of pregnancy was distinctly smaller The right ovarian artery and veins were not dilated These peculiarities about the blood supply of a tumour or hæmatometra in an ill developed cornu must be borne in mind by the operator He must make sure of the position of the uterine and ovarian arteries before dividing the pedicle. Simple transfixion and ligature of the pedicle as in ovariotomy would be dangerous, the two arteries should be ligatured before division of the pedicle

Lastly, I observed when speaking of the relations of the round ligament to a fibroid that in some cases of fibroid near the cornu those relations are not very clear

Oöphorectomy for Fibroids and its Teachings.

The removal of the ovaries for checking the hæmorrhage from a fibroid and reducing its growth was a very popular operation not many years ago but has recently fallen into disfavour Mr J Furneaux Jordan,[36] however, still defends it, under certain limitations, and Professor Murdoch Cameron created some surprise at the Manchester meeting of the British Medical Association by openly advocating this operation. "A new era,' said Professor Cameron,[37] "set in with the methods of Hegar and Tait, and notwithstanding current opinion against their methods, I desire emphatically to say that I have never met with a single bad symptom following the removal of the ovaries and tubes for fibroids when thought advisable, but on the contrary, I have found it highly beneficial in all cases operated on, and the patients themselves testify to the blessing they have enjoyed through its means. This has also been the experience of others in Glasgow" It would be interesting to know how this distinguished authority manages to remove the ovaries thoroughly without leaving a trace of ovarian tissue and yet without risk of slipping of ligatures owing to the necessary shortness of a pedicle of the ovarian ligament cut completely internal to the ovary I have taken some pains to demonstrate the anatomy of the ovarian ligament and noted that, short as it is, it may contain ovarian tissue. As a rule, when oöphorectomy for fibroid was largely practised the pedicle was cut too long and a piece of the ovary was to be seen on the distal side of the ligature. The piece of ovarian tissue sometimes underwent atrophy as in a case of my own which I recorded over eight years ago[38] The patient was 41 years of age, and very anæmic from menorrhagia due to a fibroid in the anterior wall of the uterus I reported that "owing to the shortness of the ovarian ligaments a minute portion of ovarian tissue was left on the distal side of the pedicle I rather feared at the time that the object of the operation would be frustrated." Yet the menopause was established permanently without any disagreeable symptoms I had several other similar lucky experiences and the same is the case with other operators Indeed, I am of opinion, on the ground of this experience, that cure was due in many such cases to some factor of which we are ignorant, the same may be said in explanation of Professor Cameron s brilliant results. A fibroid is capricious in its course and may cease to grow and to bleed spontaneously I am speaking, be it understood, solely of cases said to be suitable for oöphorectomy, cases where the fibroid grows near the fundus, nourished by the ovarian artery Yet I have had good results in several cases where even the cervix was involved, though with that condition failure is the rule My good, or, rather, lucky, results can hardly have been due to the removal of the ovaries alone. Indeed, the majority of patients did well for a year or so, then the bleeding returned or the tumour continued to grow In one case in my own practice[39] a strange result ensued great and permanent reduction in the size of the tumour occurred, yet the suppression of the catamenia was but partial. The "show" was accompanied by all the disagreeable symptoms of the menopause, and last autumn (10 years after the operation) the patient, then 48 years of age, saw the period three or four times yearly and suffered from occasional flushings.

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[33] Note sur la Greffe de l Œuf dans une Corne Utérine, Bulletin de la Societe Obstétrique de Paris March 1902, p 168

[34] Ovarian Tumours simulating Inflamed Ovaries including a Case of Ovarian Myoma, Edinburgh Medical Journal, vol iii New Series p 449 The reference to the case of fibroid of the cornu is given above

[35] Josephson: loc. cit. Falk Zur kasuistik von Geschwulst entwickelung und Doppelbildung der Gebärmutter Centralblatt für Gynäkologie 1898 p 1418

[36] The After-effects of Removal of the Appendages and Removal of the Uterus British Gynæcological Journal vol xv 1899 p 369

[37] The Past and Present Treatment of Fibroids Brit. Med Jour Oct 11th 1902 p 1153

[38] An address on the Treatment of Bleeding and other Uterine Fibroids by Removal of the Appendages Brit. Med Jour vol i 1894 p 1233 Case 1

A return and advance both of the bleeding and of the growth of the tumour seem, however, to have been the rule when oöphorectomy for fibroid was popular The reason seems to be evident the ovarian tissue on the distal side of the pedicle resumed its functions, for a time in abeyance owing to the organisation of lymph thrown across the groove formed by the ligature a condition well known in the pedicle after ovariotomy[40] In performing a hysterectomy in a case where oöphorectomy had failed I detected a small, flat button of ovarian tissue lying on the stump of the tube against the cornu of the uterus The operation itself was not without dangers—slipping of the ligature of the pedicle and thrombosis of a pelvic vessel or of one of the big veins of the lower extremity being not unknown. In anæmic cases the shock was often quite as great as after the removal of a big fibroid and I reported a fatal case in the address to which I recently referred Again the ovaries may be so placed in relation to a big tumour as to render their removal impossible. The hæmorrhage in some instances proved to be due to a polypus high up in the distorted uterine cavity and thus easily overlooked.

Mr Jordan believes that a hysterectomy always involves more shock and takes up more time than an oöphorectomy for fibroid disease[41] If so uncertain, however, for reasons which I have explained, hysterectomy must be a far better operation Mr Jordan s teaching may I admit, be advantageously followed under exceptional conditions. Thus in 1897 I removed the ovaries of a woman, aged 44 years, who was under Dr Travers Smith's treatment for hæmatemesis which had greatly reduced her health There was a small bleeding fibroid and I found the appendages springing from the uterus well below the tumour which was in the fundus Above all, the ovarian ligaments were long I speedily removed the ovaries and the "show" at once began to abate, ceasing altogether seven months after the operation. The patient's strength steadily increased, but unfortunately three months after the artificial menopause she died suddenly from perforation of the stomach. As far as the oöphorectomy is concerned this case was satisfactory, but a previous experience to which I have referred taught me that the operation may be followed by fatal shock without any clinical or post-mortem evidence of internal bleeding or sepsis

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[39] Loc. cit Case 5 and Fig 4

[40] For the literature of the subject see On Ligature of the Pedicle in Ovariotomy" Transactions of the Obstetrical Society of London vol xxxv 1893

[41] However skilfully and by whatever method a hysterectomy may be done and however favourable the conditions are it takes longer and inflicts more shock on the patient than removal of the appendages " Loc. cit

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FALMOUTH DRAINAGE —At the meeting of the Falmouth Corporation held on Jan. 29th the general purposes committee reported that it was of opinion that the council could not carry out the contemplated drainage scheme owing to its cost. It was stated that the committee was unanimous in considering that the action of the Local Government Board in requiring the outfall to be carried considerably farther toward the east made the cost prohibitive.

ELECTRIC SHOCKS

BY DR S JELLINEK.

IN a very remarkable article which appeared in THE LANCET in 1902[1] Mr F B Aspinall gave his views regarding the action of the electrical current on the human body His reasons are strengthened by observation upon a large number of accident cases and by experiments carried out on the human body There is a boundary between the technical and the medical knowledge of electricity, and the physician wishing to treat the subject satisfactorily must understand the technical working of electricity as well as the scientific, otherwise the solving of certain questions is impossible. As I myself have been studying atmospheric and technical electricity concerning their effects on animals I wish to add a few remarks to the article published in THE LANCET[2]

While I agree with Mr Aspinall on a great many points, on some important questions I am of another opinion. As to his first question "Is everyone equally susceptible to an electric shock?' I agree with him that susceptibility depends upon the individual I would add to the above that women and children show less resistance and are therefore more endangered by a current than are males, also that the point of entrance is of importance, mucous surfaces being much more dangerous than the skin.

Secondly, Mr Aspinall asks "Is a person suffering from disease more likely to be fatally injured by an electric shock than a person in good health?" and states that the question is difficult to answer I believe, however, that all diseases which lower skin resistance—e.g, Basedow's disease, diseases of the heart and kidneys, and some skin diseases—predispose to accident from electric shock. The effect of an electric current is, as Mr Aspinall observed, dependent upon the resistance of the skin. *Cæteris paribus* the skin offers the chief resistance, for example, we find that on measuring the resistance of the hand when dry the galvanometer (Universalgalvanometer von Siemens) indicates 50 000 ohms, but after wetting the hand with a solution of sodium chloride that the number of ohms is reduced to 500—100 times less than in the first condition. The importance of this becomes clear to us when we remember Ohm's law $C = \frac{E}{R}$ which shows that in the above case the person in the first condition would receive 100 times less ampères than in the second. A person suffering from heart disease is much more sensitive to the electric current than when the heart is normal. Here I will remark that in my opinion the lesions of the central nervous system produced by electricity are of the greatest importance, of these lesions I will speak later

Very interesting and highly important are the cases described by Mr Aspinall with reference to his third question ' Does the physiological condition which a person is in at the time a shock is received make any difference?" With regard to the first case which he mentions I believe that the greater part of the current was carried away by the heavy flannel shirt, which was drenched with perspiration, and that only a small part of the current passed through the body His description of the effect of the electric current on sleeping persons deserves special consideration, Mr Aspinall being the first to observe that otherwise dangerous currents are harmless to sleeping persons In the cases which he mentions it is certain that the persons suffered an electric shock from the fact that severe burns were found on the bodies Unfortunately, I have never had the opportunity of observing the effect of electricity on sleeping persons I wish to call attention to the similarity which exists between the above mentioned cases and the following experiments[3] which I have carried out on animals

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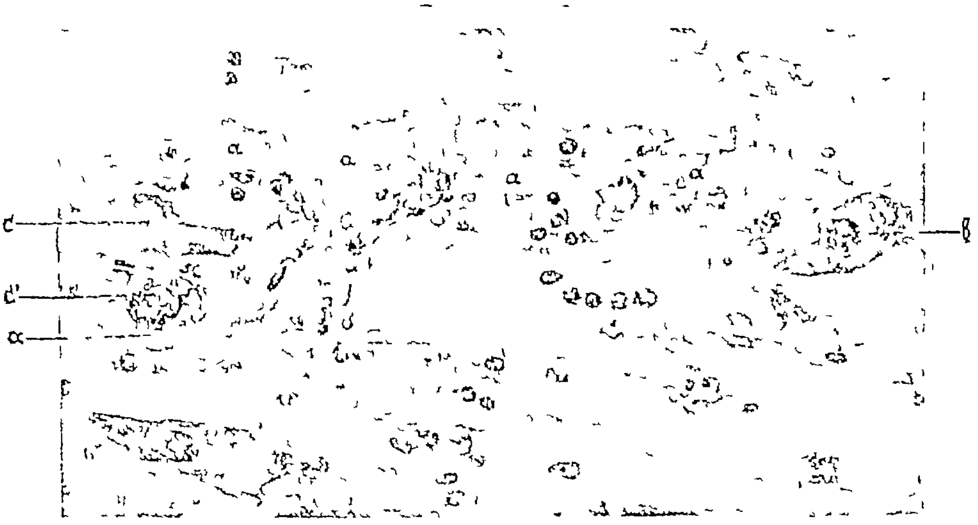
[1] THE LANCET March 8th 1902, p 660

[2] A part of my observations and experiments have appeared in the following publications Beobachtungen an Elektricitätsarbeiten Wiener Klinische Wochenschrift No ii., 1900 Blitzschlag und Elektrische Hochspannung Wiener Klinische Wochenschrift Nos xxviii. and xxix. 1901 Vorrichtungen zur Verhütung von Unglücksfällen durch die Elektrischen Oberleitungen eine neue Isolirzange Oesterreich Sanitätswes, No xxxvii 1901 Elektrizität und Chloroformnarkose Wiener Klinische Wochenschrift No xlv 1901 Animalische Effecte der Elektrizität Wiener Klinische Wochenschrift Nos xvi and xvii 1902 Histologische Veränderungen im Menschlichen und Thierischen Gehirn und Ruckenmark theils als Blitz theils als Elektrizität Hoorkstrom wirkung Virchow s Archiv Band clxx 1902 Zur Klinik der durch Atmospherische und Technische Electrizität verursachten Gesundheitsstörungen Vortrag am Elektrischen Congress in Bern 1902 and Elektrisches Unfallwesen Zeitschrift für klinische Medizin zu erscheinen)

If a rabbit be subjected to a high tension interrupted current, with one pole in the mouth and the other in the rectum, it will be either immediately killed or paralysed for several hours in all four extremities, or a spasmus nutans may be present, or it may cease to eat and soon die from starvation, &c. If, however, a rabbit be deeply chloroformed so that it does not react to the severest mechanical irritations—for example, the insertion of a needle into the spinal cord—and while in this condition be subjected to the same high tension interrupted current as in the previously described case for only a fraction of a second a remarkable change takes place the rabbit assumes a position of opisthotonos, then tries to rise falls down again cries out, opens its mouth, and in a few minutes the animal appears to have perfectly recovered The control animal that was narcotised at the same time but not subjected to the current died. *The high tension interrupted current thereby proves itself to be not only harmless for rabbits during narcosis but is even life saving* I have not yet finished my experiments with the other narcotics. I mention the above experiment only because our observations appear to agree, that is, an otherwise fatal current has no injurious effect on animals in an insensible condition (sleep or narcosis)

FIG 1



Represents the hæmorrhage and alteration of ganglion cells from the spinal cord of a man killed by an electric current of 1000-volt tension *a* Hæmorrhage *b* Unaltered cell *c.* Destroyed cell *c'* Nucleus and nucleolus from destroyed cell lying in the hæmorrhage

I agree with Mr Aspinall in the statement that "the path" which the current takes through the body is important. The left side seems to be more sensitive than the right, but this fact is not due, in my opinion to any injury to the valves of the heart but rather to the effect on the ganglia of the heart. Owing to the necessity of brevity I cannot further discuss this important question. I will only remark that the current is most dangerous when it is brought to bear on the heart and nervous system in greatest density I have made pathological sections from the hearts of both men and animals but have never discovered anything abnormal.

Another question on which I differ from Mr Aspinall is the following "Does the question of contact made, and whether burning takes place or not, have any effect upon a person's chance of being killed?" I have made similar experiments to measure the resistance and I agree with Mr Aspinall that the area and completeness of the contact bear an exact relation to the resistance. When, however, Mr Aspinall asserts that the burning "is a wonderful provision of nature to protect us against fatal shocks, as the burning not only numbs the nerves and thus prevents us from feeling but will also be found to increase the resistance, thus preventing the current passing," I must protest, as I have found by repeated experiments that the resistance is lowered after burns of the body In my publication "Animalische Effecte der Elektrizität" I have fully explained three different methods of measuring the resistance, by which I can prove that the longer the tissue is exposed to currents from the main the less the resistance becomes. I have demonstrated the above on a portion of the sciatic nerve by first measuring the resistance which proved to be 120,000 ohms. I then subjected it to a current from the main of 300 volts. I immediately again measured the resistance and found that it had sunk to 70,000 ohms and was reduced by 1000 ohms for every second of time that it was exposed. After the experiments the resistance began to increase The anatomical alteration of the tissue appears to be the cause of the reduction of the resistance

This fact of reduction of resistance through currents from the main, which is sometimes very great, is of great importance to the physicians of accident insurance companies. In explanation of the above I would refer to the technical formula for the work performed by a current A (ampère), × V (volt) × *t* (time) This formula is true only in estimating the power of a current in driving machinery, in men, however, it does not hold true, as resistance constantly decreases through every second of contact, thereby increasing the ampèrage, thus the *t* has not the function of a simple algebraic expression In consideration of the above changes which my experiments have proved we must admit that the time (*t*) during which a person is exposed to the current is important for two reasons first, that *t* has the same value as in the above formula, secondly, owing to the decrease of resistance and increase of ampèrage the effect is in five seconds not only five times greater but considerably more.

In regard to the sixth question "Can a person receive a fatal shock without giving the 'cry,' and also can he speak after receiving a fatal shock?" I quite agree with Mr. Aspinall that the cry is "a rapid drawing in of the breath," that it does not occur in every case, and that this cry is due to sudden contraction of the diaphragm In those cases, however where the current is not dangerous and the victim is not rendered insensible but is held to the machine by muscular contraction, the cry is not involuntary

Mr Aspinall has discussed very fully the seventh question "Is an alternating or a direct current shock more likely to prove fatal?" From my experiments and observations I have found that both alternating and direct currents from 500 to 600 volts are dangerous and currents of tension of 1000 volts without exception are fatal. With a low tension of from 100 to 200 volts the alternating current is much more disagreeable, and this difference I can prove by measuring the pressure of the blood current by means of the tonometer of Professor Gärtner of Vienna. Almost without exception the blood pressure is changed. After exposure to the direct current it increases from 10 to 20 millimetres, while, following the alternating current, a reduction of pressure of

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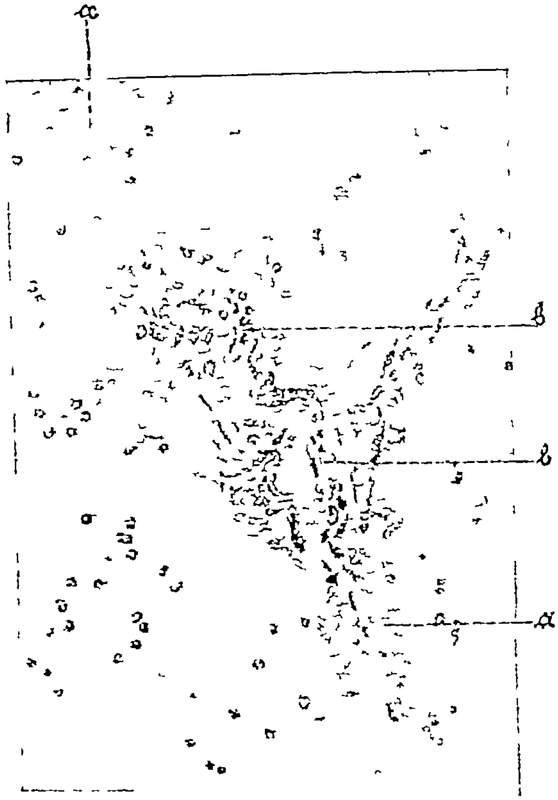
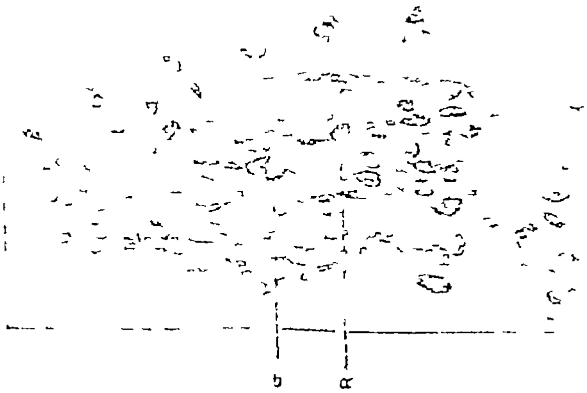
[3] Electrizität und Chloroformnarkose Wiener Klinische Wochenschrift No xlv, 1901

FIG 2



Shows hæmorrhage and destruction of the vessel wall from the brain of a girl killed by lightning *a* Hæmorrhage. *b* Tortuous and destroyed vessel wall

FIG 3.



Shows hæmorrhage and destruction of the vessel wall from the brain of a guinea pig killed by an electric current of 300-volt tension *a* Hæmorrhage with small particles of brain substance. *b* Destroyed vessel wall

from 10 to 15 millimetres is present, thereby proving that the direct current has an action different from the alternating current when using a current of a tension of from 100 to 200 volts. With higher tensions I have not experimented Mr Aspinall is of the opinion that a direct current seems to paralyse the victim at once "whilst an alternating current shock seems to draw him closer and to tie his body as far as possible into a knot. My experiments and observations on men and animals show that the effect of both currents is to produce a severe spasm of all the muscles during the action of the current. I myself have touched a wire carrying a direct current of 500 volts tension and was immediately repulsed I have also observed and read of cases where the contact was made with the whole hand gripping the wire, and in these cases the person is always held fast. The most peculiar phenomenon is the pushing away of the persons. Professor S Exner of Vienna thinks that it is possibly caused by the sudden strong contraction of the entire musculature.

Mr Aspinall's eighth question is "Cannot medical men give us a more certain method of ascertaining whether a man is dead or not?" As to whether the heart function is entirely lost it is difficult even for the physician to decide. In my experiments on animals I have observed that several hours after apparent death they show signs of life For this reason I believe that the attempts at restoration after shock should be continued for hours or until some certain sign of death appears

I wish to call special attention to the importance of the ninth question 'Cannot something more be done to help those who receive a shock?" Mr Aspinall asks if it would be advantageous to "hold the body for a few seconds head downwards at an angle of 45°, thus flushing the brain and stimulating its action?" Flushing the brain" in particular I would warn against The method of reasoning by which Mr Aspinall arrives at this conclusion is very plausible, but the fact is that there are direct contra indications to this treatment. During the microscopical examination of pathological preparations taken from three men and six animals that were killed by electricity I was successful in finding that the capillaries of the central nervous system were torn and that blood had escaped and permeated the surrounding nervous substance These hæmorrhages were found almost without exception in the grey substance of the brain and cord. I also discovered an alteration of the ganglion-cells.[5] These changes are illustrated by Figs. 1, 2, and 3. Such a hæmorrhage is not necessarily fatal, but it is very probable that the above method of flushing the brain would lead to secondary hæmorrhage and therefore result fatally In my opinion it would be better to perform venesection. Artificial respiration should be continued for hours, massage of the abdomen and of the region of the heart, placing the patient in a hot bath, subcutaneous injections of ether, camphor, or strychnine, should also be carried out. I believe that many of those victims who are pronounced dead could be revived by taking the necessary time and trouble.

In conclusion, I wish to remark that Mr Aspinall's observations are of the greatest interest to physicians and that these very difficult problems regarding the action of electricity in the human body can only be solved through the combined and harmonious efforts of both physicians and engineers

Vienna

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[5] The etiology and character of the above described pathological alterations I have fully described in Virchow's Archiv October 1902 Band clxx Heft 1 p 44

LENGTH OF STAY OF SCARLET FEVER PATIENTS IN THE METROPOLITAN ASYLUMS BOARD'S HOSPITALS.—At a meeting of the Metropolitan Asylums Board on Jan 24th the hospitals committee reported that it had had under consideration a letter from the Metropolitan Branch of the Incorporated Society of Medical Officers of Health, drawing attention to the length of stay of scarlet fever patients in the hospitals of the Board as compared with that of patients in some of the provincial hospitals, and suggesting that a conference should be arranged on that subject between the Board's medical superintendents and the medical officers of health The committee stated that it had discussed that suggestion and as a result of its consideration had informed the society that it saw no objection to such a conference but that it did not appear to it that for the holding of such a conference there was any necessity for the official sanction of the Board or of the hospitals committee, adding that, so far as it could see, there was nothing to prevent two bodies of medical men meeting together to discuss a purely medical question. The Board agreed with the action of the committee

THE VALUE OF BLOOD EXAMINATIONS AS AN AID TO DIAGNOSIS AND PROGNOSIS[1]

BY J H. BRYANT, M.D , F R C P LOND ,
ASSISTANT PHYSICIAN AND PATHOLOGIST TO GUY'S HOSPITAL

I HAVE been greatly interested in blood examinations for some time and am much impressed with the important information which can be derived from this method of investigation. I have therefore ventured to hope that a few remarks on the value of this form of clinical examination as an aid to diagnosis and prognosis will be of interest. During the last few years the number of workers in this field of clinical pathology has increased enormously and some very important papers and text-books have been published which deal with the subject and I would mention in particular the works of Ehrlich and Lazarus, Cabot and Ewing A further impetus has been given to this fascinating form of research by a greater perfection in the methods, by the introduction of more reliable instruments, and by a simplification of the manner of fixing and staining films for microscopical examination. For many years it has been customary both in hospital and general practice to examine the urine of every patient when first coming under observation. The tendency at the present time is certainly in hospital practice to make also an examination of the blood of every in patient, and in this respect the Johns Hopkins Hospital at Baltimore has been the pioneer, for every patient admitted to this institution, irrespectively of the diagnosis, has the blood examined in a routine manner At Guy's Hospital many more examinations are made than hitherto, in the clinical wards which I have recently had under my charge the blood of every patient was examined as soon as possible after admission. It would be a matter of impossibility for a busy medical man engaged in general practice to use this aid to diagnosis in anything like a systematic manner on account of the length of time it requires to conduct a satisfactory examination of this kind The technique is also a stumbling block, this, however, can easily be overcome by a little practice The scope of this paper must necessarily be small as the subject is so large, but I shall endeavour by reference to a few of my cases to draw your attention to some important and practical points and to give you an indication of the class of case in which a clinical examination of the blood is likely to prove of value.

There are several different methods of examining the blood, but I shall confine myself to a consideration of the following (1) the estimation of the number of red and white blood corpuscles and the percentage amount of hæmoglobin, (2) an examination of stained blood films in order to determine the relative proportion of different kinds of leucocytes, the form and character of the red blood corpuscles, and the presence or absence of protozoa and micro organisms, (3) the determination of the agglutinating power of the blood on certain bacilli—e g, in typhoid fever and Malta fever, and (4) the bacteriological examination of the blood.

Before considering these methods of examination I will first of all remind you of the condition of the blood in health and of the abnormal corpuscles which may be found in disease. The normal number of red blood corpuscles per cubic millimetre is from 5,000,000 to 6,000,000 in men and about 4,500 000 in women The average number of white blood corpuscles per cubic millimetre is about 8000 in adults and 10,000 in children The varieties of white corpuscles and their relative proportions in health are polymorphonuclear leucocytes, from 70 to 72 per cent., lymphocytes, from 22 to 25 per cent., large mononuclear leucocytes 1 per cent., eosinophiles, from 2 to 4 per cent., transitional, from 2 to 3 per cent., and mast cells, 0 5 per cent. Myelocytes are present in leukæmia but not in normal blood In health the red cells are more or less uniform in shape and size but in disease there may be smaller or larger forms and also nucleated cells of various sizes. The varieties of red corpuscles found are normal red blood corpuscles, small red blood corpuscles (microcytes) large red blood corpuscles (macrocytes), normal sized nucleated cells (normoblasts), small sized nucleated cells (microblasts), large sized nucleated cells (megaloblasts), enormous sized nucleated cells (gigantoblasts), cells which stain irregularly (polychromatophilic), and cells altered in shape (poikilocytes) The estimation of the number of the red and white blood corpuscles is best accomplished by the Thoma Zeiss hæmocytometer and of the hæmoglobin by Haldane's hæmoglobinometer The technique of the making and staining of films, the estimation of the agglutinating power of the blood on certain bacilli, and the bacteriological examination I will endeavour to explain at the end of my remarks should time permit.

I *What can be learnt from an estimation of the number of red blood corpuscles and of the amount of hæmoglobin.*—An examination of the blood is often necessary before an accurate diagnosis can be made, when anæmia is the most important and prominent indication of the patient being ill. Anæmia may be due to a deficiency of red blood corpuscles or of hæmoglobin or of both. It is of great importance to note the relation between the reduction in the number of the red blood corpuscles and of the percentage amount of hæmoglobin and it is at once obvious that there are three possible types of change which may occur—viz. 1 A much greater reduction in the percentage amount of hæmoglobin than in the number of red blood corpuscles—viz. with 3,500;000 (e.g, 70 per cent.) red blood corpuscles to the cubic millimetre 25 per cent of hæmoglobin—the colour index being therefore considerably under 1. This is the chlorotic type of blood. 2. A very great diminution in the number of red blood corpuscles with a relative higher percentage of hæmoglobin—e.g, 1,000 000 (i.e, 20 per cent) red blood corpuscles to the cubic millimetre with 25 per cent of hæmoglobin—the colour index being therefore above 1. This is the pernicious anæmia type. 3 An equal or approximately corresponding reduction of the number of red blood corpuscles and percentage amount of hæmoglobin—e.g, with 2,500,000 (i.e., 50 per cent.) blood corpuscles to the cubic millimetre 45 per cent. of hæmoglobin—the colour index being just under 1. This is the type of a secondary anæmia. If the anæmia, however, is very severe it may approach nearer to the chlorotic type. It is by carefully noting the relationship between the number of red blood corpuscles and the percentage amount of hæmoglobin that a secondary anæmia can be distinguished from a primary anæmia when the cause is not apparent after a careful physical examination. A primary anæmia is a form of anæmia in which the cause is either unknown or there is no sufficient pathological change found to account for it. A secondary anæmia may be defined as a form of anæmia which is the result of some recognisable pathological change or lesion Chlorosis and pernicious anæmia are classed as primary anæmias Secondary anæmia may be caused by an actual loss of blood, from diminished and defective nutrition, and from increased consumption or loss of albumins, it may therefore result from severe hæmorrhages, from wasting diseases such as phthisis, cancer, &c, from syphilis, malaria, plumbism, intestinal parasites, and many other causes

I will now tell you about three patients who were sent to me as cases of pernicious anæmia in order to have the diagnosis confirmed or refuted by an examination of their blood

CASE 1.—A man, aged 40 years, was brought to me for pernicious anæmia. He had been ill for three months and had been unable to work His friends kept asking him why he was looking so pale and this was the first indication of the commencement of his illness. He had always enjoyed good health before. He had never had anything to do with lead He had gradually been getting weaker and during the last three months had lost over a stone in weight. He had not vomited or passed any blood. He had had no pain. There had been neither sickness nor diarrhœa. He was intensely anæmic. His pulse was 124 and he was rather dyspnœic. The examination of the blood showed red blood corpuscles 3 750 000, white blood corpuscles, 12,000, and hæmoglobin, 25 per cent—a chlorotic type of blood the colour index being under 0 5, which at once showed that he was not suffering from pernicious anæmia, and further it was not likely that his condition could be explained by chlorosis for this disease is most unusual—in fact, almost unheard of—in men of this age. I therefore concluded that it was a secondary anæmia and after making a careful, systematic, physical examination found a tumour in the right lumbar region. It was tender, did not extend far back into the loin, was not connected with the liver, and was resonant on percussion. The urine was healthy A diagnosis of carcinoma of the ascending colon was made which was subsequently verified by an operation and later by a post-mortem examination. This tumour gave rise to no local symptoms and was not discovered until the blood examination had proved that he was not suffering from pernicious anæmia, for which he had been treated.

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[1] A paper read before the West Kent Medico-Chirurgical Society

CASE 2.—A man, aged 72 years, was brought to me for cough and bladder trouble. He had enjoyed good health until about six months before when he was noticed to be ailing He had suffered from bleeding hæmorrhoids, frequent micturition, and looseness of the bowels. He had lost flesh and his appearance suggested malignant disease. A careful and systematic physical examination was made but nothing abnormal was found to account for his weakness. His urine was normal. A few weeks afterwards he went to the Riviera, became weaker and very anæmic, and consulted a medical man who felt what he considered to be some enlargement of the spleen. He diagnosed pernicious anæmia and treated him with arsenic. I saw him again about four and a half months after first seeing him, and found that he was intensely anæmic and very much like a case of pernicious anæmia in appearance. A blood examination showed 4,500 000 red blood corpuscles, 5000 white blood corpuscles and 38 per cent. hæmoglobin—i.e., a chlorotic type of blood, the colour index being low, which at once excluded pernicious anæmia. A careful physical examination of the abdomen and of the tumour which was stated to be the spleen showed that it was more characteristic of an enlargement of the kidney or of a carcinoma of the colon. The former was considered to be most likely and a subsequent post-mortem examination proved it to be so.

These two cases illustrate the marked changes which take place in the blood as a result of carcinoma, but in both, the hæmoglobin index was remarkably low Case 2 also is an example of what is usually found in most cases of malignant disease—viz., that in the early stages the anæmia is not a prominent symptom. The blood in carcinoma has a closer resemblance to chlorosis than any other form of secondary anæmia, for the hæmoglobin index is always low In Osler and McCrae's monograph on malignant disease of the stomach, accurate blood counts were made in 59 cases the average number of red blood corpuscles was 3,712,186 (over 70 per cent.), the average percentage of hæmoglobin was 49 9, and the average number of white blood corpuscles was under 8000 to the cubic millimetre

CASE 3.—The patient was a man, aged about 40 years, who was sent to me on account of his extreme anæmia and weakness, pernicious anæmia having been diagnosed. He had all the typical symptoms of anæmia and the general appearance of pernicious anæmia. For a long time he had been suffering from bleeding hæmorrhoids. The only abnormal condition, discovered after a careful physical examination, was the presence of large bleeding internal hæmorrhoids The blood examination showed that he was not suffering from pernicious anæmia, for he had 2,950 000 red blood corpuscles, 12,187 white blood corpuscles, and 22 per cent. of hæmoglobin, which indicated a marked secondary anæmia of the chlorotic type The hæmorrhoids were treated by operation and the loss of blood stopped. Alginate of iron and arsenic were administered and after a few months he appeared to be perfectly well.

CASE 4 *Chlorosis.*—A girl, aged 18 years, was admitted into Guy's Hospital under my care for syncopal attacks, restlessness, and vomiting She had led a sedentary life and had been under extremely bad hygienic conditions. There was no history of any loss of blood. She had suffered from amenorrhœa and constipation for some time. She was intensely anæmic and very short of breath on admission. There were loud hæmic bruits at the base of the heart and a well marked venous hum in the neck. There were no physical signs or symptoms of disease of the lungs, liver, spleen, kidneys, or any of the abdominal viscera or of organic disease of the heart. A diagnosis of chlorosis was made and confirmed by the blood examination. There were 3,000,000 (67 per cent.) red blood corpuscles, 16 000 white blood corpuscles, and 25 per cent of hæmoglobin. The leucocytosis was caused by some suppuration under the nail of her big toe. She was treated by rest in bed and with ten grain doses of alginate of iron three times a day Three and a half weeks afterwards a blood count showed rapid improvement. The red blood corpuscles numbered 3 875,000 and the percentage of hæmoglobin was 50 per cent.

The blood in chlorosis in marked cases is very pale and it rapidly coagulates. The average number of red blood corpuscles is 4,000 000 to the cubic millimetre when the patient first comes under observation and it is extremely rare to find a case with the red blood corpuscles as low as 1,000 000 The leucocytes are not increased A blood examination alone will therefore not be sufficient to differentiate a case of chlorosis from a severe secondary anæmia. The diagnosis can only be correctly made when the result of the blood examination and the physical examination of the patient are considered together If leucocytosis is present and the polymorphonuclear cells are increased chlorosis without any complications can be excluded. In the case of chlorosis alluded to above the leucocytosis was accounted for by the suppuration under the big toe-nail.

CASE 5 *Pernicious anæmia.*—A woman, aged 50 years, was under my care for pernicious anæmia, the third occasion on which she had been in the hospital for treatment for this condition. She was first admitted on April 4th, 1901, for vomiting and palpitation. She had been under treatment for acute dyspepsia. She had not been able to do any work since October, 1900, and her chief symptom had been vomiting On admission she was markedly anæmic and her skin had a peculiar light yellowish tint. A blood examination showed 650 000 (13 per cent) red blood corpuscles to the cubic millimetre and 26 per cent. of hæmoglobin, the colour index therefore being 2, which is exceptionally high , there were 7000 leucocytes to the cubic millimetre She was treated with liquor arsenicalis, five minims three times a day Her mouth was in a very septic condition and there was well marked pyorrhœa alveolaris. Cultures were taken and various bacilli, cocci, and streptococci were found. On the 13th she was ordered one-minim keratin coated tabloids of creasote and later was treated with injections of anti-streptococcic serum She improved and on May 14th the blood showed 1,800,000 red blood corpuscles and 41 per cent. of hæmoglobin. She left the hospital much improved but was readmitted two months afterwards. She was intensely anæmic, the blood count being red blood corpuscles 750 000 and hæmoglobin 20 per cent. The blood film showed poikilocytosis and a number of normoblasts. She gradually became worse and died. At the post-mortem examination the only abnormal change which was found was an excess of iron in the liver

This was a typical case of pernicious anæmia. The blood in this disease is pale and watery and coagulates slowly There is a remarkable decrease in the number of the red corpuscles. The average in 52 cases examined by Cabot was 1,200 000 per cubic millimetre and the lowest count which has been recorded is in a case reported by Quincke in which only 143,000 red blood corpuscles to the cubic millimetre were present. The examination of a blood film shows in this disease a large proportion of macrocytes and the presence of nucleated red blood corpuscles. The diagnosis must rest on the small number of red blood corpuscles, the relatively higher percentage of hæmoglobin, and the presence of a large number of macrocytes and megaloblasts. The bad prognostic signs in this disease are an extreme reduction of the red cells—e.g , to 600,000 per cubic millimetre,—a high colour index, the presence of a large number of megaloblasts, and an increase in the number of lymphocytes

II. *Some practical points to be learnt from an estimation of the number and of a differential count of the various forms of leucocytes* —The average number of white corpuscles in healthy adults is 8000 to the cubic millimetre. Certain physiological and pathological states are associated with an increase of leucocytes, whereas in other diseases the number of these cells may be diminished. Leucocytosis is the term used to indicate the former condition and leucopenia the latter. The degree of leucocytosis varies between very wide limits, from 10,000 or 12,000 to 1,000 000 or more cells per cubic millimetre, and cases have been recorded in which the white have equalled and even exceeded the red in number Leucocytosis may be caused by a large number of conditions and it may be either physiological or pathological. Physiological leucocytosis occurs in the newly born, after digestion, during pregnancy after parturition, after cold baths, violent exercise, massage, &c. Pathological leucocytosis may occur after hæmorrhage, as a result of inflammatory and septic conditions, from certain toxic states, in malignant disease, as a result of certain therapeutic

THE VALUE OF BLOOD EXAMINATIONS AS AN AID TO DIAGNOSIS AND PROGNOSIS[1]

BY J H. BRYANT, M.D, F R C P LOND,
ASSISTANT PHYSICIAN AND PATHOLOGIST TO GUY'S HOSPITAL.

I HAVE been greatly interested in blood examinations for some time and am much impressed with the important information which can be derived from this method of investigation I have therefore ventured to hope that a few remarks on the value of this form of clinical examination as an aid to diagnosis and prognosis will be of interest. During the last few years the number of workers in this field of clinical pathology has increased enormously and some very important papers and text-books have been published which deal with the subject and I would mention in particular the works of Ehrlich and Lazarus, Cabot and Ewing A further impetus has been given to this fascinating form of research by a greater perfection in the methods, by the introduction of more reliable instruments, and by a simplification of the manner of fixing and staining films for microscopical examination. For many years it has been customary both in hospital and general practice to examine the urine of every patient when first coming under observation. The tendency at the present time is certainly in hospital practice to make also an examination of the blood of every in patient, and in this respect the Johns Hopkins Hospital at Baltimore has been the pioneer, for every patient admitted to this institution, irrespectively of the diagnosis, has the blood examined in a routine manner At Guy's Hospital many more examinations are made than hitherto, in the clinical wards which I have recently had under my charge the blood of every patient was examined as soon as possible after admission. It would be a matter of impossibility for a busy medical man engaged in general practice to use this aid to diagnosis in anything like a systematic manner on account of the length of time it requires to conduct a satisfactory examination of this kind The technique is also a stumbling block, this, however, can easily be overcome by a little practice The scope of this paper must necessarily be small as the subject is so large, but I shall endeavour by reference to a few of my cases to draw your attention to some important and practical points and to give you an indication of the class of case in which a clinical examination of the blood is likely to prove of value.

There are several different methods of examining the blood, but I shall confine myself to a consideration of the following (1) the estimation of the number of red and white blood corpuscles and the percentage amount of hæmoglobin, (2) an examination of stained blood films in order to determine the relative proportion of different kinds of leucocytes, the form and character of the red blood corpuscles, and the presence or absence of protozoa and micro-organisms, (3) the determination of the agglutinating power of the blood on certain bacilli—e g, in typhoid fever and Malta fever, and (4) the bacteriological examination of the blood.

Before considering these methods of examination I will first of all remind you of the condition of the blood in health and of the abnormal corpuscles which may be found in disease. The normal number of red blood corpuscles per cubic millimetre is from 5,000,000 to 6,000,000 in men and about 4,500 000 in women The average number of white blood corpuscles per cubic millimetre is about 8000 in adults and 10,000 in children The varieties of white corpuscles and their relative proportions in health are polymorphonuclear leucocytes, from 70 to 72 per cent., lymphocytes, from 22 to 25 per cent., large mononuclear leucocytes, 1 per cent., eosinophiles, from 2 to 4 per cent., transitional from 2 to 3 per cent., and mast cells, 0 5 per cent. Myelocytes are present in leukæmia but not in normal blood In health, the red cells are more or less uniform in shape and size, but in disease there may be smaller or larger forms and also nucleated cells of various sizes. The varieties of red corpuscles found are normal red blood corpuscles, small red blood corpuscles (microcytes) large red blood corpuscles (macrocytes), normal sized nucleated cells (normoblasts), small sized nucleated cells (microblasts), large-sized nucleated cells (megaloblasts), enormous sized nucleated cells (giantoblasts), cells which stain irregularly (polychromatophilic), and cells altered in shape (poikilocytes) The estimation of the number of the red and white blood corpuscles is best accomplished by the Thoma Zeiss hæmocytometer and of the hæmoglobin by Haldane's hæmoglobinometer The technique of the making and staining of films, the estimation of the agglutinating power of the blood on certain bacilli, and the bacteriological examination I will endeavour to explain at the end of my remarks should time permit.

I. *What can be learnt from an estimation of the number of red blood corpuscles and of the amount of hæmoglobin.*—An examination of the blood is often necessary before an accurate diagnosis can be made, when anæmia is the most important and prominent indication of the patient being ill. Anæmia may be due to a deficiency of red blood corpuscles or of hæmoglobin or of both. It is of great importance to note the relation between the reduction in the number of the red blood corpuscles and of the percentage amount of hæmoglobin and it is at once obvious that there are three possible types of change which may occur—viz. 1 A much greater reduction in the percentage amount of hæmoglobin than in the number of red blood corpuscles—viz. with 3,500,000 (e.g, 70 per cent.) red blood corpuscles to the cubic millimetre 25 per cent of hæmoglobin—the colour index being therefore considerably under 1. This is the chlorotic type of blood. 2. A very great diminution in the number of red blood corpuscles with a relative higher percentage of hæmoglobin—e.g, 1,000 000 (i.e, 20 per cent) red blood corpuscles to the cubic millimetre with 25 per cent of hæmoglobin—the colour index being therefore above 1. This is the pernicious anæmia type. 3. An equal or approximately corresponding reduction of the number of red blood corpuscles and percentage amount of hæmoglobin—e.g, with 2,500,000 (i.e., 50 per cent.) blood corpuscles to the cubic millimetre 45 per cent. of hæmoglobin—the colour index being just under 1. This is the type of a secondary anæmia. If the anæmia, however, is very severe it may approach nearer to the chlorotic type. It is by carefully noting the relationship between the number of red blood corpuscles and the percentage amount of hæmoglobin that a secondary anæmia can be distinguished from a primary anæmia when the cause is not apparent after a careful physical examination A primary anæmia is a form of anæmia in which the cause is either unknown or there is no sufficient pathological change found to account for it. A secondary anæmia may be defined as a form of anæmia which is the result of some recognisable pathological change or lesion. Chlorosis and pernicious anæmia are classed as primary anæmias Secondary anæmia may be caused by an actual loss of blood, from diminished and defective nutrition, and from increased consumption or loss of albumins, it may therefore result from severe hæmorrhages, from wasting diseases such as phthisis, cancer, &c, from syphilis, malaria, plumbism, intestinal parasites, and many other causes

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CASE 1.—A man, aged 40 years, was brought to me for pernicious anæmia. He had been ill for three months and had been unable to work His friends kept asking him why he was looking so pale and this was the first indication of the commencement of his illness He had always enjoyed good health before He had never had anything to do with lead He had gradually been getting weaker and during the last three months had lost over a stone in weight. He had not vomited or passed any blood He had no pain. There had been neither sickness nor diarrhœa. He was intensely anæmic His pulse was 124 and he was rather dyspnœic. The examination of the blood showed red blood corpuscles, 3,750 000, white blood corpuscles, 12,000, and hæmoglobin, 25 per cent—a chlorotic type of blood the colour index being under 0 5, which at once showed that he was not suffering from pernicious anæmia, and further it was not likely that his condition could be explained by chlorosis for this disease is most unusual—in fact, almost unheard of—in men of this age. I therefore concluded that it was a secondary anæmia, and after making a careful, systematic, physical examination found a tumour in the right lumbar region. It was tender, puscles can be found a very short time after the initial or and when the case ends by crisis the leucocytes do not l to their normal number with the temperature but take o or three days to do so When the temperature falls by is the leucocytosis falls with it and the normal number the cubic millimetre is, as a rule, recorded when the nperature remains normal. If there is a difficulty in king a diagnosis, the presence of leucocytosis would point pneumonia and exclude typhoid fever, influenza, and laria. If the case is obviously pneumonia and the patient very ill with a considerable area of lung involved, an sence of, or a very slight degree of, leucocytosis is an tremely grave prognostic sign. If the leucocytosis remains r several days after the temperature has fallen, and then a rther rise of temperature and an increase in the number leucocytes occur a relapse or empyema is indicated. Dr A. Gaitskell has recently been working in the wards of ay's Hospital on this subject and has published his results [2]

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[1] A paper read before the West Kent Medico-Chirurgical Society

CASE 11.—The patient was a woman, aged 24 years, ffering from pneumonia. Dr Gaitskell found no increase leucocytes, the whole of the patient's left lung was con lidated, and in spite of the fact that her condition appeared be satisfactory a bad prognosis was given and was con rmed by the death of the patient on the eighth day

If pneumonia complicates typhoid fever an absence of ucocytosis or even a leucopenia does not necessarily mean bad prognosis A case of this nature was investigated by r Gaitskell

CASE 12.—The patient was a boy, aged nine years, whose eucocytes did not rise above 10,937 per cubic millimetre fter the first examination, on account of the absence of eucocytosis, a bad prognosis was given, but two days after rards a typical Durham (so-called Widal) reaction was ob ained, and the absence of leucocytosis being thus explained more favourable prognosis was given and justified by the oy's subsequent recovery

In typhoid fever the most important characteristic of the lood is an absence of leucocytosis and in the later weeks of he disease the presence of a leucopenia. The differential ount shows a progressive increase in the number of the ymphocytes with a corresponding decrease in the poly norphonuclear cells I have already pointed out that liseases characterised by suppuration are usually associated with a polymorphonuclear leucocytosis, so that an absence f leucocytosis would be a point in favour of typhoid fever and much against appendicitis, perinephric abscess, hepatic abscess, suppurative pylephlebitis, and other forms of intra abdominal suppuration, and it would also be against pneumonia.

CASE 13.—There has recently been a case of pyosalpinx in the hospital admitted for typhoid fever The absence of a positive Durham reaction and the presence of a marked leucocytosis helped to exclude typhoid fever and to indicate the presence of intra abdominal suppuration.

CASE 14.—A few weeks ago a patient under the care of Dr E. C Perry (who has kindly allowed me to mention this case) suffering from a typical attack of typhoid fever suddenly, on the fifteenth day of the disease, complained of severe abdominal pain, became collapsed, and appeared to be suffering from hæmorrhage or perforation The question of hæmorrhage was soon decided The specific gravity of the blood was found to be 1053, which indicated that there had been no serious loss of blood The red corpuscles were enumerated and found to be 3,760,000 per cubic millimetre, which also pointed to the same conclusion. This view was subsequently confirmed by no blood being passed per rectum It seemed much more likely that perforation had occurred On the previous day he had bitten off and swallowed the bulb of a thermometer which had injudiciously been placed in his mouth, it was in the third week of the disease, he had suffered from marked twitching of his hands which is said to denote that the ulceration was deep, the abdomen was full, rigid, and tender, and there was very little movement during respiration. The pulse was 128 and running in character The leucocytes were counted and found to number 8250 per cubic millimetre, a result which was very much against perforation having occurred. It was decided not to operate at once, but that laparotomy should be performed if there was an ingravescent leucocytosis, so a leucocyte count was therefore made every hour for the next 12 hours, the number being found to vary between 7500 and 9000 per cubic millimetre. From a consideration of the result of these blood counts taken together with the improving condition of the pulse it was decided not to operate, and the decision has been justified by his complete recovery

Malaria is a disease which is often confounded with typhoid fever, for in addition to pyrexia and other symptoms it is also characterised by an absence of leucocytosis. This difficulty does not often arise in this country unless patients have returned to it from a malarial district abroad The presence of the malarial parasite in the blood is the absolute and decisive test of the presence of malaria Tuberculosis cannot be distinguished from typhoid fever by a blood examination alone

Eosinophilia.—I have alluded to a disease in which the lymphocytes are enormously increased, to conditions characterised by an increase in the polymorphonuclear cells, and to another disease in which a large number of myelocytes are present I shall now say a few words about eosinophile cells The examination of a blood film and the finding of a large number of eosinophiles were instrumental in clearing up a very difficult case.

CASE 15.—The patient was a man, aged 25 years, who was admitted under my care for cough and attacks of dyspnœa. He had been invalided home from India. He had been seen by a physician who had diagnosed aneurysm and in consequence of this diagnosis he would have had to retire from his appointment. He was sent to me by Dr O S Pantin of Douglas who had diagnosed asthma. I failed to find any positive evidence of aneurysm and an examination under the x rays did not show any sign of this condition. A blood examination showed red blood corpuscles, 6,587,500, white blood corpuscles, 10,625, and hæmoglobin, 90 per cent. The differential count showed 24 per cent. polymorphonuclear cells, 59 per cent eosinophiles, 4 per cent. large lymphocytes, and 13 per cent. small lymphocytes Eosinophilia in asthma has been noted by many observers and its occurrence in this case was undoubtedly an important diagnostic sign in favour of this disease. The blood examination saved this patient from compulsory retirement.

Eosinophilia occurs in a good many diseases and especially in certain skin diseases—viz., pemphigus, eczema, sclerodermia, psoriasis, urticaria, &c , also in some of the diseases due to animal parasites—e.g , bilharzia hæmatobia, ankylostomum duodenale, &c.

Malaria is a disease which cannot be diagnosed with certainty until the parasites have been demonstrated in the red blood corpuscles and this is best accomplished by staining thin films with carbol thionin blue, eosin and methylene blue, or with Jenner stain Not only can malaria be diagnosed but the particular kind of parasite may be demonstrated and from the examination of a blood film the type of fever predicted The demonstration of the parasite is sufficient to distinguish it from other febrile diseases The spirillum of relapsing fever may be demonstrated by means of blood films Streptococci, pneumococci, typhoid bacilli, and other organisms are not usually found in stained films and their presence cannot be relied on as an aid to diagnosis.

III. *What can be learnt from the addition of blood serum to living motile cultures of certain bacilli* —The diagnosis of two diseases—viz., typhoid fever and Malta fever—may be very materially helped by noting the agglutinating power of the serum of a patient suffering from either of these diseases on recent motile cultures of their respective bacilli If a few cubic centimetres of blood serum from a patient suffering from typhoid fever are added to a recent actively motile broth culture of the bacillus typhosus the bacilli are precipitated in flakes leaving the upper part of the fluid clear, and if the sediment is examined under the microscope the bacilli will be found to be no longer motile but to be agglutinated into compact non motile masses The agglutinating power of the blood is tested by mixing some blood serum with a recent culture of the typhoid bacillus and examining the mixture under the microscope Authorities differ as to the degree of dilution and the time limit which constitute a positive reaction It is customary in the Bacteriological Laboratory at Guy's Hospital to use a 50 per cent, 5 per cent., and 0 5 per cent. dilution and the reaction is not considered positive unless clumping and immobility of the bacilli occur with the 1 in 200 dilution within half an hour Examinations made before the eleventh day of the disease with a negative result are of little value. That the result of the reaction is of great value influences, and in leukæmia. I shall confine my remarks to a few of the pathological conditions characterised by leucocytosis When estimating the particular significance of the presence of leucocytosis in any given case it is not only necessary to find the number of white blood corpuscles per cubic millimetre, but also to know the percentage number of each variety of cell, which can be most satisfactorily ascertained by the examination of a stained film. The following case illustrates the importance of attending to these points.

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[2] Guy's Hospital Reports vol. lvii.

CASE 6—A woman, aged 56 years, came to my out-patients' department on account of a painful swelling in her left side below the ribs About a month before, as she was feeling ill and on account of the pain, she consulted her medical attendant who, after examining her, told her she was suffering from an enlargement of her left kidney When I examined her abdomen I found a large tumour occupying the left hypochondriac, left lumbar, and left half of the umbilical region It was tender and had a fairly well defined, hard, rounded edge extending downwards from the right costal margin towards the umbilicus and reaching to a point about half an inch below it. It yielded a dull percussion note which was continuous in front with the usual area of normal spleen dulness. It could be felt to extend well into the loin, so that from the physical signs it was difficult to say whether the tumour was splenic or renal I examined a fresh specimen of blood under the microscope and found an enormous increase in the white blood corpuscles, for there appeared to be about one white to seven or eight red and this suggested a diagnosis of spleno medullary leukæmia. She was admitted into the hospital and a few days afterwards a more careful examination of the blood showed a moderate leucocytosis with the polymorphonuclear cells predominating and no myelocytes A subsequent post-mortem examination showed that the tumour was a perinephritic abscess, secondary to a calculous pyonephrosis which had discharged into the colon

This case shows that a too hasty opinion must not be expressed before a satisfactory blood examination has been made. In cases of enlargement of the spleen a correct diagnosis cannot be made until the blood has been examined and this applies in particular to enormous enlargements of the spleen such as may be due to spleno-medullary leukæmia, chronic malaria, splenic anæmia, and spleno-megalic cirrhosis

CASE 7—A man, aged 30 years, came to my out-patients' department for anæmia, shortness of breath, and enlargement of the abdomen He was markedly anæmic His abdomen was distended and the spleen was enormously enlarged. It was found that the blood was pale and that it clotted very readily There were 3,000,000 red blood corpuscles, and 300 000 white blood corpuscles to the cubic millimetre, and 42 per cent. of hæmoglobin. The differential count of the leucocytes showed—polymorphonuclear cells, 49 per cent , myelocytes, 44 per cent. , lymphocytes, 4 per cent. , and eosinophiles, 3 per cent. The large percentage of myelocytes pointed with certainty to a diagnosis of spleno medullary leukæmia.

CASE 8.—A girl, aged 23 years, was sent to the hospital for enlargement of the abdomen which was thought to be due to an ovarian tumour A careful physical examination revealed enormous enlargement of the spleen which was considered to be due to spleno medullary leukæmia. The blood examination showed a diminution in the number of red blood corpuscles and of the amount of hæmoglobin, but no leucocytosis. As she was not suffering from any intercurrent disease and had not been abroad her condition was considered to be due to either splenic anæmia or splenomegalic cirrhosis, and certainly not to spleno-medullary leukæmia. A few days afterwards she died from hæmatemesis and at the post-mortem examination the enlargement of the spleen was found to have been due to cirrhosis of the liver

The chief characteristics of the blood in spleno medullary leukæmia are a reduction in the number of red blood corpuscles to about 3,000,000 per cubic millimetre, and an enormous increase of the white cells to between 200,000 and 500,000, of which over 30 per cent. are usually myelocytes.

In cases of enlargement of the glands, especially if associated with enlargement of the spleen, a blood examination is necessary before a correct diagnosis can be made. The disease which can, in particular, be diagnosed by this means is lymphatic leukæmia

CASE 9—A boy, aged 15 years, had no illness until a week before he was admitted into the hospital when he felt pains in the neck, axillæ, and groins, and on the following day he noticed lumps which quickly enlarged to the size found when he was admitted On admission enlarged glands were found in the submaxillary, submental, cervical, axillary, sub-occipital, and inguinal regions A diagnosis of acute tuberculosis of the glands or of acute lymphadenoma was made. A blood count showed that the correct diagnosis was lymphatic leukæmia, for there were 3,800,000 red blood corpuscles and 43,750 white corpuscles, of which 95 6 per cent were lymphocytes Subsequent examinations showed a great increase in the number of white cells to 116,875 and 126,000 He died from hæmoptysis.

The chief characteristics of lymphatic leukæmia are therefore enlargement of the glands with or without enlargement of the spleen, but, when it is enlarged, never reaching the enormous size it does in spleno medullary leukæmia The red blood corpuscles are diminished in number as a rule to about 3,000,000 to the cubic millimetre , the percentage of hæmoglobin is reduced as in spleno-medullary leukæmia. The white blood corpuscles are much increased, but do not as a rule exceed 150,000 to the cubic millimetre and the percentage of the lymphocytes is enormously increased, on an average to about 96 per cent. Such an enormous lymphocytosis as this serves to distinguish it from lymphadenoma and other diseases characterised by enlargement of the glands or spleen.

In suppurative and inflammatory conditions a leucocytosis may occur which does not often exceed 50,000 to the cubic millimetre A differential count usually shows that the polymorphonuclear cells are in excess and may amount to 90 per cent. of the leucocytes. Klein has described a case of hæmorrhagic septicæmia in which 40 per cent. of eosinophiles were found in the blood This occurrence of leucocytosis as a result of suppuration has a very important bearing on diagnosis, treatment, and prognosis, and is well exemplified in cases of appendicitis Last year I had two male patients admitted on the same day suffering from appendicitis and each had a tumour in the right iliac fossa. After a careful physical examination and a consideration of the state of the abdomen and of the general condition of the patients I came to the conclusion that in one the tumour would subside and he would get well without an operation and in the other that a surgical procedure would be necessary I had a blood examination made and found in the former 8500 leucocytes and in the latter 25,000 leucocytes. I asked my surgical colleague, Mr L. A. Dunn, to see the two cases, and he decided to operate at once on the patient with the marked leucocytosis and to leave the other He found an abscess and drained it and the other patient recovered without an operation. I do not mean to claim that a blood examination will tell you when to operate and when not to operate, but it will be an additional indication should the state of the abdomen and the general condition of the patient point to the advisability of immediate surgical interference.

CASE 10—Three months ago I hurriedly had to make a journey to the west of England to see one of my sisters who was suffering from a typical attack of appendicitis and it was left to me to decide whether she should be immediately operated on or not. Her pulse was 100, the temperature was 103° F , and there was a large tender swelling in the right iliac region From a physical examination alone it was almost impossible to say whether pus was present or not I made a blood examination and found between 11,000 and 12,000 leucocytes and on the strength of this I decided to defer the question of operation. The opinion thus formed was justified by her recovery, the tumour gradually diminishing in size until it finally disappeared I mention this case to emphasise further my opinion of the importance of blood examination in such cases

Cabot's experience is that a marked leucocytosis—i.e., over 25 000—usually means a large abscess or peritonitis. A catarrhal appendicitis rarely causes leucocytosis. Very mild cases and very severe cases may show no leucocytosis, so that, as I have already stated, a blood examination must not be relied on alone as an indication of the pathological changes which have taken place or as an absolute guide to operation With regard to differential diagnosis if there is a difficulty in determining whether a patient is suffering from appendicitis or typhoid fever a leucocytosis would practically exclude typhoid fever In pneumonia blood examinations are of very great importance both from the point of view of diagnosis and prognosis, for leucocytosis is a constant accompaniment of it, very mild and fatal cases being excepted. The increase in the number of white blood irreducible and gangrenous; the others were reducible, some with ease and some with more or less difficulty. One case (Case 1) was evidently quite beyond surgical treatment and died shortly after admission into the hospital. Of the five successful cases four were quite young children, being five months, six months, six months, and eight months old respectively. In no case was inflation or injection of fluid by the rectum attempted; the futility of thus wasting valuable time has been amply demonstrated, whilst the cases relieved completely by these methods are few and problematical. Whilst surgical registrar of the London Hospital I collected for Mr. Frederick Eve the results of 53 cases many of which had been either inflated or injected and in every case laparotomy had to be subsequently performed. Injection or inflation is undesirable for two reasons, first, because it might actually rupture the gut by the pressure exerted, and secondly because it is likely to reduce the intussusception up to the last inch or two and then to cease to act. This last portion is always the most difficult to reduce manually; again, this last inch or two gives rise to a comparatively small mass which may easily be overlooked on abdominal palpation. The condition is supposed to be completely relieved only to return again when the pressure of fluid or air is relaxed.

In text-books on intestinal obstruction mention is made of the physical condition of the children as a factor in the production of intussusception. Some authors consider that it is more often found in the ill fed and delicate. My experience at the London Hospital has been exactly the reverse—in nearly every case which I have observed there during the last seven years one has been struck by the good physique and general lustiness of the patient. One might suggest, therefore, that too vigorous peristalsis is responsible for the condition rather than an atonic state of the gut wall; probably in many cases careless feeding with indigestible food has been the exciting factor. That so many cases should occur in the week following Christmas day may also point in the same direction. With regard to the actual operative technique practised in those five cases which recovered in three cases a median incision was made below the umbilicus whilst in the other two the abdomen was opened in the lower part of the right semilunar line. In those cases in which the sausage like tumour could be made out in the descending colon, left iliac region, or per rectum a median incision was made. In each case an attempt was made to reduce the gut by simply introducing two fingers of one hand within the abdomen and manipulating the gut with the other hand on the abdominal wall. Complete reduction by this method was found impossible; in every case the cæcum, colon and ileo-cæcal junction had to be brought up to the wound and manipulated outside the abdominal cavity. The difficulty of complete reduction by the first method was, I found, due to the mobility of the cæcum, a distinct mesocæcum being present in nearly every case. Great care was taken to prevent prolapse of gut through the abdominal wound and the colon which was exposed was protected carefully by hot sponges wrung out of boiled water.

I feel sure that the keynote of success in operating on these cases is "rapidity." The time occupied from the actual incision of the abdominal wall to the tying of the last suture was noted. It did not exceed 15 minutes in each case—one took 10 and another 12 minutes. The usual precautions were taken to prevent shock, the limbs and chest were incased in cotton-wool, and the operations were performed on a hot-water pillow.

With regard to the after treatment, the feeding of these children was commenced almost as soon as they had recovered from the anæsthetic effects; this in the absence of vomiting is an essential point. In many cases children have been constantly sick for two or perhaps three days before admission to hospital. They are much exhausted, and to withhold nourishment, as is sometimes practised for a further six or eight hours after operation may just prove sufficient to turn the balance in the wrong direction. Opium was given to each child if any restlessness was present. Two-minim doses of nepenthe acted well; in one case a small hypodermic injection of morphia was necessary owing to persistent vomiting after anæsthesia. In two cases—viz., Cases 2 and 5—a rise of temperature (104° and 106° F. respectively) followed within a few hours of operation; this was doubtless due to sudden toxic absorption from the lymphatic area of the inflamed and damaged gut. Saline fluid injected per rectum in the latter case appeared to have a very beneficial effect. Case 7, in which resection was performed with a fatal result, was a particularly interesting and unusual one. The site of the intussusception commenced only five feet from the duodenum; it was an enteric form—i.e., small gut within small gut—and curiously enough the lower part was invaginated into the upper—i.e., a retrograde or ascending intussusception. This was verified at the post-mortem examination. In addition to the actual intussusception of the gut the mesentery had been twisted on its axis so giving rise to gangrene of about two and a half feet of intestine. The following are brief notes of the cases.

Case 1.—The patient was a male, aged five months, who was admitted into the London Hospital on Dec. 26th, 1902, with the following history. The illness began three days previously with severe pain in the abdomen; blood was then noticed in the motions; the child had vomited constantly up to the day of admission. His condition on admission was as follows. He was a well nourished child, evidently much collapsed; his eyes were sunken and he had the abdominal facies. The pulse was feeble and not countable. The abdomen was generally much distended; no definite tumour was made out on palpation. No tumour was felt per rectum but some blood and slime were present on the examining finger. The child's condition was considered to be too bad for operative treatment and he died four hours after admission. At the post-mortem examination an ileo-cæcal intussusception was found which had entered the ascending and transverse mesocolon. The whole of the small gut was much distended. The intussusception was reducible with difficulty.

Case 2.—A female aged five months was admitted into the London Hospital on Dec. 26th, 1902, with the history that the child was in good health until 5 P.M. on the previous day—viz., the 25th; she then suddenly woke up crying out. The mother gave her a teaspoonful of syrup of rhubarb. Blood was noticed in the next motion and a good deal of blood passed during the night in four or five motions. The child began to vomit in the night; this had continued up to the time of admission. The child had always been breast-fed. On admission she was found to be a healthy and well nourished child not markedly collapsed, but the extremities were cold and there was general restlessness. On abdominal examination a well-defined sausage shaped tumour could be felt lying transversely across the abdomen and extending to the left iliac region. The apex of an intussusception could also be felt easily per rectum. The rest of the abdomen was flaccid and not distended. Operation was performed half an hour after admission. A median incision was made below the umbilicus and two fingers were inserted; an attempt made to reduce thus proving unsuccessful the tumour was brought up to the wound and reduced fairly easily, the last portion to be reduced being the caput cæci. The abdominal wound was sutured with silkworm gut. The time occupied in operation was 15 minutes. With regard to her progress restlessness was marked after operation. Two minims of nepenthe were given with very good results. The bowels acted three hours after operation; the first motion contained blood. The temperature rose to 104° F. on the evening of the operation day; this subsided to normal two days later. The after progress was uneventful. The sutures were removed on the tenth day and strapping was applied.

Case 3.—A male aged six months, was admitted into the London Hospital on Dec. 29th, 1902, with a history that two days previously at 6 P.M. he began to scream, and shortly after blood and slime were passed per rectum; the bowels had not acted since. Vomiting had been incessant. The child had always been breast-fed. On admission he was found to be a well developed child. Some amount of shock was present and whilst being examined vomiting occurred with apparently no effort. On examination general rigidity of the abdominal wall was found. No tumour was made out on palpation and nothing definite could be felt per rectum. The examining finger was, however, coated with bloody mucus. Operation was performed. Under anæsthesia a tumour was easily felt in the right iliac and hypochondriac regions, placed vertically. An oblique incision about two and a half inches in length was made in the right semilunar line. The intussusception was brought up to the wound and reduced. This was effected with some difficulty, the peritoneum of the ensheathing layer being torn for about one inch transversely. This was not sutured. The last two inches of the ileum were invaginated through the ileo-cæcal valve and so formed the apex of the intussusception. This had drawn the ileo-cæcal valve with it, constituting the is shown by Mr W O C Pakes's analysis of 304 consecutive cases in which the error was only 3 03 per cent. In doubtful cases a morphological examination of the blood should be made, and if, in addition to a slight or indefinite serum reaction, there are an absence of leucocytosis and a relative lymphocytosis the disease is, without much doubt, typhoid fever A negative serum reaction does not necessarily prove that the patient is not suffering from typhoid fever If the clinical evidence is sufficient to make the diagnosis certain a negative serum reaction should in many cases be looked upon as a warning of the possibility—in fact, I might say of the probability—of a relapse.

CASE 16.—Last year I had under my care a boy who was undoubtedly suffering from typhoid fever Repeated attempts at obtaining a positive serum reaction failed until the beginning of the tenth week of his illness, when a third relapse was commencing

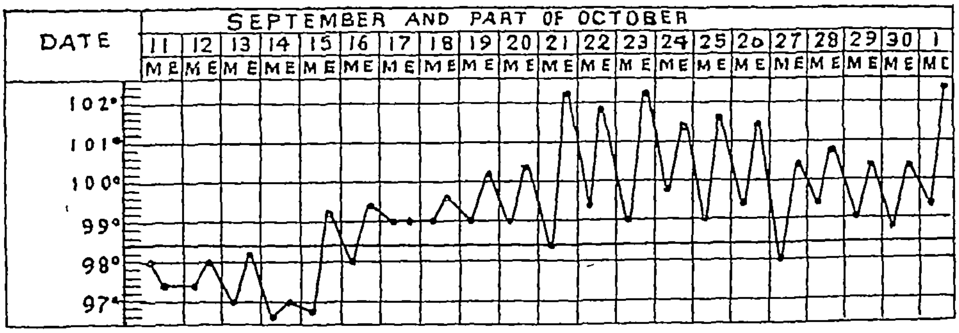


Chart of temperature in case of ambulatory typhoid fever with relapse. Positive serum reaction on Sept. 14th

CASE 17 —Lying in the bed opposite to the patient in the preceding case was another boy suffering from the same disease whose serum did not give a positive reaction until the middle of a second relapse.

The following case illustrates the value of the reaction in making a diagnosis of typhoid fever

CASE 18.—A male, aged 25 years, was admitted on Sept. 11th, 1901, for debility resulting from diarrhœa. He commenced to feel ill a month before admission and complained of headache, diarrhœa, pain in the abdomen, and sickness. The diarrhœa continued and he could not check it with medicine. He became weaker and lost weight, but did not have to keep to his bed. On admission his temperature was 98° F , his pulse was 72, and his respirations were 24 The abdomen was not distended and the spleen was just palpable. There were no spots. The stools were liquid and pale The possibility of ambulatory typhoid fever was considered and three days after admission his blood serum gave a positive reaction when diluted to 1 in 200, the temperature being 97° (*vide* Chart) A week after admission the temperature began to rise and he had a relapse The diagnosis of this case as one of typhoid fever was much helped by the positive serum reaction.

Malta fever may be diagnosed by means of a similar serum reaction if a culture of the bacillus Melitensis is mixed with the serum from a patient suffering with this disease.

IV *The bacteriological examination of the blood* —Great care must be exercised to prevent the possibility of the blood which is obtained for bacteriological examination being contaminated. The staphylococcus albus, if found, is due to contamination and is not the specific cause of the disease from which the patient is suffering The micro-organism which is most frequently obtained by cultivating the blood is the streptococcus pyogenes I have obtained it in a good many cases of infective endocarditis. If a patient is suffering from some valvular lesion, has an irregular temperature, is anæmic, and streptococci are obtained by cultivating the blood a diagnosis of infective endocarditis can be made and the indication for treatment is the injection of anti streptococcic serum A question which is often asked is—Is infective endocarditis invariably fatal? The following case bears on this point.

CASE 19 —A boy, aged 15 years, was admitted to hospital suffering from mitral disease. He had had several attacks of rheumatism. His temperature was varied and was running an irregular course, ranging between 98° and 101 5° F When he first came under my care he had been in the hospital for nearly two months and during the whole of this time his temperature had been raised and he had not had any manifestation of rheumatism or of tonsillitis. A bacteriological examination of the blood showed the presence of streptococci in pure culture A few days afterwards the temperature dropped to normal and remained normal. A subsequent bacteriological examination of the blood was negative. I considered that this boy was suffering from infective endocarditis, that the acute process had subsided, and the streptococci had died out

I have endeavoured to show in this paper what can be learnt by examination of the blood in certain diseases. It is only a sketch of the subject which is one of very great interest to me. I hope I have not given the impression that I believe blood examinations are infallible as an aid to diagnosis and prognosis. I fully indorse what Ewing writes, "The examination having been performed *its results are to be interpreted only in the light of the fullest possible clinical information.*"

Mansfield street, W

NOTE ON THE RESULTS OF THE TREATMENT OF AN UNUSUAL SERIES OF CASES OF ACUTE INTUSSUSCEPTION

BY HUGH M RIGBY, M S LOND , F R C S ENG.,
ASSISTANT SURGEON TO THE LONDON HOSPITAL SURGEON TO THE POPLAR HOSPITAL FOR ACCIDENTS

DURING the nine days from Dec. 26th, 1902, to Jan. 3rd, 1903, no less than seven cases of acute intussusception were admitted into the surgical wards of the London Hospital. As I was fortunate enough to be the surgeon on duty during this period I had the opportunity of seeing and dealing with them all It seems worth while to record the notes and results of treatment of these seven cases, six of which were submitted to operation. The result—viz., five recoveries out of the six operated upon—is distinctly encouraging and should be a strong argument in favour of early resort to surgical interference in these too often fatal forms of intestinal obstruction Statistics of cases of acute intussusception with the results of their operative treatment have been dealt with by many writers. It seems to me that in no class of case can statistics be of less value than in this, the operative mortality must vary enormously from time to time, depending as it does on such slight alterations of the pathological changes found within the abdomen. The very fact of the invaginated portion of the gut being irreducible immediately causes the mortality to rise from, perhaps at the best, 50 to 90, or even 100 per cent. The age of the patient also has a marked influence on the prognosis, while the duration of the illness before its serious nature is recognised is another all important factor which has to be reckoned with. The notes of my cases show that of the six operated on only one was to a very small percentage, and (5) that the chief points in the after treatment are (*a*) early feeding and (*b*) the use of opium when necessary In conclusion, I have to thank Dr E F Fisher and Mr F G Bowen, house surgeons, for their valuable aid in the care and after treatment of these cases

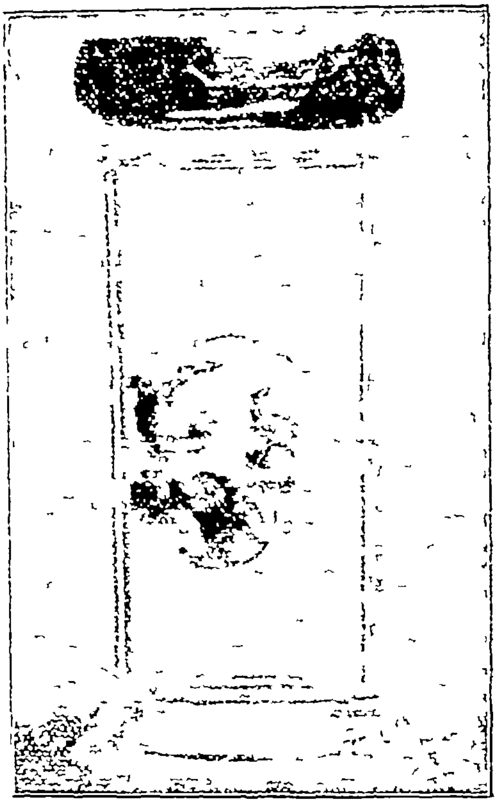
Wimpole-street W

A CASE OF EXTRA-UTERINE FŒTATION

By THOMAS H. MORSE, F R C S Eng

FEW conditions are more alarming than that which may occur to a young wife apparently in the best of health by the rupture of an extra uterine fœtation. We owe much to the courage and investigations of the late Mr Lawson Tait on this subject. He it was who first demonstrated to us the way to rescue these cases from imminent death by a timely operation. The following case occurred in Norfolk I hope in the near future to bring before our profession a series of 20 of these cases which have occurred in my practice, trusting that the details of them may be of service in illustrating important points in diagnosis and treatment for the future. I have entered fully into details as this case is typical of many others that I have operated upon, and I believe the condition to be more common than is generally supposed, early recognition being of the greatest importance.

The patient was a woman, aged 30 years, who was under the care of Dr A. R. Manby, Mr H. E. Rowell, and Mr Hogg, with whom I saw her She had been married two months and menstruation was missed for the first time three weeks before I saw her There had been no subjective signs of pregnancy She was feeling quite well until 3 A.M on Jan. 5th, 1903, when she was seized with violent abdominal pain followed by faintness and temporary blindness She was sick once and the abdomen was very tender to touch The pulse was 130 and the breathing was rapid and thoracic Pain was referred to the right inguinal region The symptoms of loss of blood increased until pallor and collapse were extreme and she appeared to be dying The diagnosis of ruptured tubal pregnancy was made by Mr Hogg and confirmed by Dr Manby and Mr Rowell the same evening Operation was advised but refused. In response to an urgent summons I saw her on Jan. 6th Before my arrival saline fluid had been injected into the rectum and the pulse had considerably improved in consequence. The patient at that time looked extremely ill and could not speak above a whisper Extreme pallor showed itself in the lips, gums, and tongue, and especially in the conjunctivæ The abdomen was distended and resonant all over the centre, but dull or nearly so in both flanks. The pulse was still feeble—130 per minute—though much improved by the saline injection. The temperature was 96° F The uterus seemed somewhat fixed and Douglas's pouch contained a resistant semi solid mass. The abdomen was not tender to touch anywhere—a sign which I have before noticed in these cases and a valuable one as a diagnostic distinction from perforation of the stomach or other hollow viscus Abdominal section was decided upon. Every precaution having been taken as to asepsis, Mr Hogg gave ether and Dr Manby and Mr. Rowell assisted As soon as the peritoneal cavity was opened a large quantity of dark blood escaped, the pelvis was completely full of clots. As the history given pointed to the right side as the place of origin of the trouble I at once drew up the ovary and tube of that side when a small tubal pregnancy not larger than a hazel nut was found close to the uterine end of the tube. Here let me remark that I have noticed that the nearer the gestation sac is to the uterine end of the tube the greater in amount has been the hæmorrhage in these cases The tube was ligatured with silk and the whole of it including the pregnancy, was removed, large handfuls of clots were then removed and the abdomen was washed out with sterile hot water The wound was closed completely with three rows of suture, catgut being used for the peritoneum and muscle and fishing gut for the skin. A large quantity of water was purposely left inside. The wound was dressed with cyanide gauze and collodion Shock was not severe and the pulse quickly improved in volume and remained at 120 per minute for the next 12 hours. Judging from the daily reports that I received from Dr Manby and my nurse I find that the convalescence was rapid and uneventful, the wound having united by primary union.



The illustration shows the Fallopian tube, the upper end being the normal fimbriated extremity and the expansion at the lower end being the gestation sac, it is the smallest I have ever seen which had given rise to so much hæmorrhage.

Norwich.

FURTHER INVESTIGATIONS REGARDING THE INFECTIVE NATURE AND ETIOLOGY OF PERNICIOUS ANÆMIA.

(25 CASES)

(SYN IDIOPATHIC ANÆMIA OF ADDISON")
ITS NON IDENTITY WITH THE 'PROGRESSIVE PERNICIOUS ANÆMIA" OF BIERMER

BY WILLIAM HUNTER, M D EDIN F R C P LOND,
PHYSICIAN TO THE LONDON FEVER HOSPITAL EXAMINER IN MEDICINE IN THE UNIVERSITY OF GLASGOW

(*Continued from p 253*)

THE evidence on the points already mentioned I shall now consider

VII —GENERAL ETIOLOGY OF 25 CASES.

General etiology —The facts in connexion with the general etiology in the 25 cases observed in the past three years may be summarised as follows —*Age* varied from 32 to 72 years The average age was 51 years, the majority of the cases being between the ages of 40 and 60 years *Sex* 19 cases were in men and six were in women. *Station in life* There were 17 private patients and eight hospital patients. *General health* in all the cases was good *Poverty* In no case did this play any part in the production of the disease, nor did *bad food* or *insufficient food* As one of the hospital patients put it, he had always been careful about what he ate and drank and had been in a position to gratify his wishes in those respects. *Pregnancy* or *puerperal troubles* In none of the six cases in form described by Lichtenstern as ileo colic iliaca. The abdominal wound was closed with silkworm gut The time occupied was altogether 10 minutes. Progress was uneventful. No stimulant or opium was required There was a slight rise of temperature—viz, 100° F on the day after operation. Feeding was commenced as soon as the effects of the anæsthetic had passed off. The sutures were removed on the tenth day

CASE 4 —A male, aged six months, was admitted into the London Hospital on Dec. 29th, 1902, with the history that the child was quite well until 7 30 P M on the 28th He then began to scream with pain, some brandy was given, and a good deal of blood was passed in the motions during the night and vomiting was frequent. The child had always been breast-fed. During the last week he had had diarrhœa. On admission he was found to be a well nourished child. He lay in an apathetic condition and the pulse was small and quick. On examination the abdomen was generally flaccid and a well marked sausage shaped mass could be easily felt in the left hypochondriac and iliac regions Per rectum the apex of an intussusception could be easily felt within one and a half inches from the anus Operation was performed. A median incision was made below the umbilicus The intussusception could not be reduced without exposing it through the wound There was some difficulty in reduction, especially the last two or three inches, the apex was formed by the caput cæci, the cæcum and appendix were much injected, œdematous and covered with thick lymph, this was gently sponged away The wound was sutured with silkworm gut The time occupied was altogether 15 minutes. After operation there was much collapse, the child was restless and his extremities were cold, $\frac{1}{150}$th of a grain of strychnine was given hypodermically and two minims of nepenthe. The bowels acted nine hours after operation, some blood being passed. On the day following operation the general condition had much improved The sutures were partly removed on the ninth day, no strapping was applied A few hours later the child was sick and on examining the abdomen the house surgeon, Mr F G Bowen, found that the wound had partly given way and that some small gut had prolapsed, he immediately under anæsthesia replaced the protruded portion and resutured the abdominal wound. The further progress of the case has been uneventful

CASE 5.—A female, aged eight months, was admitted into the London Hospital on Jan. 2nd, 1903, with the history that she had been vomiting on and off for the last seven days Two days before admission blood was passed in the motions and a good deal since that time, slime had also been passed She had always been breast-fed On admission at 11 A M the patient was found to be a small undersized child but well nourished She was evidently suffering from collapse, the lips were pale and the eyes were sunken. The pulse was thready On examination the abdomen was generally flaccid and a definite tumour could be felt in the left iliac region, no tumour could be made out per rectum Operation was performed at 1 P M A median incision was made below the umbilicus, the tumour was drawn up to the wound, the intussusception had extended into the rectum The apex proved to be the ileo-cæcal valve There were much swelling and œdema of the lower end of the ileum, cæcum, and appendix. During the necessary manipulations the child stopped breathing and artificial respiration was carried on for a few minutes. The abdominal wound was closed with silkworm gut The time occupied in operation was 15 minutes. The child was much collapsed immediately after the operation, ether was injected and half a pint of saline fluid was also introduced into the subcutaneous tissue. At 7 P M on the same day the child had vomited several times after the anæsthetic, she was very restless, the temperature had risen to 106° and the pulse was uncountable at the wrist. A rectal injection of saline solution (eight ounces) was given and a hypodermic injection of morphia (one twenty fourth of a grain) These had a very marked effect the child slept and next day was much improved On Jan. 8th the child had an attack of abdominal pain she vomited several times, and her temperature rose to 101° F Nothing was found on abdominal examination and further progress was uneventful The sutures were removed on the tenth day

CASE 6.—A male, aged five years, was admitted into the London Hospital on Jan 3rd 1903, with the history that the illness began on the 1st with abdominal pain There was no vomiting and nothing was noticed abnormal in the motions On the 2nd the boy had several attacks of colicky pain but he did not vomit He had been subject to attacks of colic and diarrhœa from time to time and he had attended the North Eastern Hospital for Children for tabes mesenterica. There was a family history of consumption. On the day before admission the bowels acted normally On admission he was found to be a well nourished boy, he appeared to be comfortable and free from pain The pulse was full and regular, 80 per minute On examination the abdomen was not distended, it moved freely on respiration, and there was no tenderness on palpation. An ill defined tumour could be felt placed transversely above the umbilicus, it felt nodular and somewhat moveable Nothing abnormal was felt per rectum A glycerine enema was given with the result that formed motions were passed quite free from blood or slime As the diagnosis was doubtful no immediate operation was thought necessary Next day, the 4th, at 12 noon, the child had vomited after milk four times during the night, the bowels had not acted. The temperature was 100° F The general condition was unchanged except that the abdominal tumour had quite disappeared. At 6 P M the child was again examined. No further vomiting had occurred, but there had been several slight attacks of colicky pain lasting only a few seconds at a time. On abdominal examination a well defined tumour could again be felt, it was situated transversely above the umbilicus, was slightly tender on palpation, and whilst being manipulated was found to enter into peristaltic action A diagnosis of recurring intussusception was made and operation was immediately decided upon. This was performed at 7 P M An incision three inches long was made in the right semilunar line, an intussusception was found formed by the last two inches of the ileum, this had passed through the ileo-cæcal valve and was there fixed. It was easily reduced, the wall of the gut was much thickened and congested. The abdominal wound was sutured with silkworm gut. The time occupied in all was 12 minutes. The after progress of this case was without incident. The sutures were removed on the tenth day

CASE 7 —A male, aged nine years, was admitted into the London Hospital on Jan. 3rd, 1903 with the history that the illness commenced with an acute attack of abdominal pain on Dec. 31st, 1902—i.e., three days before admission. There were continual retching and vomiting, the bowels were confined, and no blood or slime had been passed per rectum. There had been no previous history of abdominal trouble. On admission he was found to be a well nourished boy, evidently suffering from severe shock, the extremities were cold, the lips were blue, and the face was blanched The pulse was 160 per minute, thready and collapsable. On examination the abdominal wall was not rigid, but the whole abdomen was distended No definite tumour could be made out on palpation, and a rectal examination was negative—no blood was seen on the examining finger Stimulants were given and hot bottles were applied, and as the general condition improved shortly after admission to hospital an operation was decided upon The abdomen was opened in the mid line and a large coil of deeply injected gut was drawn into the wound, it proved to be small gut forming the insheathing layer of an intussusception, the mesentery of which was twisted on its axis The intussusception was partially withdrawn, there were no adhesions, the invaginated gut was found to be gangrenous, and an immediate resection was decided upon This was done as quickly as possible, about three feet in all were excised, including the intussusceptum and part of the intussuscipiens The cut ends of the gut were united by a Murphy's button. The abdominal wound was closed with silkworm gut There was profound shock after the operation. Saline fluid was injected and strychnine, caffeine, and brandy were given, but without any appreciable result, and death occurred six hours later. At the post-mortem examination it was found, as abovementioned, that the intussusception had been a retrograde one The contracted part of the gut continuous with the intussusceptum was found in a condition of commencing gangrene where the button had been inserted. There was early general peritonitis present.

To summarise briefly, the chief conclusions to be drawn from my short series are (1) that in these cases immediate laparotomy should be insisted upon without delay, (2) that no valuable time should be lost in attempting inflation of air or injection of fluids per rectum, (3) that the keynote of operative success is rapidity, (4) that in favourable conditions, as in hospitals and with skilled assistants, the mortality of reducible intussusceptions should be diminished other control analyses made in other conditions of profound anæmia is exceedingly striking.[2] In pernicious anæmia the average percentage of iron in the liver and kidney combined was 360 milligrammes, whereas in health it was 84, in profound sepsis 49, in cancer of the stomach 83 and in ulcerative phthisis 100 milligrammes. 1. It will be noted that I have always included the kidney among the organs analysed. This is a point to which I have attached more and more importance during the past 12 years for reasons which the present series of analyses bring out. It will be seen that the excess of iron present is not always equally distributed between the liver and kidney, in some cases—e.g., Cases 3 and 6—the percentage in the kidney being very large (to insure absence of any error I had the analyses in these cases repeated). If in Case 6 the analysis of the kidney had not been made the moderate percentage in the liver would not have accurately represented the amount of blood destruction that had occurred. The varying percentage in the kidney in different cases is notable. It depends, as originally explained in 1888, on the overflow of hæmoglobin from the portal circulation. "If the destruction is slight the products of it present within the portal circulation are completely disposed of by the liver before reaching the general circulation. If it is excessive at any one time the evidences of hæmolysis extend to the general circulation. Hæmoglobin in the form described passes into the general circulation and is excreted through the cells of the convoluted tubules of the kidney. The most likely cases, therefore, in which to find pigment in the kidneys will be those in which the progress of disease has been marked by specially severe exacerbations in which, therefore, the destruction has been very great" (1888). In Case 6 a notable exacerbation of this kind had occurred during the patient's last relapse, the blood corpuscles falling in the course of three or four weeks from 83 to 32 per cent. and the hæmoglobin from 82 to 35 per cent. 2. The analyses bring out also in a striking way the second point which was drawn attention to in 1888 as one of the marked features of the hæmolysis in this disease—the peculiar distribution of pigment between the liver and spleen. In health and in most diseases the spleen usually contains a higher percentage of iron than the liver (as these analyses show, than the liver and kidney combined) sometimes from six to eight times higher. In pernicious anæmia, on the other hand, as will be seen, in every case without exception this relation was reversed. The percentage in the liver alone exceeded that of the spleen, sometimes as much as five fold (Case 1). 3. I draw particular attention to the analyses (9, 10, 11) in cases of profound sepsis. They prove conclusively that sepsis alone, however severe, cannot cause the pigment changes characteristic of pernicious anæmia. Case 10 is a typical example of what I have termed "septic anæmia," the form of anæmia oftenest mistaken for pernicious anæmia (Addison's anæmia). It was sent to me as such a case and it resembled this in the general features and appearances in the degree and character of its blood changes, and in the presence of marked gastro-intestinal symptoms and extreme oral sepsis. But the urine showed no hæmolytic changes and there was no history of the glossitis which I regard as characteristic of pernicious anæmia, and I therefore declared it to be non-pernicious and probably of the type of "septic anæmia." A trace of albumin subsequently appeared in the urine, and the patient died from uræmia two months later. At the necropsy I found a large perinephric abscess in the left loin connected with a calculous pyo-nephrosis of which there were no symptoms during life. The pigment changes strikingly contrast with those of pernicious anæmia. 4. Of special interest, also, are the analyses in gastric cancer (12 and 13)—in view of the very prevalent view that gastric cancer may simulate pernicious anæmia and be a cause of that anæmia. Case 13 was a typical case of this kind, presenting the lemon colour of pernicious anæmia. The low percentage of iron in all the organs is very striking. Case 12 was a case of cancer involving the whole body of the stomach. The high percentage of iron in the spleen in this case as also in the case of ulcerative phthisis is noteworthy. It is the condition typically found in long-standing wasting disease depending on inanition. It denotes for reasons I have elsewhere explained, a lessened, rather than an increased, hæmolysis. If pernicious anæmia could be produced by inanition the result of gastric atrophy, achylia gastrica, &c., as so many maintain, the distribution of blood pigment between the spleen and the liver would be that illustrated in Analyses 12 and 14, rather than that one just drawn attention to in Analyses 1–7. 5. The importance attached since 1888 to pigment changes by all English, American, and Canadian observers is in striking contrast to the neglect of this subject which is the most remarkable feature of German work during the past 25 years. In the latest German monograph on the disease (1900) Ehrlich and Lazarus dismiss the subject in three paragraphs occupying half a page. In my own monograph (1901) 250 pages out of a total of 450 are devoted to the studies connected with this subject. During the same period I know of no new analyses in German literature, whereas in English literature there are at least 54—viz., 19 in pernicious anæmia and 35 in other conditions.

Table of Analyses. Percentage of Iron in Organs in 14 Cases.

No. of case	Condition	Liver	Kidney	Spleen
1	Pernicious anæmia	0·360	0·033	0·069
2	”	0·2 0	0·042	0·094
3		0·363	0·133	0·141
4		0·114	0·055	0·111
5		0·292	0·013	0·275
6		0·140	0·2 6	0·099
7		0·305	0·031	0·090
	Average	0·270	0·090	0·125
	Total	0·360		
8	Health	0·080	0·004	0·090
	Total	0·084		
9	Intense sepsis. Pyæmia with purpura	0·069	0·014	0·105
10	Septic anæmia." Calculous pyo-nephrosis with perinephric abscess.	0·012	0·006	0·095
11	Intense croupous enteritis and oral sepsis	0·034	0·013	0·050
	Average	0·038	0·011	0·083
	Total	0·049		
12	Cancer of the stomach	0·123	0·022	1·330
13		0·022	0·003	0·013
	Average	0·072	0·012	0·671
	Total	0·084		
14	Ulcerative phthisis	0·084	0·016	0·605
	Total	0·100		

Result.

—	Average percentage	
	Liver and kidney	Spleen
Pernicious anæmia (seven cases)	0·360	0·125
Other conditions (seven cases) ...	0·079	0·362

X.—INFECTIVE ETIOLOGY OF THE DISEASE.

If I have been able to throw any light on the nature and etiology of the severe conditions of anæmia comprised within Addison's and Biermer's widely different conceptions it is largely due to two circumstances. 1. It was my good fortune to approach the subject (1885), not from the surface where my attention would probably have been engrossed by the conflicting views—historical, clinical, and etiological—connected with the disease, but from the ground (pathological) underlying the whole group of these severe anæmias. 2. While working there I came almost accidentally as it were, upon a great bed rock of hæmolysis underlying Addison's anæmia (1885) and in endeavouring to expose its size and relations (1886–87) I no less suddenly found the whole superstructure built upon Biermer's different foundation women did pregnancy or puerperal troubles play any part. *Loss of blood* In no case was there any previous loss of blood and in the few cases—the very small minority—in which epistaxis occurred this was only slight in amount and not very frequent in occurrence, it occurred only after the disease was already well developed and was not a factor in its original production *Malignant disease* In none of the 25 cases was there reasonable ground for suspecting malignant disease (two cases in which this question arose I have purposely excluded) and in none of the seven cases examined post mortem was any malignant disease found *Gastric or intestinal disturbance* A history of antecedent gastric or intestinal disturbance, as I shall presently show, was found in every case. In no case were these of sufficient character or intensity to account for the supervention of such an intense degree of anæmia. The various disturbances connected with this tract have an important significance, which I have brought out, not as causes of the disease but as symptoms of the gastric and intestinal infective lesions presently to be described associated with the disease.

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[2] Analyses specially made by Mr. Percy Richards, F.C.S., of Charing Cross Hospital. (For method see THE LANCET of Nov. 24th, 1900, p. 1495.)

Anatomical lesions —In all the cases observed during life, 25 in number, and in the cases, seven in number, in which post-mortem examinations were obtained, I found certain infective *lesions* in the *mouth*, *tongue*, *stomach*, or *intestine* —either singly or associated with each other These were of two classes (1) a special form of glossitis (in every case), (2) septic lesions—viz, (*a*) a preceding or existing "oral sepsis" (24 cases), (*b*) "septic gastritis," the condition I described (1900) as a common result of long continued oral sepsis, causing finally gastric atrophy (more or less in every case and most intense in three cases), and (*c*) "septic enteritis"—e g, a croupous enteritis, patches of congestion and catarrh, follicular enlargement, and patchy colitis (three cases) With regard to these the point to be emphasised now in view of the significance I shall subsequently attach to them is in no case were these lesions either in anatomical character or severity sufficient of themselves to *originate* the intense anæmia by any interference with nutrition they may have been capable of producing

Chronic discharges and suppurations —In no case were there any discharges or suppurations sufficient of themselves to originate the anæmia

Summary —In all the 25 cases the anæmia might well have been described in Addison's own words—viz, as 'occurring without any recognisable cause whatever, cases where there has been no previous loss of blood, no exhausting diarrhœa no chlorosis, no purpura no renal, splenic, miasmatic, glandular, strumous, or malignant disease and without any organic lesion that could properly or reasonably be assigned as an adequate cause of such serious consequences" (1856) On the other hand, in not one of the cases could Biermer's description of the etiology of "progressive pernicious anæmia," which has so largely influenced the views of most subsequent observers, be applied. "A spontaneous origin *without clear etiology* is the rule" In all the foregoing cases an apparently spontaneous origin was, on the contrary the rule *without exception*

Conclusion —The first clear conclusion in regard to the etiology of these 25 cases is this that even *on clinical grounds* the disease could not reasonably be ascribed to the ordinary causes of anæmia. since (1) it originated without the presence of these, and (2) each and all of these are often present in severest degree without causing the anæmia In that respect Addison's original etiological foundation has been proved, so to speak, even to the naked eye—i e, clinically—as far as my own work is concerned, to have been much more solidly laid than that of Biermer *Some other factor* was required to account for the disease in all these cases.

VIII.—Weak Foundations of Biermer's Etiology

Still weaker is Biermer's etiology pathologically To a degree which they themselves have never recognised or acknowledged, the whole fabric of Biermer's anæmia as built up by its workers has from the very first largely rested on Addison's foundation—that is to say, whenever its so-called causes have one and all been absent, the anæmia has been summarily disposed of by being termed the Addisonian variety—"primary, cryptogenetic'—and no further attempt has been made to throw light on its nature or mode of origin Moreover, even in the large group of "causes" which they consider responsible for the anæmia—e.g, worms, gastric disturbance, intestinal disturbance, hæmorrhages, &c.—all the chief exponents of "progressive pernicious anæmia" have to admit that these causes are not themselves sufficient but that 'something over and above" is required.

1 "A gross *disproportion between cause and effect*," "a kind of *predisposition*," are essential features (Eichhorst, 1891, Lazarus, 1900, Grawitz, 1901, Schaumann, 1900)

2. '*Something over and above* which transforms the worm from a comparatively harmless inhabitant of the intestine to an important disease-producer under certain conditions not yet fully ascertained," such is the admission that has to be made by Lazarus (Ehrlich and Lazarus[1]) with regard to the anæmia caused by the bothriocephalus, which he just immediately before declared to be "progressive pernicious anæmia with a known (*sic*) etiology fully (*sic*) explained in its etiology if not also in its pathogenesis."

3. "We cannot explain these blood diseases without assuming the existence of *an individual predisposition* many points still dark in this difficult subject, notably *the extraordinary persistence and progression of the disease after to all appearance the cause is removed*" Such is the admission of Professor Grawitz, one of the strongest and most recent (1901) upholders of the theory of the gastro-intestinal origin of the disease from auto-intoxication, its cause being "a vicious circle" of blood changes, gastro intestinal lesions, altered digestion and absorption, and auto-intoxication, the auto-intoxication causing the blood changes, these causing the atrophy of the glands, this atrophy producing altered digestion and absorption (which in turn increases the anæmia), and this latter causing the auto-intoxication And yet, curiously enough the disease persists and progresses after all these "causes" are removed A similar *predisposition* is admitted by Dr Schaumann to be necessary for the occurrence of the severe anæmia (which more than any other observer he has studied and thrown light upon) associated with bothriocehapalus anæmia, "since there are a great number of men whose blood is not in the slightest degree affected by the worm, *although the worms of these men contain*, as shown by Dr Schaumann and Dr Tallqvist, *the same toxic bodies as other worms* (1900)"

4 "*The causes of the initial anæmia are still imperfectly known*, and cases sometimes occur in *people apparently healthy and living under good conditions* In some cases after death hæmorrhages have been so few that I have doubted very seriously whether they could ever have been very numerous so very few that this might lead us to adopt Hunter's view that in some cases at least a blood-destroying body may be the cause of the condition." Such is the admission of Professor Stockman, the most recent and chief upholder of the view that the disease is due to the ordinary causes of anæmia aggravated by internal hæmorrhages (1895)

Put together all these admissions and qualifications form an "underpin" of remarkable size and strength for an erection whose foundation, declared to be a solid one, is "that a spontaneous origin *without clear etiology* is the exception." (See Scheme.)

Conclusion.—General etiology cannot account for this anæmia It has a special etiology underlying it.

IX.—Special Etiology

There are two classes of lesions which I consider of importance in this relation—(1) a Hæmolysis of special degree and character, well shown by the analyses in the present series of seven cases, and (2) a Glossitis, *observed in every case* having the peculiar relation to the onset of the anæmia and clinical characters suggestive of its being of an infective nature, described by me in 1900 Histological examination in seven cases shows that it has even more striking pathological features, and in all the three cases bacteriologically examined these are associated with, and presumably dependent upon, a deep-seated pure streptococcal infection of the substance of the tongue

Hæmolytic Nature of the Disease.

Analyses of the liver, spleen, and kidney in seven cases show (1) the large excess of iron, and (2) the peculiar distribution between the liver and the spleen—the reversal of that usually obtaining—to which importance is in my judgment to be attached (1888) The contrast between the results obtained in pernicious anæmia and those obtained in seven

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[1] Die Anaemie, Part 2, 1900

In these circumstances some new nomenclature appears sirable. So long as I was not myself clear as to the nature the large group of severe anæmias which simulated ddison's anæmia and yet, as I was satisfied, were essenally different, it seemed premature to give any new name to e disease. Now that in my own mind (as the result alike clinical and pathological experience) this great group has een definitely separated off as in a large measure of septic haracter and may be entitled "septic anæmia," I feel free suggest another name for Addison's form. It is really a ery remarkable *specific infective disease*, characterised by tense *hæmolysis* as its most prominent (although by no eans its only) pathological feature and consequently *næmic* as its most striking (but by no means its only) linical manifestation, and this onset of hæmolysis is ssociated with the onset of a peculiar *plurality* of *infective* ature. The title which would best describe its character ould thus be "specific infective hæmolytic anæmia," or nore shortly "*infective hæmolytic anæmia*" (Addison's næmia), the *specific* nature of the infection responsible for he hæmolysis being always kept in mind, just as the *pecific* nature of the infection is always kept in mind n the title "enteric fever." There are other anæmias complicated by hæmolysis just as there are other fevers complicated by enteric disturbance, but there is no anæmia in which hæmolysis plays such a remarkably preponderating part. There are also other anæmias in which infection plays a part—notably the large group I have designated "septic anæmia"—but in this group hæmolysis although in certain cases it may be marked is *not* the special feature that it is in Addison's anæmia, as the above analyses strikingly show

Harley-street W

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

NOTE ON A CASE OF NECROTIC SOFTENING OF THE BRAIN PROBABLY DUE TO INJURY AND ASSOCIATED WITH CARIES OF THE SPINE.

BY H. K. ABBOTT, M.D. DUB.
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THE patient had served in the Royal Navy and had been a smart active man until he had a fall from a height of 10 or 12 feet. Soon after this he developed epilepsy and was invalided out of the service I saw him first five years afterwards He was then thin and poorly nourished and had marked exophthalmos of both eyes the lids never being quite closed, the right pupil was larger than the left and both reacted sluggishly to light. The knee-jerk was normal. His muscles (especially those of the hands) acted in a jerky spasmodic way and he could not walk owing to lack of power of coördination He quite misjudged the distance of any object that he tried to touch and he appeared to be quite deaf but could, though with difficulty read written questions and nod or shake his head in reply He could also write, though very slowly and with great difficulty, the writing was sprawling and almost illegible but when it could be deciphered the words were correctly spelt and rational After some months however, the process of writing became more difficult and the spelling was generally incorrect. He had severe epileptic fits at intervals of from one to three or four months Except that he gained flesh to some extent there was little change in his condition for about five years He was then observed to have a fluctuating swelling in the right lumbar region just above the iliac crest and close to the spine. Some pus was aspirated from this and afterwards there was no further evidence of any disease in that region. He always from the first complained of pain in the head (not localised) and in the legs, but never of any pain elsewhere and he never suffered from diarrhœa Towards the end of his life he did not take food well and lost flesh though not to a great extent, and he had epileptic fits more frequently He died about 15 years after the original injury

At the necropsy extensive tuberculous peritonitis was found. There was also a large post-peritoneal abscess with thick walls and divided into three compartments which communicated with each other by small openings. This involved most of the left psoas muscle but did not extend downwards beyond the pelvis, and it evidently originated from the bodies of the third and fourth lumbar vertebræ, which were carious to a considerable extent. The laminæ, &c., were sound There was nothing abnormal in the other abdominal or the thoracic viscera. The occipital bone was thickened for some distance from the junction with the left parietal bone which was also thickened in the adjoining part, the extra thickness being in the inner table which was about double that of the corresponding part on the right side. There was no indication of fracture. The tentorium on the left side was very thick and partly calcified. The pia arachnoid was slightly thickened and markedly congested, the grey matter generally was wasted, and the left lateral ventricle was much dilated at the expense of the temporo-sphenoidal lobe chiefly The whole of the occipital lobe on that side and what remained of the lower part of the temporo-sphenoidal presented the appearance of yellow softening The cerebellum was small and very soft, almost pulpy, and of a yellowish colour and no structure was visible to the naked eye beyond the peduncles It is, I think, highly probable that the brain lesions at any rate, and possibly the disease of the spine, had their origin in the injury sustained at least 15 years before death.

Fareham, Hants

A CASE OF SCURVY OCCURRING IN AN INFANT

BY DAVID YOUNG M.B EDIN,
RESIDENT MEDICAL OFFICER, FLEMING MEMORIAL HOSPITAL FOR DISEASES OF SICK CHILDREN NEWCASTLE-ON-TYNE.

A CHILD four months old, was brought to the *Hospital for* Sick Children, Moor Edge, Newcastle-upon-Tyne, with a history of persistent vomiting and diarrhœa of two weeks duration, which had been unsuccessfully treated at home For some time before admission the child had been fed partly on fresh cow's milk and partly on condensed milk. The infant was very collapsed on admission and had *to be freely stimulated.* After some time the stomach and colon were thoroughly washed out. The diet then ordered was bovinine and barley water, with the addition of a little white of egg The treatment was so far successful that there was no return of the vomiting, the diarrhœa soon subsided and during the week

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which appeared in THE LANCET (Sept 28th, 1901, p 851) The writer at the very outset notes as the most remarkable feature of the work—one which he apparently regards as detracting in some way from its value—the contrast between the uncertainty with which I speak of the etiology of the disease and the certainty of my conclusions regarding its pathology And then, quite misled by "an impression" that I should have liked to ascribe the disease to bad teeth," he adds, "All this serves to *render* (*sic*) the etiology of the disease very involved." As the remainder of the review clearly shows the *anæmia* he has in view is the same one I have in view—viz. Addison's anæmia—but what *etiology* has he in mind—that of Addison or that of Biermer? The most notable feature of Addison's anæmia notoriously was and has always been the mystery of its cause and, in reality the difficulty all have had in getting at its cause might justly be regarded as the greatest possible tribute to Addison's clinical acumen, since it was the absence of "any discoverable cause" which first led him to describe the disease as a "very remarkable" one. Moreover the caution with which I speak of the class of facts which I have brought into etiological relation with the disease might well be regarded as rather a subject for approval, contrasting as it does with the absolute assurance—in my judgment quite groundless—with which from Biermer's time, 1871 down to the present moment the majority of observers speak of the disease as due to *many causes*. On the one side therefore is Addison asserting that the disease is "without discoverable cause" on the other Biermer and many chief workers at the disease asserting that "a clear etiology" is the rule and it is this chaos that I am charged with "rendering" very involved. As a matter of fact in his interest in following my very difficult and halting endeavours to expose the foundations of what was termed by Addison "without discoverable cause" the reviewer has inadvertently overlooked the most important fact—namely that my work involves the most emphatic conclusion regarding etiology reached by any observer since Addison first defined the disease as "without discoverable cause." The conclusion namely is that the whole fabric of etiology built up and around Addison's anæmia by later workers has no real foundation and, so far as I am concerned has since 1883 been completely demolished and cleared away leaving Addison's foundation once more standing out clear and well defined and largely exposing (1) its hæmolytic nature (2) oral, gastro-intestinal site and (3) the infective factors underlying it If the result of this is to render the etiology more involved, what can be said of the alternative view—viz. that the disease can be caused at once by all sorts of causes and without discoverable cause tumbling about my ears For instead of a bed rock of hæmolysis, such as I found *in all cases* of Addison's anæmia, I found, underlying Biermer's anæmia, a mass of rubble of various kinds of which hæmolysis was quite the *least* prominent constituent. 3. In consequence of these observations I was able to recognise and to point out very early (1888) the existence of the great 'underpin" (C) which the chief builders upon Biermer's foundation are recognising only now (1891, 1895, 1900, 1901)

"With regard to all these so called causes—gastritis worms, cancer (*et hoc genus omne*)—it is necessary to assume that there have been superadded *certain other factors* essential to pernicious anæmia *on which its characteristic features depend* In the case of bothriocephalus latus *some pathological factor other than the presence of worms must be at work* to explain, on the one hand, the frequent presence of worms without anæmia, on the other hand, the occurrence even in Finland of cases of pernicious anæmia—specially intractable cases too—without any worms. For these reasons I am compelled to conclude that, as with malignant disease so with intestinal worms, *their presence alone* cannot be held as sufficiently accounting for the pernicious anæmia *occasionally* associated with them" So I wrote in 1888[3] as the outcome of the "Investigation into its Pathology" then published, and from that time to the present the object I have steadfastly kept in view has been to seek for an explanation of this anæmia in causes other than those built upon Biermer's foundation For further experience only served to confirm the conclusions already come to "In my own mind no fact stands out more clearly in connexion with the etiology of the disease than that none of the above causes (Biermer causes) can of themselves produce Addison's anæmia with its characteristic hæmolytic changes" (1900) On the contrary, my endeavour has been to expose more and more the bed rock of hæmolysis underlying Addison's foundation (1890–1900)

The result has been not only to expose this but to reveal two sets of infective factors, (1) a *specific* (hæmolytic) *infection* whose site and lesions (the tongue, stomach and intestine), approximate time of contraction, and probable source I have, I think, been able to lay partly bare, and (2) while doing this to lay completely bare a great stratum of *septic infection* traversing the foundations of Addison's anæmia forming to a large extent the foundation of those forms of severe anæmia which clinically most resemble pernicious anæmia.

XI —THE FEATURES OF "SEPTIC ANÆMIA" AND "ADDISON'S ANÆMIA" RESPECTIVELY

It is, I find, this septic infection which gives to the heterogeneous group of anæmias comprised within Biermer's definition "progressive pernicious anæmia" the resemblances which have led them to be mistaken for Addison's anæmia. In them the "septic factor" is so predominant that I have for some time past distinguished them in my own mind by the title of "Septic Anæmia." The features of severe forms of this anæmia are (1) most of the blood changes found in Addison's anæmia, including the existence of poikilocytes normoblasts, and megaloblasts, to which so much *distinctive* importance has (erroneously, in my experience) been attached by Ehrlich and most observers, (2) hæmorrhages, (3) dirty yellow anæmic complexion, (4) very frequently the existence of oral, gastric, and intestinal sepsis and symptoms, (5) fever, (6) severe and often fatal course the disease takes, (7) nervous effects and symptoms in many cases, and (8) favourable prognosis if cause be removed in time

In Addison's anæmia, on the other hand, the septic factor is, according to my observations a most important antecedent and concomitant, *but not the only factor* It precedes the disease, creating conditions of mucosa in mouth stomach, and intestines which permit *the contraction* of the *specific* (hæmolytic) *infection* underlying the real characteristic features of the disease. Its features include those above mentioned in connexion with "septic anæmia," generally more marked and of greater severity than in septic anæmia. They include, however, certain features which mark it off from simple septic anæmia. 1. Most important pathologically, an *intense hæmolysis*, accompanied by pigment changes in the liver, kidney, and spleen—these changes being, according to above observations and analyses made during the last two years, no less characteristically absent in "septic anæmia," even the severest forms. 2 The occurrence of a *glossitis* possessing *peculiar clinical features*, as I before described (1900), and even more *striking pathological characters*, as I have since found, and associated with a deep-seated *infection* of the tongue itself, as I now have ascertained bacteriologically (in three cases). 3 The contraction of this infective glossitis coincides approximately with the onset of the severe anæmia and its accompanying hæmolysis, so that in many cases with a clear history the patient can date the onset of his disease from a particular month when this glossitis was first noted 4 The source of this hæmolytic and glossitic affection which thus, comparatively speaking, *suddenly* comes on is connected —when the history can be clearly obtained—in all cases with an *exposure to drain poisons* (five cases) 5 The hæmolytic infection once taken root in the mucosa and substance of the tongue, in the mucosa of the stomach, and in some cases in the mucosa of the intestinal tract is extraordinarily persistent, healing up in one part for a time, then spreading to another—these variations in activity as they can be seen during life in the tongue being attended by an aggravation of all the features of the disease—viz., increased anæmia, increased hæmolytic changes (in the urine), increase of glossitic, gastric, or intestinal symptoms, and increase of toxic (febrile and nervous) disturbances

XII —NOMENCLATURE.

To mark off this "remarkable disease," as Addison truly called it, from the mixed group of "symptomatic conditions due to many causes" described and spoken of as "progressive pernicious anæmia," and by many as "pernicious anæmia," has thus in my judgment become an even greater necessity than it was when Addison first described it "Addison's anæmia" would fitly describe it if Addison's name were not already associated with another disease and as I have already had occasion to appreciate, confusion might arise by using the term "Addison's anæmia" only The term 'idiopathic" has been given a generic significance and cannot now be restricted to one form of anæmia, even if it were any more satisfactory than such terms as "primary," "essential," "protopathic," "cryptogenetic," which it is not I have myself always employed the title "pernicious anæmia" as referring to the rare form of anæmia had in view by Addison, occurring "without discoverable cause", and it has become quite a task each time one writes to explain that it is to this form, and not to the "progressive pernicious anæmia" of Biermer, "due to many causes," that one refers But many writers—I fear the majority—use the title "pernicious anæmia" in a generic sense, as including all forms of severe anæmia—"pernicious anæmias" as Grawitz calls them—and the result so far as I am concerned is endless confusion, as I have recently had occasion to note.

Views and conclusions are ascribed to me absolutely opposed to the whole tenour and character of my work from first to last, which notoriously have been to emphasise in every direction from which I have approached the subject the *special nature of this anæmia* If my work proves anything at all it is that none of the ordinary causes of anæmia —whether they be the older ones, gastritis, gastric atrophy, worms, hæmorrhages, altered digestion altered absorption, and auto-intoxication—or the new set of conditions which I have recently brought into prominence—bad teeth, pyorrhœa alveolaris, "septic gastritis," or the whole group of septic mouth conditions which I have comprehensively designated "oral sepsis"—can of themselves produce Addison's anæmia with its characteristic hæmolytic changes. I thought to make this quite clear by such statements as that "none of these conditions (e.g., mouth conditions), however severe, can be held to be the direct cause of so rare a disease Even in the cases in which they are most intense[4] they cannot be regarded as the causes of the disease" and thus felt quite free to discuss the important rôle which (always subordinate to the above conclusion) they one and all might "nevertheless" play. All views and statements such as that I ascribe 'pernicious anæmia" to "bad teeth," "pyorrhœa alveolaris,' or "foul mouths"—or that I "should like to ascribe pernicious anæmia to such causes"—are not only quite wrong, more than any other conclusion they would stultify my whole work on this disease, which, as stated, has been to point to its very special nature[5] of fat present.—Dr GLYNN said that he had seen scurvy arise in people who had been put on a strict diet for flatulent dyspepsia. He thought that some brands of Swiss milk were quite suitable for infant feeding up to seven months.—Dr F B O'FLAHERTY had found it difficult to get a good mixture with added cream; butter or cod liver oil was better The cream might however, be given separately.—Dr RAW, Dr BUCHANAN Dr GRÜNBAUM, Mr. W B. BENNETT, and Dr LLEWELLYN A. MORGAN spoke, and Dr DAVIDSON, in reply, said that although the cases were still rare, yet the disease was on the increase, apparently from the greater use of preserved milks. In his experience there was no preserved milk that could equal fresh cow s milk suitably modified.

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[3] THE LANCET, Sept. 22nd 1888 p. 555

[4] Op cit. 204 1900

[5] Nothing better illustrates the confusion caused by the terminology of this disease than some of the criticisms which have been made in certain reviews of my recent work. One of the most careful of these is that

The Suture of Divided Nerves.—Ventilation of Bedrooms.—Stone in the Female Bladder

A MEETING was also held on Jan. 29th, Mr RUSHTON PARKER, the President, being in the chair

Dr NATHAN RAW showed a case in which he had successfully United the Severed Median and Ulnar Nerves several months after division The point to which he wished to draw special attention was the return of sensation within 24 hours of the operation.—Mr DAMER HARRISSON had performed many experimental operations with Professor Francis Gotch and had had several successful cases. He had found experimentally that impulses never passed through the nerve before the tenth day Sensation returned first, then the trophic lesion passed away motor power followed and finally electrical reactions were obtained.—Sir WILLIAM M. BANKS recalled cases, which he had shown to the society in which he had employed the sciatic nerve of the dog and the sheep to repair the injured median and ulnar nerves in man. At the great St Helen s glassworks division of the latter nerve was of no infrequent occurrence, and in former days, when no attempt at primary suture was made, it was very curious to observe what an amount of sensation and motion gradually returned after two or three years This was explicable on the "loop-line" theory, but in Dr Raw's case the immediate return showed that the nerve current had at once found its way back through the old route Viewing a nerve in the light of an electric telegraph cable, with each thread of the nerve corresponding to each wire of the cable, they knew that when a broken cable was repaired it was necessary to unite the broken ends of the identical wires whereas when a nerve was joined either immediately or through the intervention of some piece of indifferent tissue it was not possible to join the identical nerve fibres and yet messages were transmitted Might not the principle of Marconi s wireless telegraphy explain this? Let them suppose the divided ends of the fibres of a nerve to be attuned to each other like Marconi s masts, then any impulses sent along the proximal end from the electrical battery the brain, could be conceived as travelling through a suitable medium to reach the distal end without the necessity of intervening fibres (wires) at all.—Mr G G HAMILTON had operated on a number of cases by simply suturing the divided ends and the results had been quite satisfactory Two cases were mentioned where division of the nerves was overlooked by chemists. In seven cases a few hours after the divided nerve was sutured sensation returned for about 24 hours, and then completely disappeared.—Dr A. G GULLAN asked as to the appearance of the distal portions of the nerves. After 14 weeks' separation he would have expected complete degeneration. In this case the immediate return of sensation could not be explained. He also thought that a considerable amount of the improved muscular power and movement was dependent on the long flexors, the nerve-supply of which came off about the seat of section of the nerves and the tendons of which Dr. Raw united at the operation.—Mr KEITH W MONSARRAT had had recently a similar case in which sensation was re-established 22 hours after operation. He thought that this rapid restoration showed that even in the absence of the integrity of axis cylinders the nerve as a whole was capable of conducting sensory impulses, and that the analysis of these impulses took place entirely in the cerebrum.—Dr. W ALEXANDER and the PRESIDENT also spoke and Dr. RAW replied.

Dr W MACFIE CAMPBELL read a note upon Bedroom Ventilation. After dealing with the changes in respired air and the rate of change necessary to maintain purity in rooms of varying capacity he said that a fire in the room was useless unless it was kept up The Hinckes Bird system and Tobin s tubes were unsatisfactory in his opinion. Dr Campbell found that the only really satisfactory plan was to have the bedroom window widely open He found sleep to be more refreshing and consequently fewer hours in bed were necessary and getting up was a pleasure. He was, moreover, never cold at night, and was freer from catarrh.—Dr F H. BARENDT agreed thoroughly with Dr Campbell s remarks. He hoped that it would become a tenet of personal hygiene that the air of the bedroom should be as pure in the morning as at night.—Dr W PERMEWAN the PRESIDENT and others spoke and Dr CAMPBELL replied

Mr G P NEWBOLT read notes of two cases of Stone occurring in the Female Bladder, one of which was removed by litholapaxy and the other by suprapubic cystotomy He dealt with the methods of removing stone from that organ and emphasised the fact that vaginal lithotomy might be followed by fistula and should only be practised on certain rare occasions.—Mr W THELWALL THOMAS, although particularly partial to suprapubic lithotomy, thought that such an operation in adipose females with ammoniacal urine was liable to lead to septic cellulitis He preferred vaginal lithotomy, if lithotrity was impossible.—Dr H. BRIGGS thought vaginal lithotomy had many advantages over the suprapubic route in adult females abundant evidence now existed in support of this view.—Dr E. T DAVIES, Dr T BUSHBY and Dr W ALEXANDER spoke, and Mr NEWBOLT replied.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on Jan. 28th, Dr J Nigel Stark, the President, being in the chair.—Specimens were shown by Dr E. A. Gibson, Dr J M. Munro Kerr, and Dr G Scott MacGregor.—Dr Carstairs C Douglas read a paper on Some Points in Infant Feeding While recommending maternal nursing as the best, he pointed out that in certain cases where the child did not thrive an analysis of the milk might indicate the error He had found in some cases a reduction in the percentage of fat and in others a diminution in the sugar or an increase in the amount of proteid. Cows milk used without dilution was not recommended as a routine but a dilution to one to three without the addition of cream and sugar (preferably lactose) was too much. The speaker pointed out how the reduction in the fats might interfere with the absorption of the lime salts (as lime soaps) and might thus have some bearing on the etiology of rickets. For the infant fed with cow's milk the milk ought to be pasteurised and absolutely free from preservatives. The treatment of certain cases of infantile indigestion was touched upon and a number of the artificial foods received comment.—The paper was discussed by a number of the Fellows.—Mr. R. H Parry asked about the standard of Glasgow milk.—The President, while thanking Dr Douglas for his interesting paper, stated that he agreed with Dr Munro Kerr in his statement regarding the unsatisfactory nature of the artificial feeding of infants He had not found that undiluted cow's milk always agreed. In some cases he had found marked benefit from the use of a little raw beef juice.—Dr Douglas, in reply, recommended the pasteurisation of milk as this did not interfere with the antiscorbutic property of milk, which was probably due to the living leucocytes which it contained. In reply to Mr Parry he said that he had analysed a number of specimens of milk and had found them quite up to the standard.—Dr Alexander MacLennan read a short note on a case of Large Adenomatous Polypus and showed sections of the tumour and of some other types of polypi.—Dr Munro Kerr read notes on a case of Carcinoma of the Cervix at Term. Cæsarean section was performed (giving a living child) and was followed by supra vaginal hysterectomy This was performed to prevent the very probable onset of sepsis. The patient recovered from the operation but she died from the effects of the carcinoma six weeks after leaving hospital. During the course of the pregnancy Dr Munro Kerr had seen the patient and on finding that the carcinoma was inoperable had decided to perform Cæsarean section in order, at least, to save the child.—Mr Parry instanced a case where he had scraped away the carcinomatous tissue and had delivered the child, which was known to be dead, by craniotomy The mother had recovered from the confinement.—Dr A. W Russell reported a case of Advanced Carcinoma of the Rectum complicating Pregnancy An inguinal colostomy had to be performed and following admission there was a gain of two ounces in weight This treatment was followed for ten days The temperature then suddenly rose to 102° F and the child became very restless Petechiæ were observed on the legs, followed by ecchymoses on both legs and over the sacrum The gums were then noticed to be swollen and soon became spongy and bled freely There was also melæna A scratch which the child received on one of the fingers bled freely During the following day the child was very restless and there was retraction of the head The temperature remained high and the pulse rose to 166 per minute There was no leucocytosis. On the condition being recognised as scurvy the diet was at once changed to fresh cow s milk and lemon juice in glycerine was given freely From this time the child progressed favourably for about three weeks, when she developed a typical attack of measles, followed by broncho pneumonia, from which she died

The diagnosis of scurvy appears to be evident, especially when the feeding and the results of treatment are considered It is very unlikely that in this case the scurvy could have been associated with rickets, as this condition is extremely rare at the fourth month and careful inquiry into the history and examination of the bones after death failed to give any evidence of rickets Nor did the condition correspond to the type described by Sir Thomas Barlow as infantile scurvy, for there were no marked tenderness of the limbs and no loss of power, there were no bone changes and no proptosis, and though there were no teeth the gums were spongy The chief interest lies in the early age at which the scurvy developed, the abrupt onset of the symptoms ten days after the last administration of fresh milk, the sponginess of the gums in the absence of teeth, and the very rapid improvement under anti scorbutic treatment

Newcastle-upon Tyne

A CASE OF SPURIOUS LABOUR.

By JOSEPH A W PEREIRA, M R C S ENG , L R C P LOND

THE patient aged 24 years, was married on August 1st, 1899 A couple of months later I was engaged to attend her in her confinement which was expected to take place on May 1st, 1900 Somewhere about January I was told that the patient was losing blood. Concluding that a miscarriage was impending I recommended rest in bed and suggested that if this treatment did not stop the bleeding I was to be informed of the fact. I heard nothing further until March when accidentally meeting the patient's mother I was told that there was again a little bleeding which was arrested by the same treatment. Exactly on the day appointed I was sent for On arrival I found labour apparently in full progress and the infant's clothes were being aired before a bright fire. The patient herself was in bed, her face buried in the pillows She was pulling vigorously at a jack towel tied to the foot of the bed Her mother and a neighbour were helping on the labour as best they could, one supporting the back and the other buoying her up with cheerful conversation. After being there some minutes I proceeded to satisfy myself that all was right. My astonishment was great when I found the cervix firm and conical I immediately placed my hand on the abdomen It was perfectly flat An invitation to the two bystanders to do the same soon convinced them that we were dealing with a case of spurious pregnancy and labour

The patient belongs to a very neurotic family An elder sister was in an asylum and a younger sister suffers from frequent paroxysms of violent temper The nature of the two losses of blood becomes at once apparent. A noteworthy fact is that the spurious labour came on exactly nine months after marriage.

Exeter

BARNSTAPLE DISPENSARY —The seventy-first annual meeting of the supporters of this institution was held on Jan 29th under the presidency of Sir Bourchier Wrey The medical report stated that during 1902 the patients numbered 2903 The financial statement showed that notwithstanding an increased expenditure the adverse balance of 1901 had been paid off and a favourable balance of £33 remained.

Medical Societies.

LIVERPOOL MEDICAL INSTITUTION

Exhibition of Cases —Infantile Scurvy

A MEETING of this society was held on Jan. 15th, Mr. RUSHTON PARKER, the President, being in the chair

Dr W B WARRINGTON described a case of Acute Ascending Paralysis, usually named after Landry There was a distinct history of an attack of influenza about a fortnight before the onset of symptoms Motor paralysis rapidly developed in the lower limbs and spread to the arms the face, the palate, and the thorax After a stationary period of a fortnight recovery began and became complete. Diaphoretics and morphia were given at first, then ergot, and finally iodide of potassium and mercury The electrical reactions were normal throughout and the integrity of the sphincters was maintained —Dr W BLAIR BELL thought that the case was one of neuritis following influenza. He narrated a case of Landry's palsy which he had lately seen in a girl, aged 20 years. A negative neurological examination had been made by Dr W Aldren Turner —Dr W CARTER said that he had seen two cases of acute ascending paralysis in which the administration of large doses of ergot had done much good, the patients ultimately recovering —Dr T R GLYNN, Dr. A S F GRÜNBAUM, Dr NATHAN RAW, and Dr R J M BUCHANAN spoke, and Dr WARRINGTON replied.

Dr WARRINGTON also described a case of Acute Yellow Atrophy in a young woman who had been nursing a child for 16 months The early symptoms were nausea and vomiting followed by marked jaundice and diminished liver dulness Urea was diminished, but leucin and tyrosin were not present in the urine. The knee jerks disappeared and the patient died from respiratory failure. The duration of the illness was about six weeks —Dr T R. BRADSHAW said that the absence of leucin and tyrosin was no presumption against the diagnosis of acute yellow atrophy, they were absent in a typical case of his own

Dr BUCHANAN showed a case of Aneurysmal Varix between the Left Subclavian Artery and the division of the Left Innominate Vein due to a gunshot wound received in the late Boer war Associated with the varix was left brachial monoplegia with the peculiar condition of flexibilitas cerea of the arm. Dr Buchanan considered that some indirect damage had been done to the nerves supplying the rhomboids and the lower part of the trapezius, although the bulk of the palsy might be functional. He thought that hypnotic suggestion was likely to be of value.—Dr BRADSHAW agreed with the diagnosis of aneurysmal varix He thought that the palsy was entirely functional and the wasting due simply to disuse as there were no deformity and no trophic change in the skin Flexibilitas cerea in one limb was rare, but the hysterical state on which it depended was not very infrequent in soldiers who had been wounded.—Dr BUCHANAN replied

Dr E T DAVIES related a case in which he had removed 1754 Stones from the Gall bladder of a woman aged 51 years There was no definite history of jaundice, but the urine was coloured and the skin was tawny The patient made an excellent recovery

The adjourned discussion upon Dr Peter Davidson's paper on Infantile Scurvy was opened by Mr S KELLETT SMITH, who said that they were handicapped from the onset by their ignorance of the true cause of scurvy There were many theories, but in this country the disease was regarded as the outcome, direct or indirect, of some malnutrition. In the case of adults the anti scorbutic properties of lime juice, which contained certain known salts, was amply proved, but it was false argument to conclude from this that the absence of these same salts from the diet was the cause of scurvy Close examination of the dietary in most cases of scurvy revealed the fact that fats were present in insufficient quantity Bottle-fed babies were especially liable to suffer in this way for while attention was given to modification of the proteids and sugar of cow's milk, little regard was paid, as a rule, to the equalisation of the fatty matter He thought, therefore, that in all cases showing early symptoms of scurvy the diet should be carefully criticised with respect to the proportion a good example of the hydrostatic paradox. It had a small feed pipe—the ileum—and a piston of much larger sectional area in the fæcal column of the ascending colon, the whole forming a kind of hydraulic lift, the gain being equal to about ten times in the ascending colon and twice in the sigmoid flexure. It was just where this power reached its minimum that syphonage came to the rescue. Dr Leftwich showed experimentally that syphonage set up a vacuum in the cæcum, the ileo-cæcal opening being blocked probably by a sucking through of the mucous membrane of the ileum like an incipient intussusception for which lesion a good explanation was thus offered. The formation of a vacuum might have a highly beneficial effect in evacuating the appendix.—A vote of thanks was proposed by Dr F F Caiger and was carried by acclamation.

THERAPEUTICAL SOCIETY —A meeting of this society was held on Jan. 20th when Dr J Gordon Sharp read a paper on Dita Bark (*Alstonia scholaris*) and Australian Bitter Bark (*Alstonia constricta*) two drugs belonging to the dogbane family He also showed specimens of the barks and demonstrated the chemical and pharmacological actions of the crude drugs and their alkaloids. Dita bark was found in India Malay and Australia Strong sulphuric acid applied to the surface gave a characteristic pink colour It contained three alkaloids—ditamine, echitamine, and echitenine, all belonging to one series. The first was the chief, it gave a pink reaction with strong sulphuric acid In frogs it paralysed muscle by coagulating its substance and was found to act like curare in some respects This must not be forgotten, for the neglect of this point might explain why in large doses it had often been found to produce collapse The tree yielding Australian bitter bark was found in Eastern Australia. The bark itself was brown very bitter in taste and aromatic in odour. Strong nitric acid applied to the inner surface gave a dark red reaction, similar to the colour produced by the same reagent on the bark of nux vomica It contained four alkaloids—alstonine (formerly known as chlorogenine) porphyrine, porphyrosine, and alstonidine. Alstonine was the most important of these. Commercial alstonine was mixed with resinous matter and was not crystalline but the pure alkaloid could be made to crystallise. It gave a red reaction with strong nitric acid A solution of the alkaloid in water, as well as a watery solution of the bark, was fluorescent. In its pharmacology it resembled both nux vomica and quinine but it had not so much resemblance to curare as dita bark or its alkaloids. Like quinine it paralysed *Amœba rotifera* &c. On beetles (*Blaps mortisaga*) crickets (*Acheta domestica*), and wasps it acted like quinine. In frogs in medium doses it acted like strychnine, but tetanus was not so marked or so universal. For the full play of symptoms both vessels and nerves must be intact Its final action was to paralyse completely evidently due to excessive activity The therapeutics of the drug had been worked out by the Bancrofts of Australia and by Bixby of the United States It was quite distinct in its action from dita bark and acted on the skin, producing a mild diaphoresis. In the kidneys it increased the volume of the urine and toned up and slowed the pulse. The tincture was especially useful in influenza immediately after the acute symptoms had passed off The Pharmacopœial dose was too large one half of the amount specified was enough and when prescribing the tincture that made from *Alstonia constricta* should be ordered.

BURNLEY AND DISTRICT MEDICO-ETHICAL SOCIETY —A clinical meeting of this society was held on Jan. 8th, Mr S. M. Giffen being in the chair —Dr James Mackenzie read a paper on Pain He defined pain as a *disagreeable* sensation due to stimulation of some portion of the cerebro-spinal nervous system and referred to the peripheral distribution in the external body wall of cerebro-spinal sensory nerves. This definition implied that the sensation of pain, from whatever source the stimulation arose, whether in the brain, in the spinal cord, in the posterior root ganglia of spinal nerves, in the viscera, or in the external body wall, was invariably referred to the peripheral distribution of a sensory cerebro-spinal nerve and that therefore pain was a phenomenon peculiar to the cerebro-spinal nervous system. In the above definition the division of the nervous system into a cerebro spinal and sympathetic was maintained, as the clinical facts pointed to the conclusion that the sensation of pain (and probably other sensations) did not arise from stimulation of the sympathetic nerves unless through the intermediary of the cerebro spinal nerves Reference was made exclusively to the pain and associated symptoms arising from stimulation of the viscera Experimental observations on animals were practically of no avail in determining this question Such experiments as had shown the various organs to have been insensitive proved only that the stimulus employed had not been adequate to produce pain On the other hand, in such experiments as had demonstrated that the stimulus was adequate and where the animal showed symptoms of pain no evidence was available to determine in what region the pain was felt.—Dr R C Holt opened the discussion by speaking of various referred pains which had been accepted as indications of internal disturbance which did not quite accord with Dr Mackenzie's investigations and theories, he also spoke of Sir Frederick Treves's lecture upon appendicitis and his refutation of the inferences connected with McBurney's point, and finally asked for clinical results with regard to labour pains and with regard to sciatica.—Dr A. M. Sinclair and Mr R. C Rodgers also took part in the discussion.

MIDLAND MEDICAL SOCIETY —A meeting of this society was held on Jan 21st, Mr J W Taylor being in the chair —Dr J Douglas Stanley showed the Heart of a Man, aged 47 years. The patient had complained for some time of recurring præcordial pain which also extended down the left arm, of a tendency to faint, and of dyspnœa The cardiac sounds were feeble and short and the pulse was frequent, irregular, and weak. The patient died suddenly and on post-mortem examination extensive chronic aortitis with degeneration of the valves of the left side was found. The myocardium was abnormally tough and showed fibrotic changes At the apex the wall of the left ventricle was very thin and showed a slight tendency to bulge, forming early cardiac aneurysm —Mr Christopher Martin showed a specimen of Unruptured Tubal Pregnancy removed by operation. There was a history of amenorrhœa for two months, followed by irregular hæmorrhage for three weeks, cramp-like pains in the right side of the pelvis, and the passage of a decidua On examination a large sausage-shaped swelling could be felt behind and to the right of the uterus Mr Martin opened the abdomen and found the right Fallopian tube much enlarged and distended with clot. The fimbriated end was occluded and glued to the ovary There was no trace of old or recent blood in the peritoneum The case was evidently one of tubal pregnancy with intra tubal hæmorrhage. The patient made an excellent recovery from the operation.—A paper by Mr C G Higginson (read in his absence by one of the secretaries) dealt with the treatment of Status Epilepticus The writer drew attention to the use of chloral in repeated doses and referred to cases that came under his own observation where lives had been saved by this method.—Dr C E Purslow read a paper on Abdominal Hysterectomy

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND —A meeting of this society was held on Jan. 28th Dr J H. Stowers the President, being in the chair —Mr G Pernet showed a patient who in addition to Lupus Vulgaris of the Neck, suffered from Deep-lying Nodules in the Forearm and in other parts These he regarded as tuberculo-gummata, but several members expressed the view that they were lipomata.—Dr T D Savill showed a case of Morphœa in a Woman and a case of Facial Hemiatrophy (morphœa facialis) associated with trophic disorder of the eyeball on that side and scleroderma of the scalp —Dr E. G Little showed (1) a case of Morphœa of the Leg, (2) a case of Congenital Urticaria Pigmentosa of the Nodular Type, (3) a case of Urticaria Pigmentosa of the Macular Type also dating from birth, (4) a case of Urticaria Bullosa in an Infant (many members objected to this name and regarded the case as an erythema), (5) a girl suffering from an Eruption on the Legs which he placed in the tuberculide class (there was no evidence of tuberculosis in this case or history of the same), and (6) a boy suffering from Extensive Leucoderma and Melanoderma, the greater part of the scalp being also affected.—Dr A Eddowes showed a case of Lichen Planus and the case of extensive Lichen Planus affecting the Scalp and whole of the Body exhibited by him at the last meeting of the society together with Microscopic Sections of the Skin.—Dr. G N Meachen showed (for Dr Abraham) a case of Urticaria with Pigmentation The view was expressed that a scraping should be examined for the microsporon furfur —Mr T J P Hartigan showed a case of to avoid the danger of performing a Cæsarean section after an artificial anus had been established, the uterus with the child in it was removed at the sixth month. Dr Russell did not think that it would have been justifiable to deliver the fœtus by the vagina on account of the risks of tearing the rectum , the disease had also invaded the vagina —Mr Parry, who had performed the hysterectomy on this patient, concurred with these views and did not think any other treatment would have been advisable

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION —A general meeting of this society was held on Jan 30th, Dr V H Wyatt Wingrave, the President, being in the chair —At the President s request the secretary read a letter from Mrs Lennox Browne in reply to the letter of condolence sent her in the name of the association on the occasion of her husband's death —The President then referred in suitable terms to another loss which the association had sustained in the death of Dr G Hunter Mackenzie, and it was agreed to send a letter of condolence to his widow —The exhibition of cases followed and among them were the following Mr W Stuart-Low Cases showing the Beneficial Action of Mucin in Atrophic Rhinitis —Dr P H. Abercrombie testified to the great benefit derived from the treatment by several of his hospital patients.—Mr J Stewart Mackintosh also spoke in favour of the treatment and referred to its beneficial action on the stomach and bowels and the relief of pain in malignant disease of the rectum.—Dr L H. Pegler inquired as to the *modus operandi* of mucin.—Dr Wylie had seen good results in several cases of atrophic rhinitis treated with mucin.—Dr W Jobson Horne suggested that the massage employed with mucin might account for part of the good result obtained, and asked how the internal administration of mucin could affect atrophic rhinitis —The President congratulated Mr Stuart-Low on his results with mucin He thought that not enough time had yet elapsed for the treatment to have had a thorough trial. The good effect on digestion he regarded as of great importance He suggested that the alkali present in the tabloids of mucin might have something to do with the good results —Mr Stuart-Low, in replying, thanked the Fellows for the great interest taken in the subject and described the *modus operandi* of mucin to be local and general It inhibited bacterial growth and was hygroscopic and cleansing and it supplied the natural moisture which was defective in these patients He admitted that the massage carried out by the surgeon was beneficial but cases had benefited markedly without the massage and only with mucin Mucin acted as a protective coating to the stomach and it was the natural protector —Dr Abercrombie Two cases of Adhesion between the Soft Palate and the Posterior Pharyngeal Wall, the result of Tertiary Syphilis, operated on with good results —Dr E D Vinrace thought that the openings would gradually lessen in size as time went on —Mr W J C Nourse said that considering the great discomfort arising from the nasal obstruction in such cases he thought it wise to do all in one s power to give relief, and he thought systematic dilatation of the openings might be advisable —The President congratulated Dr Abercrombie on the good results following his operation and remarked how much relief might be obtained in such cases with even very small openings —Dr Pegler showed cases of Deflected Septum, treated by Moure s operation together with the septotome devised and used by Dr Pegler —Dr J Dundas Grant congratulated Dr Pegler on the excellent results obtained He regarded it as a distinct gain to correct the deformity without making a septal perforation.—Dr Jobson Horne regarded Dr Pegler's instrument as better than the original one

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN —A meeting of thi society was held on Jan. 16th, Dr G E Shuttleworth being in the chair —Dr G A Sutherland and Mr J W Thomson Walker contributed a paper on a case of Syphilitic Endarteritis and Nephritis in an Infant. The child presented evidence of congenital syphilis and there was paralysis, and later rigidity of the right arm the lower extremities also becoming rigid and the head retracted. Albumin was present in the urine At the necropsy there were endarteritis of the cerebral arteries and softening of the left frontal lobe of the brain The kidneys showed diffuse interstitial nephritis. A second case of interstitial nephritis due to congenital syphilis was also described Dr Sutherland and Mr. Walker considered that the most important change in this form of arteritis took place in the adventitia and that syphilitic arteritis was a secondary and not a tertiary manifestation of the disease. The etiology of nephritis in children was often obscure and the importance of syphilis as a cause was greater than was usually supposed. Many of these cases were probably unrecognised owing to the slight naked-eye changes —Dr Leonard G Guthrie considered that the views expressed by Dr Sutherland and Mr Walker bore out his own opinion—namely, that chronic interstitial nephritis in children was often due to syphilis —Dr G Carpenter mentioned two cases of the kind that had been under his care.—The paper was also discussed by Dr Shuttleworth and Dr R Hutchison.—Dr Sutherland and Mr Walker replied.—Mr Walker showed specimens of (1) Traumatic Cephalhydrocele , and (2) Punctured Fracture of the Skull —Mr Sydney Stephenson described a case in which Paralysis of the Cervical Sympathetic on one side had closely followed the evacuation of a Retro pharyngeal Abscess by Hilton's Method. The symptoms were characteristic and included ptosis, contraction of the pupil, enophthalmos, and lowered intraocular tension No changes in the state of the blood vessels or the function of sweating were noted.—Dr Guthrie showed an infant, aged five months, suffering from an unusual kind of Microcephaly The occipital bone showed a beak like projection and overlapped the two parietal bones There was in addition spasticity of all the limbs. The child s features did not suggest imbecility —Mr A. H. Tubby entered a protest against operating in such cases His experiences in that direction had been uniformly unfortunate Craniectomy appeared to be powerless to cure the condition —Dr Charles W Chapman read notes of a case of Dilatation of the Stomach in a girl, eight years of age, who had been accustomed to take unsuitable food at irregular intervals. Under suitable treatment she made a complete recovery —Dr Carpenter read notes of a case of Acute Primary Thyroiditis in a rachitic infant, aged 14 months. The disease went on to suppuration, the abscess was opened, and the patient recovered Dr Carpenter called attention to the rarity of the condition, even as a complication of the specific fevers, and pointed out that in some reported cases induration of the gland, and not suppuration, had resulted as the sequel of inflammation.

BRIXTON MEDICAL SOCIETY —At a meeting of this society held on Jan 29th, Dr Patrick G Simpson being in the chair, Dr R. W Leftwich read a paper on the Mechanism of the Large Intestine He pointed out that the structural peculiarities of the colon were all adverse to the view that peristalsis there was the one propelling force. The large lumen, the weak muscular development, the sacculation of the walls, the fixation and the upward course of the ascending colon, all presented obstacles. In cases of orthopnœa a stream had to be forced against gravitation for months together without the help of valves, and yet constipation was not a special feature of the condition Dr Leftwich then proceeded to demonstrate that there were two other forces at work The 'course of the large intestine suggested a syphon, its short ascending limb, starting from the right iliac fossa, being the ascending colon, and its long descending limb, terminating at the anus being the descending colon and rectum. There was, therefore, always a fixed fæcal column in the colon, the cæcum being usually empty After defecation the stream propelled by peristalsis of the small intestine filled the cæcum and on reaching the fæcal column, pushed this forward and disturbed the balance , syphonage was then set up, the cæcum was emptied, and the rectum was filled The necessary rigidity of the walls of the colon was obtained by a tonic contraction of the longitudinal bands which also deepened and thickened the dissepiments between the saccules The existence of this tonus was shown by the deep retraction of the anus—the longitudinal fibres of the rectum being continuous with those of the bands , by the maintenance of the transverse colon *in situ* without waviness notwithstanding that it was twice as long as its bed , and by the elongation of the colon which took place in sigmoid obstruction The tension upon the bands and the unequal distribution of gas and solids in this condition accounted for the movements which had been mistaken for peristalsis The saccular undulations described by Boas must be quite ineffective for propulsion and were connected with absorption only Further, the cæcum presented

Insomnia will repay perusal, as will also the chapter on Epilepsy Dr Yeo extols the administration of bromides in this affection, and with regard to the appropriate dose he rightly maintains that we must study each case that comes under observation and note the individual susceptibility to the drug and regulate the dose accordingly, some individuals will be found to require much larger doses than others. The remaining part of this volume contains instructions on the Treatment of Constitutional Diseases (gout, diabetes, rheumatoid arthritis) and of the Specific Infective Diseases

We can speak in the highest terms of praise of this publication and strongly recommend a study of it to all practitioners and senior students

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Diet and Food, considered in Relation to Strength and Power of Endurance, Training, and Athletics By ALEXANDER HAIG, M.A, M.D Oxon, F R.C P Lond. Fourth edition, with seven Illustrations. London J and A Churchill. 1902. Pp 127 Price 2s

Avenues to Health. By EUSTACE H. MILES, M A. London Swan Sonnenschein and Co 1902. Pp 438 Price 4s 6d

The Art of Breathing as the Basis of Tone Production. By LEO KOFLER, Teacher of the Art of Singing New York City London J Curwen and Sons. 1902. Pp. 277 Price 4s

THESE three little books may well be criticised side by side, for the first two deal mainly with the question of health by way of the alimentary canal and the third with health by way of the respiratory apparatus Dr Haig's views are too familiar to require here any fresh exposition. That in a great number of cases a large proportion of his statements hold true we have no doubt We have equally little doubt that he allows too little for other injurious influences upon the metabolism of the body than the ingestion of improper nitrogenous food stuffs There is, at any rate, this great advantage about Dr Haig's writing It clearly states a clear issue His view reduces all men and women to mere automata illustrating this simple principle—nine ounces of albumin per pound of body weight if they are to keep in perfect health. If we do not agree with the precise working of Dr Haig's human machine nothing can be easier than to say so and to give reasons why

With Mr Miles the case is very different, though the aim of his book is much the same. Mr Miles's description of health, however, is so far reaching, and he includes so many only slightly cognate spiritual conditions, that we are not to expect the precise conclusions of Dr Haig Mr Miles would appear to consider a person unhealthy for instance, who does not enjoy good music or a dance. Yet men of unexceptionable bodily condition may not find any pleasure in the one or trouble to acquire the practice of the other No doubt Mr Miles's sketch of a healthy man presents us with a being uniformly endowed with a level excellence of mental and physical qualities But we cannot admit that everyone less happily gifted is therefore to be called unhealthy Some of Mr Miles's principles land him in quaint conclusions and as he possesses the enthusiast's fixity of gaze the humorous side of his own picture does not catch his eye. Thus on this same question of dancing we cannot read without an amused image of what would occur in the ordinary ballroom were Mr Miles's doctrines enforced that "after the dance there should be cold sponging and rubbing" Broadly speaking certainly most of Mr Miles's recommendations are admirable, particularly when he advocates fewer and simpler meals and regular devotion to simple but various bodily exercises

Mr Kofler's book has the merit of being the outcome of long actual experience. Here and there it shows the disadvantages arising from defective training in physiology, but on the whole it is a valuable little work and should be studied by actors, singers, and public speakers with great benefit to themselves.

LIBRARY TABLE

Annals of Ophthalmology Vol. XI, No 4 1902. H. V WÜRDEMANN M.D, Managing Editor Pp 209 Published quarterly by Jones H. Parker, St. Louis, Missouri, U S A. Price $4 per annum in advance —This part of the *Annals of Ophthalmology* contains several interesting articles, amongst which may be mentioned the following —1. A Study of the Connective Tissue of the Orbit by a New Method, by Lucien Howe, M D, of Buffalo, New York. The author of this article recommends the hardening of the orbit and of its contents in Zenker's fluid for several days, then decalcification by means of cotton wool moistened with 20 per cent. hydrochloric acid wrapped round the bony walls, and finally staining with Gerson's picro-fuchsin stain or with Mallory's phosphomolybdic-acid aniline blue. The mode of insertion of the recti muscles is illustrated by reproductions of photographs which, however, leave much to be desired in point of clearness. 2. J P Nuel, M.D, of Liége, on Toxic Amblyopia This article is translated by F W Marlow, Professor of Ophthalmology in the University of Syracuse, New York. Professor Nuel holds that both the optic nerve and the retina are implicated in the morbid process associated with alcohol nicotin amblyopia and maintains that the inflammation is of a parenchymatous nature. 3. Alexander W Stirling M.D, C M Edin., gives an Analysis of 100 Cases of Refraction with Special Reference to Headache. 4 George F Keiper, M.D, La Fayette, Indiana, contributes a paper entitled "When to Operate for Ripe Senile Cataract in one Eye, the other Eye possessing useful vision" The author argues that the patient if successfully operated on has a larger field of vision which is a source of protection from accidents the cause of which may be due to the blind side, that the dangers and difficulties of extracting an over-ripe lens are avoided, that the patient has continuous vision since the other eye is not usually affected, that he has more comfort with vision in both eyes, and finally that his appearance is better Additional arguments might be advanced that in case of failure there is less disappointment on the part of the patient as he can still see well and that important information in regard to the habits or peculiarities of the patient is sometimes obtained from the first operation. 5 M. V Ball, M.D, of Warren, Pennsylvania, gives the details of a case of Death from Meningitis following Enucleation of the Eyeball. 6 H. V Würdemann, M D Milwaukee, Wisconsin, has an article on Papillomatous Degeneration of the Conjunctiva The rest of the part is occupied with abstracts of English, colonial, and foreign literature.

Response in the Living and Non living By JAGADIS CHUNDER BOSE, M A. D Sc, Professor, Presidency College, Calcutta. With 117 Illustrations London Longmans, Green and Co 1902. Pp 199 Price 10s 6d —Under this title Professor Bose has assembled together several interesting papers which deal chiefly with the small electromotive forces which can be detected in various living tissues and which have long been known in the case of nerve and muscle preparations as the currents of rest and the negative variation or current of action The study of these phenomena has been extended by the author to vegetable tissues and also to inorganic substances, and it is part of the object of this book to show by records and tracings the electro-motive forces which are set up in metallic wires when they are subjected to various mechanical and chemical influences Professor Bose points out the remarkable similarity between these tracings and those obtained with living tissues under analogous treatment He draws the inference that there is no necessity for the assumption of vital force to account for these "phenomena of response' and he ascribes the electro-motive effects which are manifested in animal and vegetable tissues as well as in the metallic wires experimented with to physico chemical action solely Professor Bose's work raises the

Tuberculous Folliculitis —Mr A. Shillitoe showed an extensive Nodular Syphilide and a case of Lichen Planus Circinatus.—Dr W B Warde showed an old man with Lupus Vulgaris affecting nearly the whole of the Face and Scalp

EDINBURGH ROYAL MEDICAL SOCIETY —A meeting of this society was held on Jan 30th, Dr Watson being in the chair —Dr Wilson showed the following card specimens (1) Photographs of patients suffering from Paralysis Agitans, Molluscum Fibrosum, and Syringomyelia, (2) Photographs demonstrating Tuberculous Pericarditis, and (3) a Microscopic Specimen of Acute Lymphatic Leukæmia with Streptococcic Poisoning —Dr A. M. Malcolmson showed a large Aneurysm of the Aorta.—Dr R. Dods Brown read notes of a case of Acute Lymphatic Leucocythæmia which occurred in a schoolboy, aged 13 years, who was admitted into hospital suffering from bleeding from the nose, gums, and throat. While in hospital the patient had hæmatemesis, hæmaturia, and melæna, and he died about a fortnight after admission. The post-mortem examination showed marked hæmorrhages throughout the body Dr Brown exhibited sections of the various organs, also microscopic sections of the spleen, thymus, and bone marrow The thymus gland was very much enlarged and the microscope demonstrated that it was crowded with lymphocytes —Dr A B Ross read notes of two cases of Diabetic Coma both of which were fatal The coma occurred in middle aged women and diacetic acid and acetone were present in the urine in both A post-mortem examination was made in one case and the pancreas was found to be slightly cirrhosed and the stomach showed acute inflammation —A communication on a case of Spina Bifida by Dr Hey was read in his absence by Dr Wilson. The case occurred in a girl six years of age and was successfully operated on.—A dissertation on the Diagnostic Value of the Examination of the Blood by Dr J H Montgomerie Bell was read in his absence by Dr A. H. Firth

PATHOLOGICAL SOCIETY OF MANCHESTER —A meeting of this society was held on Jan 21st, Mr Broadbent being in the chair —Professor S J Hickson described some Deformations of Corals produced by Animal Parasites and exhibited specimens and photographs illustrating the various phenomena mentioned —Mr Smith showed the specimens from two cases of Intussusception of the Small Intestine, one of which had originated as an intussusception of a Meckel's diverticulum —Mr A. J Rodocanachi exhibited and described a specimen of Paget s Disease of the Nipple.—Dr Philip Prebble and Dr W E Fothergill described the specimen from a case of Calculous Pyonephrosis

Reviews and Notices of Books.

A Manual of Medical Treatment or Clinical Therapeutics By I. BURNEY YEO, M D, F R C P Lond., Emeritus Professor of Medicine in King's College, London, Consulting Physician to King's College Hospital, Hon Fellow of King's College, formerly Professor of the Principles and Practice of Medicine and of Clinical Therapeutics in King's College. New and revised edition In two volumes. London Cassell and Co, Limited. Pp Vol. I 696, Vol. II 818 Price 21s

THE object of this work is the study of disease from the point of view of treatment. The author explains in his preface that the teaching of therapeutics is in his book approached from the side of the disease and not from the side of the drug or remedy It is by examining into the mode of causation of disease by investigating the true nature of the morbid changes which underlie the phenomena of disease, and by an exact knowledge of the properties and mode of action of the agencies that are administered for the purpose of favourably influencing its course that what are termed rational indications for treatment are arrived at Dr Yeo, therefore, has attempted wherever it was possible, to deduce rational indications for treatment from an examination of the pathological nature and the clinical course and characters of the disease under discussion For the purposes of practitioners and students this is certainly the most advantageous plan to adopt and that Dr Yeo has succeeded in his endeavours we think will be allowed by every reader of this manual. The etiology and symptoms of disease are considered in terse, concise terms which convey a large amount of information, but for a full clinical description text-books on general medicine must, of course, be consulted. Selections of formulæ are added to most of the chapters for the purpose of giving completeness and breadth of view to the subject.

Part I. is devoted to a consideration of the treatment of Diseases of the Organs of Digestion. When first entering on private practice the young medical man will be surprised to find how large a number of patients will present themselves suffering from some form of indigestion The treatment of such cases will consist partly of dietetic measures and partly of the administration of drugs, but the course to be adopted in any particular case will be by no means easy to decide Dr Yeo's remarks on acute and chronic gastric catarrh, dilatation of the stomach, and dyspepsia will be found of the greatest value in dealing with these conditions. The directions given as to diet are very lucid, and the many hints as to treatment by drugs, together with the large number of formulæ, make the chapters devoted to diseases of the digestive organs most valuable for reference. The section on Modern Gastric Methods will also be read with interest. Dr Yeo very wisely deals only with the chief clinical types of gastric disorders and avoids the consideration of the various subdivisions and forms of dyspepsia as set forth in some recent treatises on gastric diseases—such as "achylia gastrica," "neurasthenia gastrica," "gastrosuccorrhœa," &c. Certain methods of investigation and treatment of gastric disorders, however, which are fully described in the works just referred to, are considered, such as the examination of the contents of the stomach after the administration of test meals We agree with Dr Yeo that too much reliance must not be placed on the inferences that are drawn by some physicians from the results of such analyses A detailed examination of the chemistry of the gastric secretion must be left to the chemist skilled in pathological analyses and can hardly be satisfactorily conducted by the practitioner

Diseases of the Heart and Blood vessels and of the Blood and Ductless Glands are dealt with in Part II. We strongly recommend a study of these pages to young practitioners The remarks on cardiac tonics are excellent Due stress is laid on the importance of diminishing the mechanical work of the heart, for this point in the treatment of cardiac affections is apt to be forgotten and the heart may be unduly stimulated by digitalis. Much better results are often obtained by the administration of vaso-dilators, especially when there is degeneration of the cardiac muscle The chapter on the Management of Special Symptoms dependent on Chronic Valvular Disease also contains many valuable hints as to obtaining relief from the distressing symptoms which may accompany a failing heart.

Parts III. and IV of the first volume are devoted to a consideration of the Treatment of Diseases of the Organs of Respiration, including pulmonary tuberculosis The same high standard is maintained as in the earlier chapters of the book

In the second volume the chapters devoted to Diseases of the Liver contain sound advice. For instance, some cases of "catarrhal jaundice" prove difficult to manage, Dr Yeo suggests several measures which may be adopted in such circumstances. The Treatment of Diseases of the Nervous System is very carefully discussed, but we have not space to deal fully with the many chapters occupied by a consideration of this subject. The remarks on the Treatment of ll cases comparable with those of the sanitary districts h they have replaced, so that the amount of local crowding at the two periods cannot be uniformly rasted Mr Shirley Murphy has however given ible which contains full particulars as to overcrowd in tenements of less than five rooms in each he sanitary districts of London. According to the res given overcrowding as measured by the proportion he population living more than two in a room, is excepally prevalent in the areas constituted by the eastern central groups of boroughs, in which areas, we observe, perhaps mainly for the foregoing reason, the rate of tality is constantly excessive and higher than in any r part of London It will be noticed that in Lewisham, re only 3 5 per cent. of the population occupy tenements ne room the death rate, corrected for age-constitution of population, does not exceed 13 4 per 1000 living whilst Holborn, where the proportion occupying single-roomed ements averages 27 per cent the corrected death rate is 7 per 1000 Again, the proportion of population living two-roomed tenements was equal to 32 7 per cent in sbury, where the corrected death rate averaged 23 1 per 0 (the highest in London), whereas the proportion in iting two-roomed tenements in Hampstead, which isters the lowest death rate in London, does not exceed 7 per cent.

Of the health of the metropolis as a whole in 1901 Mr rley Murphy has a satisfactory account to give. Judged the general mortality from all causes, uncorrected for age-l sex distribution of population the year 1901 was the lthiest on record, the death rate from all causes being ly 17 1 per 1000 of the population. Compared with the vious decennium, the London death rate in the year erred to was considerably lower at each age period of life d for each sex. The mortality from epidemic diseases in e aggregate showed a decided reduction and so did that m pulmonary and other forms of tuberculosis. The e disease which formed, as in previous years a serious ception to the rule, is cancer which accounted last year r a mortality considerably in excess of even the high cennial average. In order to ascertain the true local cidence of fatal cancer in relation to population a useful ble is for the first time inserted in this report, showing the tual number of deaths from cancer which rightly belong each metropolitan borough, after due distribution of the aths taking place in hospitals and workhouses

With commendable promptitude, which other authorities ight with advantage emulate, Mr Shirley Murphy has cluded in his report an extended life table by means of hich the error attaching to ordinary death rates, by ason of differing age-constitution of population may be minated. In a table at p 13 the number of deaths that tually occurred in the year 1901 at each age period and for ach sex is compared with the number of deaths that would ave occurred had the rates of mortality in the previous ten ears been maintained throughout 1901. The number of ves gained in the latter period is also shown, and this gain s exhibited in terms of "life capital," which is obtained by pplying the mean future lifetime (from the life table) to the umber of lives saved at each age-group Thus we learn hat in the year 1901 there has been a saving of 9289 lives n London representing a gain to the community of 337 635 ears of life capital. In the metropolis as in all large rban communities the age-distribution of the population s seriously affected by migration, but Mr Shirley Murphy oints out that in London, at any rate the immigra ion of young adults exercises a favourable effect n the death rate For this factor however the life able affords only a partial correction. In so far as migration disturbs the age-distribution of the population its ffects are compensated for by the life-table method and no llowance need be made in this direction for the effects of migration, but these effects are not limited to a mere disturbance of the composition of the population in regard o sex and age and it will readily be understood that the verage immigrant who probably comes to London from he country is likely to be healthier and more robust than he average dweller in towns Migration therefore must be looked upon as probably altering the character at least as much as the age-constitution of the population, and the life-table method cannot adequately compensate for disturbances of this nature. In order to exemplify the effect of migration a table is given in the report showing the expectation of life and the probability of living one year at certain ages (1) in London and (2) in the so-called "healthy districts" of the Registrar General. Migration, however, in London appears to be a diminishing factor for the proportion in the total population of London born persons is steadily increasing year by year The proportion of London born females is smaller than that of London born males—a fact which may probably be accounted for by the immigration of females belonging to the class of domestic servants. The influence of the influx of healthy lives is well shown in the table referred to, and this process appears to affect the figures relating to females more than those relating to males. It further deserves to be mentioned that a larger proportion of females than of males probably return to their homes in the country when overtaken by sickness or by advancing age.

Looking Back.

FROM

THE LANCET, *SATURDAY*, FEB 5, 1825.

MATERIA MEDICA.

Pangline, or the active principle of the Sarsaparilla

THE science of vegetable chemistry has been brought to great perfection by the French physicians and their discoveries have induced the chemists of other countries to apply themselves to the investigation of the different natural productions used as remedial agents. The advantages which have already accrued to the profession from the discoveries of the quinina, and the salts of opium have been exceedingly great, and there is no doubt that every article of the materia medica might have its active properties extracted if a careful analysis were made Sarsaparilla has long been known to the public as a very useful remedy for various diseases, and it has lately been made the subject of examination by M Galileo Palotta, an Italian physician, who has discovered in it that which he considers its active principle, to which he has given the name of pangline.*

REVIEW[1]

A full account of the system of Friction as adopted and pursued with the greatest success, in cases of contracted joints, lameness, &c, &c By WILLIAM CLEOBUREY, M.R C S., &c. 8vo pp. 170 Oxford, 1825 Third Edition.

Our author has cited two or three cases of contractions following disease of the knee and hip-joint, one of which we shall insert

'Martha Mayland 16 years of age, or thereabouts, had been for a considerable time under the care of several surgeons for what was supposed to be a disease of the hip joint. Blisters, &c. had been applied, and when I first saw her she had an immense issue in the neighbourhood of the hip joint. This I directed to be immediately healed, and it was my intention, as soon as this was done, to proceed in the manner described in the former cases, but here I was anticipated in my practice by a noted bone setter I believe Mr Thurland of Charlton,† who laid hold of the limb, and extended it in a similar manner The result was the same - the girl recovered the use of her limb

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* M. Miquel, the editor of the *Gazette de Santé* from a number of which publication (Jan 5) we have taken the substance of this account, has adopted a curious species of etymological reasoning in his attempt to trace the origin of the word *parigline* he says "*déduit sans doute du nom latin de la plante* smilax sarsaparilla." This is like the assertion of a learned bibliographer who said that *alfana* came from *equus*, but admitted, at the same time that it had changed its character in the descent —ED L.

† This gentleman generally intoxicated his patients previous to the operation and his method of effecting the separation of adhesions situated round the head of the femur was as follows:—He placed the patient on a bed with her face downwards and made the pelvis a fixed point by kneeling with one knee on the sacrum He then passed his right arm under the femur and making a lever of it forcibly extended it backwards towards the ear till the adhesions gave way In this manner he succeeded in nine cases out of fourteen which had baffled the regular practitioners. The other five he had too much prudence to attempt, as the joints were either under the immediate influence or effect of inflammation or portions of bone had exfoliated from them, indicating that anchylosis had taken place.

Mr Thurland is now dead and was the last of a family who had practised this art for nearly a century question whether the electrical phenomena of nerve and muscle are to be regarded as of prime importance or not Possibly they represent merely a minute waste of energy and are, so to speak, accidentally associated phenomena rather than integral factors in the chemical and physical changes which accompany conduction in nerve and contraction in muscle.

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[1] Only a portion of the review has been transcribed.

Indstilling fra Beri Beri Komiteen (Report of the Norwegian Beri beri Committee) Christiania 1902 Pp 160 — This is a report of the Royal Commission appointed by the King of Sweden and Norway to examine and to report upon the means of treating and of preventing beri beri on Norwegian ships It contains consular reports reports of masters of ships, and a careful analysis of many points which have been believed to be important in the study of beri beri. With the report we have received a letter from the President of the Commission, Professor Uchermann, who expresses the opinion that beri beri is an intoxication by tainted animal or vegetable food (on ships especially by canned food, in Asia mainly by tainted rice), and that it is not a specific infectious disease The report is interesting and parts of it are in English

Electricity in Medicine and Surgery including the X Ray By WILLIAM HARVEY KING, M D With 116 Illustrations New York Boericke and Runyon Co Pp 296 —This book is divided into two parts which are paged separately The first deals with apparatus, with x rays, and with physiology and diagnosis, and the second treats of electro-therapeutics proper The whole book is characterised by a want of conciseness in description and the treatment of many of the subjects is very inadequate. The account of the reaction of degeneration is poor and without originality Under the heading of Incontinence of Urine no reference is made to the condition of nocturnal enuresis, which is so favourable a subject for electrical treatment. The important subject of the treatment of injuries of nerves (including division of nerves) has one page devoted to it and what is there said of the two quoted instances of divided nerves is almost ridiculous Under the heading of Infantile Paralysis the author states that the application of faradism for purposes of treatment in this disease is incomprehensible From what is written on the subject of the electric bath it is clear that Dr King has no practical experience of it Wehnelt's electrolytic interruptor is a 'strange little instrument" and the description given of it is not precise, and so on. Incorporated in the book is a chapter by Dr Freudenberg of Berlin on Bottini's operation for the treatment of enlargement of the prostate It occupies 47 pages and is well written and good

The Amateur's Greenhouse a Complete Guide to the Construction, Heating and Management of Greenhouses, the Propagation and Cultivation of Plants adapted for Growing therein, with a Description of the Insect, Animal, and Fungoid Pests affecting Plants, and Remedies for their Eradication By T W SANDERS, F L S, F R.H.S, editor of *Amateur Gardening* and *The Profitable Farm and Garden*, author of the "Encyclopædia of Gardening," "Cultivated Roses," &c Illustrated. London W H. & L. Collingridge. Pp 386 Price 5*s* net —This is practically a new work, although it is founded on one by the late Mr Shirley Hibberd In the first place Mr Sanders rewrote the chapter on greenhouse construction for a new edition of the old book and when the present edition was wanted the rest of the book was rewritten "The Amateur's Greenhouse" in its present form is a practically written illustrated volume which should prove of great use to amateur gardeners, and especially to those who do the work themselves. The author's experience as the editor of *Amateur Gardening* has been of great service to him in showing on what particular points information is chiefly wanted by a large and increasing class of readers who love flowers but have not at their command large sums of money to spend on them, while they yet have sufficient time at their disposal to give them a good deal of their personal attention The first part of the book furnishes a description of the construction of greenhouses and of the different methods which may be adopted for heating these structures, a section is devoted to general rules as to the management of greenhouses, and this is followed by an extremely good chapter on the propagation of plants Greenhouse pests are described in a few pages and this section might advantageously be extended. The main part of the volume is occupied by a description of popular greenhouse plants, arranged alphabetically—a plan which has obvious advantages and no less obvious disadvantages, but is probably the best which could be adopted for a work of this kind. Many of the illustrations of the plants are taken from photographs, they are of unequal merit but most of them are good. The few remarks on grafting are not particularly helpful. The modes of grafting are not illustrated and the description of the operation is meagre. Many of the directions given as to the selection of plants and the way of growing them are admirable, there is, for example, some sound advice on the growing of annuals in pots, which will be found most useful to amateurs who have only a very limited space at command, and it is to such readers that the work will prove most useful.

TENTH ANNUAL REPORT (FOR 1901) OF THE MEDICAL OFFICER OF HEALTH OF THE ADMINISTRATIVE COUNTY OF LONDON

SECOND NOTICE.[1]

THE housing of the London poor is one of the "burning questions" which the London County Council has for years past endeavoured, hitherto not altogether successfully, to solve, but it is as a matter vitally affecting the public health that Mr Shirley Murphy systematically devotes to this question so large a share of his attention.

A special and novel feature in the present report is the attempt to classify the population of London, not, as is commonly done, according to the mere density of dwelling-houses on area, but according to the degree of aggregation of persons in each room and according to the proportion of one, two, three-, and four roomed tenements in the several districts compared. This has been possible solely on account of the mode of publication of the census returns which were issued complete for London at an early date. The report contains two important tables showing the amount of overcrowding existing in the county of London as a whole in the years 1891 and 1901 respectively, the differences in area between the present "administrative county" and the former "registration county being so slight as scarcely to affect the results. Tenements of less than five rooms have diminished in number, the fall being particularly apparent in the case of single-roomed tenements The average number of occupants per room has also declined in all classes of dwelling, but the greatest decline has again been manifest in the case of tenements of only a single room The relative number of so-called 'overcrowded tenements' and also the number of their occupants in the poorer parts of London showed a considerable reduction in 1901 as compared with the previous census year Speaking generally, we learn that a considerable improvement has taken place in the manner in which the people of London were housed in 1901 in comparison with 1891, in other words, over crowding in the metropolis as a whole has declined during the last 10 years, both in quantity and in intensity Unfortunately, as a consequence of the changes in boundary which have taken place under the London Government Act of 1899 the areas of the present metropolitan boroughs are not as then the endeavour to seek for a satisfactory xplanation of the occurrence of pernicious anæmia nd it was found that when all etiological factors had een *exhausted there still remained a residue of "idio-athic"* cases. Now we learn that the only condition ntitled to be termed "pernicious anæmia" is just that hich was neglected by those observers and that it alone ossesses a single and well defined etiology It is in the lemonstration of this definite character that so much is wing to Dr HUNTER, and we doubt not that by following p his line of inquiry much will be gained, not only in the irection of clearness of conception, but in the treatment of his grave disease.

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[1] The first notice was published in THE LANCET of Jan. 24th 1903, p 259

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Multiple Pregnancies

THE subject of prolificacy and multiple pregnancy has always excited the greatest interest amongst both ancient and modern writers We find ARISTOTLE, who thought that the population should be fixed as regards numbers, recommending legislation to prevent its increase and, as he thought, the consequent deterioration of the race. Whether we regard multiple pregnancies as a result of heredity, or as an example of atavism, or merely as a consequence of undue prolificacy, we are confronted with problems of much interest. It is, indeed, only of late years that our knowledge of the laws of fecundity have been based upon well ascertained facts. The influence of heredity in the production of multiple births has long been a matter of popular belief, and the investigations of numerous observers have shown that this belief is well founded. GOEHLERT, from a study of genealogical tables which enabled him to ascertain the fruitfulness of certain families throughout several generations, has found that the tendency to the production of multiple pregnancies is undoubtedly transmitted from parent to child, and that the hereditary influence is decidedly greater when not only the mother but also the father are members of such prolific families Dr J W BALLANTYNE has published some most interesting cases of this kind, in which the relationship between large families and multiple births are well shown. One of the most striking is that of a woman who had 22 children in 18 confinements—four times twins and 14 single births, one of *her sisters had had triplets* and another had given birth to twins The influence of the male parent has been pointed out by GOEHLERT and is illustrated by the case recorded by MERRIMAN It is that of a woman who had 21 children in seven successive births. They were all born alive and 12 survived. That some of the credit for this extreme fecundity may justly be ascribed to the father would seem to be shown by the fact that a female servant seduced by him gave birth to triplets who lived for three weeks. LEROY quotes the case of four brothers in whose family twin pregnancies in the parents of a collateral branch had been observed. All four were the fathers of twins, three of them twice each and the fourth four times Possibly this record afforded the *foundation* for the story of the French family, the male members of which had acquired such a reputation as the fathers of twins and triplets that after a time no woman could be found who would consent to marry any one of them. If we may accept the observations of HELLIN it would appear that the occurrence of multiple births is directly connected with a relatively large number of egg follicles in the ovary and is due to a persistence of the embryonic condition of that organ in which the number of follicles is very much greater than it is at subsequent periods of life The chances of triplets surviving are but small. RUPPIN has calculated that the mortality of the children in twin pregnancies is double and in triplet pregnancies four times that of the mortality in single births The case, therefore, recorded in the present issue of THE LANCET, at p 397, by Mr GEORGE BATE, is one of much interest, since the children, three girls, were alive and well one year after birth. The fact that more boys than girls are born in the population as a whole appears to hold good in the case of triplets The figures given by RUPPIN show that the commonest combination of sexes is two boys and one girl, then one boy and two girls, then three boys, and, lastly, three girls According to him the relative proportion of the two sexes in this variety of multiple pregnancies is 104 boys to every 96 girls The interdependence that exists between general prolificacy and multiple births is shown by the statistics of the two conditions In France, for example, where the general prolificacy is low, twin pregnancies occur about once in every 92 births, as compared with a general frequency of about once in every 80 births, according to HELLIN He finds that the frequency of multiple births varies not only in different countries but in different districts in the same country The formula he gives is a convenient one for estimating roughly the frequency of the occurrence of multiple births. If twins be taken as occurring about once in every 80 births, then 80^2, or 1 in 6400 represents the frequency of the occurrence of triplets, 80^3, or 1 in 512,000, that of quadruplets, and 80^4, or 1 in 40,960,000, that of quintuplets

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The Treatment of Congenital Dislocation of the Hip

THE mind of the public has recently, with the assistance of the daily press, been much exercised about the manipulative achievements of Professor LORENZ Knowing nothing of the nature of congenital luxation of the hip the lay mind is ready to look upon the LORENZ method as a revelation—as the invention of a novel form of "bloodless" surgery destined to replace ordinary methods We hear of hospitals being founded where bloodless surgery is to be practised and where no cutting instrument is ever to be used. It is difficult to say with whom these erroneous ideas originate, probably in the daily press zeal has outrun knowledge and it is with a good intention that "the new method" has been boomed. For the due consideration of the best treatment of congenital dislocation of the hip it is essential to understand the etiology and pathology In the vast majority of the cases of congenital dislocation of the hip joint the two bony surfaces which should enter into the joint are misshapen. This is *in part due to an arrest* of development and in part to an absence of the mutual moulding action between the head of the femur and the acetabulum. As a result the two bony surfaces do not fit and it is impossible in many cases to replace the head of the

THE LANCET.

LONDON SATURDAY, FEBRUARY 7, 1903

Idiopathic Pernicious Anæmia

THERE are few subjects in medicine more interesting and perhaps more intricate than that which has been so exhaustively investigated by Dr WILLIAM HUNTER whose latest words upon it appear elsewhere in these columns We are sure that they will receive the attention invariably paid to the original investigator, especially when, as in this instance, his work tends to throw much light upon obscure places Nor does he speak in uncertain tones He has arrived at very definite and clear conclusions as to the real nature of pernicious anæmia, conclusions which may not after all be found to be so much at variance with the work of others as he appears to think. For we may at the outset venture to remark that in all that has been written upon this subject during the past 30 years, in that vast superstructure which Dr HUNTER ingeniously exhibits as being built over BIERMER'S foundation, there has always been in the background a class of cases which have defied attempts to assign to them a definite etiology—cases, doubtless, of the kind which ADDISON had in mind in the memorable passage of his writings Nor would it be extravagant to assert that since ADDISON'S day the advance of knowledge has shown that these so-called "idiopathic" forms of anæmia are far more limited than he surmised and that BIERMER and all who followed him have done great service in demonstrating the conditions that may contribute to induce a progressive and often fatal form of anæmia. Nevertheless, there have remained untouched the bold outlines of the simple word picture penned by the Guy's Hospital physician which mark off from a host of allied states a distinct and peculiar form of disease of the blood Dr HUNTER has therefore done well to recall to mind the salient point of ADDISON'S observation that such a disease does exist of which the main characteristic is a severe and progressively increasing anæmia "without discoverable cause"

We must refer our readers to the text of Dr HUNTER'S paper for his close and searching criticism of recent literature on pernicious anæmia, merely remarking that the criticism appears to us to be sound Indeed, from the standpoint assumed by the critic—a conviction that the condition described by ADDISON is that of a disease *sui generis*, as specific as any other specific affection—there is little room for any other kind of appreciation of these writings It is obvious that the 'pernicious anæmia' of BIERMER and the "pernicious anæmia" of every subsequent author—Dr HUNTER alone excepted—embrace much more than a single pathological or nosological entity, and we believe that this was pointed out in this country more than 20 years ago The great advance made mainly by Dr HUNTER'S investigations has been in the direction of revealing the true nature of ADDISON'S "idiopathic" affection By his researches on hæmolysis and his observations on the clinical and pathological characters of this form of pernicious anæmia Dr HUNTER has given an explanation of the disease which is thoroughly in accord with modern scientific hæmatology

So far we have taken it for granted that those who have followed BIERMER'S lead in the attempt to unravel the causes of pernicious anæmia must of necessity have dealt with many conditions which would not be regarded by Dr HUNTER as strictly falling under that category It might, however, be objected that this is not true, and that, as a matter of fact, all these observers have overlooked the essential nature of the affection which they described Happily, we are saved from so bewildering a conclusion by the scheme drawn up by Dr HUNTER who keeps ADDISON'S idiopathic anæmia carefully apart and who declares that this, the real form of pernicious anæmia, bears the impress of distinctive characters. We gather now that these differences are less clinical than pathological and above all etiological. The specific affection is "idiopathic" (Addison) or rather "hæmolytic" (Hunter), whilst all other cases which conform clinically to the type of a pernicious anæmia constitute a motley congeries of conditions all tending to the same end of impoverishment of the blood The causes which operate to bring about such a state are multifarious, ranging from insanitary surroundings to intestinal parasites, from gastro-intestinal defects to nervous shock, from insufficient and improper diet to toxic and septic agencies. The old question is always recurring and that is, Why is it that exposure to such influences and agencies should in one subject lead to a fatal and pernicious disorder of the blood and in another to comparatively slight derangement? Is there another factor at work, and, if so, of what nature is it? Hence some acute observers have been forced to believe in the existence of an underlying predisposition—never a satisfactory solution to etiological problems.

It is a singular position to which Dr HUNTER has led us and we hope that his clear and decided views will be carefully considered He has brought us back to ADDISON'S description of the disease only to demolish its essential feature—namely, its idiopathic character, but of this certainly no one will complain In the ruins of the vast superstructure which etiologists have erected over BIERMER'S work this specific disorder is not to be found. The idiopathic disease is no more idiopathic than is typhoid fever It is a definite entity, specific, infective, hæmolytic, presenting characteristic local lesions (especially a peculiar form of glossitis) and "connected in all cases with an exposure to drain poison." It only remains to discover its special bacillus and the triumph of the Addison Hunter anæmia over the Biermer Ehrlich anæmia will be assured. For the latter, according to Dr HUNTER, is no entity, it is a mass of etiological rubble which has been heaped together by the ingenuity of many minds vainly seeking for causes which, on scrutiny, prove to be inadequate to explain every case. There is no gainsaying the advantage of arriving at so definite, if humiliating, a conclusion, and we must hasten to recast our nosology accordingly For the practical outcome of such considerations is the total reversal of the situation as it was when BIERMER wrote. It

Order called Johannites from St. John the Almoner. Other people called them Hospitalarii because they served in the hospital, but, according to Felix Faber they did not take St. John the Baptist as their patron until they established themselves in Rhodes. So far Felix Faber. After the taking of Jerusalem in 1187 the Order of St. John was allowed by the courtesy of Saladin to stay in its hospital and convent for the space of one year. The next resting place of the Order was Acre. Thence, when the whole of Palestine fell into Moslem hands they moved to Cyprus and from there to Rhodes. Again being driven out in 1523 by the Moslems they went to Malta and here the Order reached at once its highest pitch of glory and its lowest ebb of dis honour, for in 1798 the remnant of the Order treacherously surrendered the island to Napoleon. The English 'langue" was free from any share in this shame owing to the Order in England having been in abeyance since the robbery of the religious houses by Henry VIII. The Order was established in England early in the twelfth century, the first house being in Clerkenwell and priories were also founded in both Ireland and Scotland. The English 'langue" was, however, formally revived in 1827 and after some vicissitudes received a Royal charter in 1880. The headquarters of the Order are again at St. John's Gate in Clerkenwell and the care of the sick in hospital is still carried on by the Order at the Ophthalmic Hospital in Jerusalem, while ambulance work, both in civil and military life together with the providing of nourishing meals for convalescents discharged from hospital, also forms part of its labours. All members of the Order and many who are not members will find both pleasure and profit in reading the history to which we have referred in these lines.

THE GERMAN WOUNDED DURING ADMIRAL SEYMOUR'S EXPEDITION

A REPORT by Staff Surgeon Major Schlick, who was in medical charge of the German detachment which accompanied Admiral Seymour in his expedition towards Peking in June, 1900 is exhaustively reviewed by Dr. Gros in the *Archives de Médecine Navale* for January. 79 men of the detachment sustained gunshot wounds and one man received a sabre cut. In eight instances the head was the seat of injury, in five the neck in eight the chest, in two the abdomen, in one the back in two the pelvis in 18 the upper extremities, and in 36 the lower extremities. Half of the gunshot wounds were caused by old fashioned weapons of large calibre, the remainder being due to small bore rifles of modern make. Only a small percentage of the wounds was inflicted at short range the distance for the most part exceeding 1000 yards. At long ranges the orifice of entrance was small and that of exit only slightly larger the track between the two running directly as though it had been produced by a stabbing instrument. In several instances long range missiles of small calibre were found imbedded either in a soft part or in a bone and wherever a fracture was noted the bone was invariably splintered. Three cases of penetrating wound of the cranium were followed by immediate death, the orifices of entrance and exit being both small, while the track between exhibited no appreciable traces of explosive action. Wounds of the face were benign and the same could be said of those that penetrated the thorax. In all the wounds of the neck, however, the prognosis was most unfavourable. In each of the two abdominal cases the liver was pierced but no reaction occurred and the patients recovered with astonishing rapidity. Surgeon Major Schlick has a great deal to say regarding the behaviour of his patients after they received their wounds. In scarcely any two of them was the general mode of reception the same. Sometimes it was a flow of blood which furnished the man with the first intimation that he had been hit. Others said they felt as if some person had struck them with a stick. In a few instances the phenomena of extreme nervous excitation made their appearance. "In such wounds," says Surgeon Major Schlick, "it is very difficult to determine how much is due to shock or to injury of the spinal cord and its membranes, or to intra medullary hæmorrhage, or to commotion of the organ." Amongst the wounded there were those who had sustained injuries of the thorax but exhibited the signs of paralysis affecting the lower limbs which lasted several hours, and also others who acted "like hysterical females," at one moment laughing and the next crying. In most these phenomena disappeared after a few hours but in a few they persisted for six or eight days. The proper treatment of these 80 wounded men was rendered very difficult by the lack of necessaries. Dressing material, antiseptics, transport, suitable food, all the essentials of modern surgery, were either insufficient or else absolutely wanting. Three operations only were performed, their urgency being imperative—namely, one amputation and two extractions of projectiles which by their situation were causing intolerable agony. In general the treatment was expectant—occlusion of orifices by sublimated pads but without washing. The officers' shirts and mosquito curtains had to be utilised as dressing material. Split bamboos served for splints as well as in some cases the telegraph wires which had been cut by the Boxers. And yet in spite of all drawbacks the results were not unfavourable. In addition to the four men who were killed on the spot four more of the wounded succumbed through internal hæmorrhage. All the rest did well.

TYPHOID FEVER OR PUERPERAL SEPSIS?

PYREXIA in the puerperium may give rise to the problem of differential diagnosis between typhoid fever and septicæmia which sometimes presents difficulty. The *Boston Medical and Surgical Journal* of Dec. 18th, 1902, contains two interesting papers on typhoid fever in the puerperium. Dr. H. T. Swain points out that while typhoid fever in the puerperium is not very rare, cases such as the following one, in which the onset is so sudden as to simulate sepsis, have been seldom recorded. A woman was admitted to the Boston Lying in Hospital in her third labour. She noticed no symptoms different from those of her previous pregnancies. She had an easy labour in the early morning. In the evening the temperature rose to 101·5° F., but the pulse rate was not elevated. Next morning the temperature was 102·5° and the pulse was 100, in the evening the temperature was 104·2° and the pulse was 130. During the day diarrhœa with 'pea soup' stools began. There was slight delirium and the tongue was coated in the centre and red at the edges. There was some abdominal distension, with general tenderness. The lochia and milk were scanty. It was difficult to determine the character of the lochia because of the continual diarrhœa and the fæcal odour about the patient. Inspection of the vagina and cervix revealed nothing abnormal. There was a macular eruption which appeared and disappeared without apparent cause. On the third day the symptoms persisted and the Widal and diazo reactions were negative. The leucocytes were 3400 per cubic millimetre. On the fourth day rose spots appeared in abundance and the spleen was felt. On the fifth day the Widal reaction could not be obtained, but the diazo reaction was present. On the tenth day the Widal reaction was still negative. It was not again sought for. At the end of a month the patient was discharged well. The sudden rise of temperature and of pulse rate without prodromata resembled sepsis rather than typhoid fever. The scanty secretion of milk was useless in differential diagnosis, because it would result from any febrile state. As to the lochia, they may be unchanged in quality and quantity in sepsis. The general abdominal femur in the acetabulum since there is no acetabulum to receive it, or so small and ill developed a cavity that it is impossible to retain the head in position even when it has been replaced. For the relief of this serious deformity three methods of treatment have been devised. Mere hip-belts can hardly be considered curative, though by limiting the mobility of the head of the femur they do tend to improve the gait The first attempts which aimed at being really curative were made by the elder PRAVAZ, he was followed by BUCKMINSTER BROWN Their methods were not essentially different and consisted in extension, lasting many months, applied to the affected limb, and, later, passive movements were carried out. The results were hardly commensurate with the time and the assiduous attention required by the method and at the present time it is almost entirely disused The next phase in the treatment was the adoption of an "open" method, the hip joint is cut down upon, the acetabulum is deepened, restraining muscles and ligaments are divided, the head is replaced, and the limb is fixed by a plaster of Paris splint In some cases the misshapen head of the femur is pared down until it fits more neatly into the acetabulum This method was introduced by HOFFA and modified by LORENZ, and in suitable cases gives fair results. The dangers from sepsis and hæmorrhage are by no means negligible. A third method yet remains, this is the "bloodless" method of forcible reposition. It was originally introduced by PACI but it has been modified by LORENZ who has abandoned his "open" operation It consists in forcibly breaking down the pelvic attachments of the muscles, especially the adductors, which resist the replacement of the head. Then by forcible abduction of the thigh the head of the femur is brought down into the position of the acetabulum. In its passage downwards the head may sometimes be felt and heard to pass over a ridge which probably represents the upper and hinder rim of the acetabulum. This is the sound of "the bone returning into its socket" which has much impressed the popular mind. To retain the head at the acetabulum the limb is fixed by plaster of Paris in a position of extreme abduction, and the plaster splint is retained for six months During this time the pressure of the head of the femur may tend to some extent to hollow out the acetabulum by causing absorption, but it is very doubtful if the action is great. After the plaster splint is removed the extreme abduction slowly disappears, without, it is said, any reproduction of the dislocation It would be premature to express at present any decided opinion as to the ultimate results of the method, especially as it has not yet been performed in this country sufficiently frequently to provide material for an opinion, but we are at least justified in saying that it cannot claim to be applicable to all forms of congenital hip dislocation, for in some cases no trace of an acetabulum can be found It is true that the risks of sepsis and hæmorrhage are removed by this operation, but the tissues around the joint are violently lacerated. Some of the credit of the method should be given to PACI who first devised it, but LORENZ has applied it to so many cases—in all, it is said, more than a thousand—that his name will certainly be associated with it. A judicious hesitancy should characterise the surgical mind until we have more certain data on which to found an opinion.

Annotations.

"Ne quid nimis."

THE ILLNESS OF THE KING

WE are authorised to make the following statement with regard to the illness of His Majesty the King For about a week past His Majesty has not been feeling in his usual health and on Friday, Jan. 30th, he complained of feeling the cold more than usual. On Monday, Feb 2nd, it was found advisable to postpone the journey to Chatsworth and on Tuesday, Feb 3rd, it became evident that His Majesty was suffering from a mild attack of influenza. The attack is but slight and the King is not confined to bed, but only to his room. Care, of course, is necessary, since influenza predisposes a patient to the attack of other infectious diseases, but so far there is no cause for anxiety There have been several cases of influenza among the members of the household

THE HOSPITALLERS OF ST JOHN OF JERUSALEM [1]

ST JOHN'S GATE in Clerkenwell is known, we daresay, to few Londoners, but most persons are acquainted by sight at any rate, with the members of the St. John Ambulance Corps who are always much to the fore on occasions when great crowds gather together in the metropolis Few, however, connect these ambulance workers with a military religious order who fought to preserve the holy places from contamination by the followers of Mahomet, but the Rev W K. R Bedford and Lieutenant Colonel Holbeche, respectively the genealogist and librarian of the Order in England have together compiled a most interesting history of the rise, fall, and resuscitation of this great Order They refer to the foundation of a hospitium for pilgrims by some merchants of Amalfi, but they do not give the circumstances surrounding the foundation. According to that exceedingly interesting book, the Evagatorium [2] of Felix Faber, the foundation occurred in the reign of Charlemagne At this time some merchants from Apulia brought some wares to the East previously quite unknown there These wares were hazel nuts (*avellanæ*) Some of these nuts came into the hands of the King of Egypt who at that time also ruled over Arabia, Palestine, and Judea, and this monarch was so delighted with the nuts that he granted a boon to the merchants of whatever they liked to ask Therefore, being charitable and pious men, they obtained leave to found a rest-house for Latin pilgrims in Jerusalem. As years went on the multitude of pilgrims increased and another hospitium was founded and dedicated to St. John the Almoner who was formerly Patriach of Alexandria, and the pilgrims were looked after by both monks and nuns who were Benedictines, but as yet there was no definite Order of Hospitallers. In the reign of the third Latin King of Jerusalem, Baldwin by name, such a multitude of pilgrims came to the city that the abbot and the abbess of the monastery and the convent respectively appointed two lay people to look after the pilgrims. One was a nobleman named Gerhard and the other was a noble Roman lady These two people were the first to assume the black mantle with the white cross and they were soon joined by others, so that in the year 1118 they were constituted into a regular der called Johannites from St John the Almoner. Others ople called them Hospitalarii because they served in the spital, but, according to Felix Faber, they did not take John the Baptist as their patron until they established emselves in Rhodes. So far Felix Faber. After the king of Jerusalem in 1187 the Order of St. John was lowed by the courtesy of Saladin to stay in its hospital d convent for the space of one year. The next resting ace of the Order was Acre. Thence when the whole of lestine fell into Moslem hands they moved to Cyprus and om there to Rhodes. Again being driven out in 1523 by the oslems they went to Malta and here the Order reached at ce its highest pitch of glory and its lowest ebb of dis nour, for in 1798 the remnant of the Order treacherously rrendered the island to Napoleon. The English "langue" is free from any share in this shame owing to e Order in England having been in abeyance since e robbery of the religious houses by Henry VIII. e Order was established in England early in the twelfth ntury, the first house being in Clerkenwell, and priories re also founded in both Ireland and Scotland. The glish "langue" was, however, formally revived in 1827 d after some vicissitudes received a Royal charter in 1888. he headquarters of the Order are again at St. John's Gate, Clerkenwell, and the care of the sick in hospital is still rried on by the Order at the Ophthalmic Hospital in rusalem, while ambulance work, both in civil and military fe, together with the providing of nourishing meals for nvalescents discharged from hospital, also forms part of its bours. All members of the Order and many who are t members will find both pleasure and profit in reading e history to which we have referred in these lines.

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[1] The Order of the Hospital of St John of Jerusalem being a History of the English Hospitallers of St. John their Rise and Progress By W K. R Bedford M A Oxon. Genealogist of the Order and Richard Holbeche Lieutenant Colonel Librarian of the Order London: F E Robinson Pp 218 and index Price 7s 6d net.

[2] Hassler's Edition vol ii pp 246 and 274

THE GERMAN WOUNDED DURING ADMIRAL SEYMOUR'S EXPEDITION

A REPORT by Staff Surgeon-Major Schlick, who was in edical charge of the German detachment which accom-anied Admiral Seymour in his expedition towards Peking June, 1900, is exhaustively reviewed by Dr Gros in e *Archives de Médecine Navale* for January. 79 men of the tachment sustained gunshot wounds and one man received sabre cut. In eight instances the head was the seat of jury, in five the neck, in eight the chest, in two the domen, in one the back, in two the pelvis, in 18 the upper tremities, and in 36 the lower extremities. Half of the unshot wounds were caused by old-fashioned weapons f large calibre, the remainder being due to small-bore fles of modern make. Only a small percentage of the ounds was inflicted at short range, the distance for e most part exceeding 1000 yards. At long ranges e orifice of entrance was small and that of exit only ightly larger, the track between the two running rectly as though it had been produced by a stabbing in-trument. In several instances long-range missiles of small alibre were found imbedded either in a soft part or in a one, and wherever a fracture was noted the bone was in-ariably splintered. Three cases of penetrating wound of he cranium were followed by immediate death, the orifices of ntrance and exit being both small, while the track between xhibited no appreciable traces of explosive action. Wounds f the face were benign and the same could be said of those hat penetrated the thorax. In all the wounds of the neck, owever, the prognosis was most unfavourable. In each of he two abdominal cases the liver was pierced but no reaction ccurred and the patients recovered with astonishing rapidity. urgeon-Major Schlick has a great deal to say regarding the ehaviour of his patients after they received their wounds. n scarcely any two of them was the general mode of erception the same. Sometimes it was a flow of blood which furnished the man with the first intimation that he had been hit. Others said they felt as if some person had struck them with a stick. In a few instances the phenomena of extreme nervous excitation made their appearance. "In such wounds," says Surgeon-Major Schlick, "it is very difficult to determine how much is due to shock or to injury of the spinal cord and its membranes, or to intramedullary hæmorrhage, or to commotion of the organ." Amongst the wounded there were those who had sustained injuries of the thorax but exhibited the signs of paralysis affecting the lower limbs which lasted several hours, and also others who acted "like hysterical females," at one moment laughing and the next crying. In most these phenomena disappeared after a few hours, but in a few they persisted for six or eight days. The proper treatment of these 80 wounded men was rendered very difficult by the lack of necessaries. Dressing material, antiseptics, transport, suitable food, all the essentials of modern surgery, were either insufficient or else absolutely wanting. Three operations only were performed, their urgency being imperative—namely, one amputation and two extractions of projectiles which by their situation were causing intolerable agony. In general the treatment was expectant—occlusion of orifices by sublimated pads but without washing. The officers' shirts and mosquito curtains had to be utilised as dressing material. Split bamboos served for splints as well as in some cases the telegraph wires which had been cut by the Boxers. And yet in spite of all drawbacks the results were not unfavourable. In addition to the four men who were killed on the spot four more of the wounded succumbed through internal hæmorrhage. All the rest did well.

TYPHOID FEVER OR PUERPERAL SEPSIS?

PYREXIA in the puerperium may give rise to the problem of differential diagnosis between typhoid fever and septicæmia which sometimes presents difficulty. The *Boston Medical and Surgical Journal* of Dec. 18th, 1902, contains two interesting papers on typhoid fever in the puerperium. Dr. H. T. Swain points out that while typhoid fever in the puerperium is not very rare, cases such as the following one, in which the onset is so sudden as to simulate sepsis, have been seldom recorded. A woman was admitted to the Boston Lying-in Hospital in her third labour. She noticed no symptoms different from those of her previous pregnancies. She had an easy labour in the early morning. In the evening the temperature rose to 101·5° F., but the pulse-rate was not elevated. Next morning the temperature was 102·5° and the pulse was 100; in the evening the temperature was 104·2° and the pulse was 120. During the day diarrhœa with "pea-soup" stools began. There was slight delirium and the tongue was coated in the centre and red at the edges. There was some abdominal distension, with general tenderness. The lochia and milk were scanty. It was difficult to determine the character of the lochia because of the continual diarrhœa and the fæcal odour about the patient. Inspection of the vagina and cervix revealed nothing abnormal. There was a macular eruption which appeared and disappeared without apparent cause. On the third day the symptoms persisted and the Widal and diazo reactions were negative. The leucocytes were 8400 per cubic millimetre. On the fourth day rose spots appeared in abundance and the spleen was felt. On the fifth day the Widal reaction could not be obtained, but the diazo reaction was present. On the tenth day the Widal reaction was still negative. It was not again sought for. At the end of a month the patient was discharged well. The sudden rise of temperature and of pulse-rate without prodromata resembled sepsis rather than typhoid fever. The scanty secretion of milk was useless in differential diagnosis, because it would result from any febrile state. As to the lochia, they may be unchanged in quality and quantity in sepsis. The general abdominal distension with slight tenderness might occur in either sepsis or typhoid fever Pelvic tenderness may be absent and the spleen may be enlarged in puerperal sepsis The diagnostic points in favour of typhoid fever were the low leucocyte count and the rose spots. The following case is recorded by Dr E. P Stickney A primipara was confined on Sept. 7th. Convalescence was uneventful except that urine could not be passed in the recumbent posture and catheterisation was necessary On the 22nd the patient was permitted to sit up After a hearty dinner she complained of dull pain in the cæcal region and frontal headache. The temperature was 101° F, the tongue was slightly coated, and there was tenderness over the cæcum and right ovary Next day the temperature was 101 7° and the pulse was 90 The uterus was of normal size for the period of the puerperium and there was practically no discharge On the 25th, after a restless night, during which there had been a chill, the temperature was 104 9° the headache was severe, the cheeks were flushed, and the pain and tenderness in the right iliac region were increased. The spleen could not be felt but the upper limit of dulness was at the eighth rib The blood gave the Widal reaction. On the 26th there were five loose brownish yellow motions of foul odour On the 28th rose spots appeared. Recovery ensued.

SIR GEORGE GABRIEL STOKES

DURING the past week the announcement has been made of the deaths of no less than three well known men of learning, by which great gaps have been created at the Universities of Cambridge and Oxford while the worlds of literature and of science have sustained great losses Mathematics loses an ardent student and instructor in the death of the Rev Norman Macleod Ferrers, D D, F R.S, who died at the Master's Lodge of Gonville and Caius College, Cambridge, on Jan. 31st, while literature will miss a great contributor in the person of the Rev John Earle, Professor of Anglo-Saxon in the University of Oxford. The death of Sir George Gabriel Stokes, however, which occurred on Feb 1st, removes from amongst us perhaps our most eminent mathematician and one of our most distinguished men of science Sir George Stokes was an example of a scholar who, in spite of his mathematical bias yet showed practical attainment. There is not a book on physics which has not scattered through its pages abundant references to Sir George Stokes and his work in the domain of physical science It seems to be the irony of things that he should have died (although, it must be admitted, at a ripe age) just at a time when we have been brought face to face with a new set of phenomena of which his own researches had indicated the existence His practical investigations into the nature of fluorescence are well known He showed, for example, that the fluorescence of a solution of sulphate of quinine was due to the extreme violet rays of the spectrum and to invisible rays of still higher refrangibility Thus by means of such a solution the absence of rays beyond the visible part of the spectrum was made manifest, for if the spectrum is thrown on to a screen damped with this solution fluorescence is produced beyond the usual visible part Sir George Stokes explained this phenomenon by stating that the ethereal vibrations are absorbed by the fluorescent matter which is set in vibration, the period of its vibration being usually longer, and never shorter, than the period of vibration of the ether Phosphorescence is a similar phenomenon except that it lasts for hours after the stimulating radiation is removed, whereas fluorescence is maintained only for a short while after the light ceases to fall on the substance Radiations of this kind have during recent years much perplexed the scientific world and a new property of matter known as radio activity is being studied with encouraging results, a line of study suggested by Sir George Stokes's work and the researches of Becquerel Sir George Stokes also described a number of very important experiments in regard to the phenomenon of interference and diffraction and investigated the nature of double refraction and polarised light. Probably no philosopher has done more towards unravelling the mystery of ether than has Sir George Stokes. His explanations of those phenomena depending upon the existence of the ether are marked by their lucidity and in many instances he has rendered the theory of ether tenable and consistent with well known facts He was elected a member of the Royal Society in 1851 when he was 32 years of age and a year afterwards he was awarded the Rumford medal in recognition of his valuable contributions on the nature of light In 1885 he was appointed President of the Royal Society, a position from which he retired in 1890, after being created a baronet in the previous year He had been one of the representatives in Parliament of the University of Cambridge, as was his predecessor Sir Isaac Newton. His devotion to scientific work and the results to which it has led promise to culminate in revelations not less in importance than those following the famous discovery of the laws of gravitation.

THE MEANING OF URIC ACID AND THE URATES

THE etiology of gout has always proved a fruitful source of controversy Although numerous suggestions have been advanced as to the precise nature of the disturbance in metabolism in this disease no definite decision has yet been reached Most authorities have been of opinion that there is probably defective oxidation of food stuffs, combined with imperfect elimination of the waste products of the body Uric acid and the urates have always held an important position in the pathology of the malady, though authorities differ as to the exact rôle played by those bodies. The article by Dr Woods Hutchinson which was published in THE LANCET of Jan 31st, p 288, under the title "The Meaning of Uric Acid and the Urates" not only possesses the charm of originality but the arguments upon which it is based appear to us well worthy of serious contemplation He maintains that there is no connexion whatever between the production of urea and of uric acid The uric acid produced in health comes exclusively from two sources—the larger moiety, or exogenous uric acid of Chittenden, from the nucleins and purin bases of the food, the smaller, or endogenous moiety, from the destructive metabolism of the nucleins of the body tissues Dr Woods Hutchinson maintains that it is the endogenous moiety alone which is increased in gout and lithæmia Further, he says gout and lithæmia are mere symptoms, names for a miscellaneous group of chronic toxæmic processes of widely varied origin, characterised by the production of uric acid and the urates. As most of the toxins which set up this destructive metabolism and consequent uric acid production are of intestinal origin or entry the diet prescribed in gout should be regulated solely with regard to the diminution of intestinal fermentation and putrefaction, hence the animal or nitrogenous foods need not be strictly limited or interdicted in gout, but as these foods, from their much more appetising and attractive flavours, are more likely to be taken in excess of the oxidative powers of the body some caution must be exercised so that the patient does not take undue advantage of the privileges as to diet which are allowed him. A still more emphatic statement is to the effect that as uric acid and the alloxur groups are not toxic or at best feebly so, and are not the cause of gout, the prohibition of even foods rich in nucleins and purin bases—such as red meats, roe, and sweetbreads—is declared ave no rational basis and to be clinically or doubtful ty except by diminishing the attractiveness of the ary There is much in Dr Woods Hutchinson's article thy of study, although there is no doubt his views are trary to some of those upheld by leading English and ign authorities

THE DISTRIBUTION OF PLAGUE

s regards the Mauritius a telegram from the Governor eived at the Colonial Office on Jan 30th, states that for week ending Jan. 29th there were 5 deaths from plague regards Cape Colony the medical officer of health of Colony states that no case of plague has been discovered ny place in the colony during the week ending Jan. 10th cases remained under treatment at the Plague Hos il, Port Elizabeth, at the end of the week, the last having n discovered there on Dec. 30th, 1902.

THE FALLING BIRTH-RATE IN FRANCE

n view of the *steady decrease* in the yearly numerical an of births in France, which has fallen from 932,000 in period 1881–86 to 884 000 in the period 1886–91, and to ,000 in the period 1891–96 the article by M Pinard l M. Richet in the January number of the *Annales Gynécologie et d'Obstétrique* upon the Pathological uses of the Diminution of the Birth rate in France is much interest. In presenting the results of their estigations they show very clearly that a fall in the rriage-rate cannot be accounted as the cause. The rcentage of the marriage-rate is practically the same France as it is in *England*—*viz*, 7 5 per cent. as comred with 7 4 per cent. As a matter of fact the number marriages has risen from 282,079 in 1881 *to* 295,752 in 99 The first point which the writers set themselves to termine was as to how far the lessened birth rate was due unavoidable causes and how far it was due to avoidable uses To answer this question they proceeded to estimate e percentages of sterile marriages amongst French people compared with that of other countries If it could be own that the percentage rate of sterility due to what ay be termed unavoidable causes was the same in France as other countries then it *followed* that such sterility could t afford a complete explanation of the falling birth rate cording to Matthews Duncan and Simpson the number sterile marriages in England was about 13 4 per 100. As eir results, however were based upon a *comparatively* all series of figures it was probable that the rate was ther too high. From a consideration of the French statistics ailable for the year 1896 the result was arrived at that nongst 2,027 739 marriages there were 233,369 in which ter a duration of from 15 to 24 years there were no ildren or a percentage of 11 5. It must be noted *however*, that no account was taken in these figures of children ho had died. To correct this source of error *no* French atistics were available but from a study of those of Brazil iven by M. Bertillon the writers found the *proportion* of hildless marriages lasting from 15 to 24 years in which hildren had been born but had died to be about 2 per ent. Deducting this number from the percentage already iven—viz. 11 5—gives a percentage of 9 5 childless arriages amongst those which had lasted from 15 to 4 years A more correct *comparison* could be obtained etween the statistics of Berlin and Rio de Janeiro nd those of Paris since they concerned an *urban* population alone and not a mixed urban and rural population. Amongst marriages which had lasted for the time already onsidered—viz., 15 to 24 years—there were in Berlin 12 8 per cent. in Rio de Janeiro 11 3 per cent., and in Paris 11 3 per cent without any children The differences were inconsiderable and did not explain the marked difference between the birth rate of 29 per 100 of Berlin and that of 23 per 100 of Paris The conclusion might therefore safely be drawn that the rate of sterility due to what may be termed unavoidable causes was practically the same in Paris as in other large towns Unfortunately, although they might accept the rate of sterility—viz. about 11 per cent.—as fairly correct they were quite unable to arrive at any approximate estimate of the frequency of the commoner causes of sterility As M. Pinard and M. Richet pointed out no doubt *the commonest* cause was one or *other of the forms of* venereal disease, particularly gonorrhœa. More especially *was this the case with the latter affection*, because even when apparently cured it yet frequently entailed sequelæ which produce *sterility* either in the *male or female* If we are to accept the above deductions as correct—and there can be no doubt that they are approximately true —then we are driven to the conclusion that the falling birth-rate in France is not due to an increasing degree of sterility amongst French men or women. It is due, as the writers are compelled to admit to the determination of French parents amongst almost all classes of the community not to have more than a certain number of children, and until the time comes when this determination can be altered the birth rate of France is likely to continue to fall

MEDICO-PSYCHOLOGICAL ASSOCIATION

THE next general meeting of the Medico-Psychological Association of Great Britain and Ireland will take place at the County Asylum, Mickleover, Derby, on Feb 12th, under the presidency of Dr Joseph Wiglesworth of the county asylum at Rainhill, Lancashire. The educational and Parliamentary committees will meet in the forenoon, the general meeting will commence at 3 P M, and there are ten candidates for election. Mr F J Stuart will propose a motion

> That a committee be appointed to reconsider and to report on the statistics obtained by the late Tuberculosis Committee of this association.

Papers will be read on the Stereoplasm of the Nerve Elements, by Dr W Lloyd Andriezen, on the Care and Treatment *of* Persons *of* Unsound Mind in Private Houses and Nursing Homes, by Dr. E. W White, and on Lunacy and the Law by Dr T O Wood Members are invited by Dr R J Legge to lunch at the asylum at 1 30 P M. and they will dine together at the Midland Hotel at 7 P M

THE LEUCOCYTES IN TYPHOID FEVER

ALTHOUGH from a diagnostic point of view in the examination *of* the blood in typhoid fever *the* importance of the leucocytic changes is largely overshadowed by Widal's reaction yet the former are of considerable *interest* and importance. That a condition of leucopenia or reduction in the number of the leucocytes occurs in uncomplicated cases of typhoid fever is well known, but the nature of this reduction and its variation in the course of the fever have attracted little attention in this country A careful study of these changes and of their diagnostic and prognostic import has been recorded by Dr Otto Nägeli of Zürich in the *Deutsches Archiv für Klinische Medicin* Band lxvii., S 279. He divides the course of the fever into four stages, in which the changes are as follows. In the first stage, that of the gradually rising temperature curve, there is probably a neutrophile leucocytosis of moderate degree, which soon gives place to a reduction, and at the same time the lymphocytes are diminished and the eosinophiles completely disappear or are but rarely found, in the second stage, that of continuous pyrexia, there is a further reduction of the neutrophiles and lymphocytes though towards the end *of this* stage the latter may gradually increase, in the third stage, with a remitting type of temperature, the increase of the lymphocytes becomes very distinct and a few eosinophiles begin to reappear, but the neutrophiles decrease still further, and in the fourth stage, that of declining fever, a further diminution occurs in the neutrophiles which now reach their minimum, while the lymphocytes increase to such a degree as to exceed the neutrophiles and the eosinophiles return slowly towards their normal proportion. In the first few days after the decline of the fever the restitution of the neutrophiles begins, while the lymphocytosis persists for some weeks or even months. Dr Nägeli explains these effects by supposing the action of a toxin upon the bone marrow, the preliminary increase and subsequent decrease in the number of leucocytes being due to a preliminary stimulation, followed by a subsequent depression analogous to the action of many known organic poisons on protoplasmic tissues, and definite changes are found in the bone marrow which lend support to this view. The blood conditions are of interest in relation to diagnosis, as definite changes occur before the development of Widal's reaction, while from the standpoint of prognosis Dr Nägeli finds that the presence of eosinophiles is favourable as indicating a mild infection, while the absence of lymphocyte increase is unfavourable. Most complications produce a leucocytosis.

THE MEDICAL LIFE

To the vast literature of medical addresses Mr George Munro Smith has added a welcome item in his racy presidential lecture delivered to the Bristol Medico-Chirurgical Society at the opening of its twenty-ninth session. The address is reprinted, as a small pamphlet, from the *Bristol Medico-Chirurgical Journal* for December, 1902, and its perusal provides an entertaining quarter of an hour. Mr Smith takes a wide view of medical life, its occupations, joys, sorrows, achievements, and disappointments, and their effects upon a man's character. In the manner in which this is done Mr Smith shows a sense of humour and a correct appreciation of many points in the nature and relationships of both patients and medical men. We find here no great inculcations to moral rectitude, but we have a sensible estimate of the great worth to any medical man of the conscientious performance of his various duties and of the value of a cheerful spirit and a mind open both to the lighter and to the more serious aspects of the situations in which the practitioner becomes involved. Moreover, Mr Smith gives some delightful anecdotes, one of which we would fain repeat, though it may be an old friend to many readers. The pith of it is the advice given by an eminent specialist to a lady patient to "take a saline aperient before breakfast daily and spend her morning on the downs." As a class medical men are apt to suffer from a too solely solemn view of their life. This is natural enough from the serious vicissitudes with which they mainly deal. A spice of humour, though, will alleviate their burdens and assuredly make them none the worse in practice.

THE PREVALENCE OF SMALL-POX

AT the meeting of the Poplar Borough Council held on Jan. 29th Mr F W Alexander, medical officer of health, reported that since the last meeting of the public health committee two cases of small pox had occurred and that both patients had died in circumstances that are worth the notice of our readers. The first case was that of a female, aged 27 years, of Morant-street, Poplar, where a case had occurred previously on Dec. 20th. The patient was prematurely confined of an eight months living child on Jan. 4th and was attended by a midwife. The medical officer of health, at the request of a medical practitioner, examined her on Jan 5th and found her to be suffering from small pox and too ill to be removed, and in order to prevent the spread of the disease the whole of the inmates were isolated within the house, food being supplied and the rent and medical attendance being paid at the expense of the council. The firms for whom the inmates worked were notified of the state of affairs, and various medical officers of health were informed of "contacts." The midwife was interviewed and advised about disinfection. The patient died on Jan 6th. The body was immediately placed in a coffin and removed to the mortuary, Wellington road, and the inmates of the house were taken to the shelter. The undertaker's men also went to the shelter, bathed, and had their clothes disinfected. The second patient, the prematurely born male infant of the above patient, developed small pox on Jan 10th at the council's shelter and was removed on the same day and has since died. The child was vaccinated as soon as born. The husband of the deceased woman and his mother who nursed her were detained at the shelter as they were not revaccinated immediately. The other inmates were allowed to return home as soon as the premises were disinfected. The medical officer of health commended the prompt manner in which the above measures were carried out. Such prompt action by the officers no doubt prevented the spread of disease. —The Local Government Board for Scotland intimates that during the period from Jan 16th to 31st inclusive five cases of small pox have been notified to it, four of these occurring in the burgh of Leith and the other at Prinlaws, Leslie. The Leith cases are all traced to one source—viz., a case imported from Riga.

"RETURN" CASES OF SCARLET FEVER

A CASE of considerable interest was recently tried at the Lowestoft County Court. A claim was made against the mayor, aldermen, and burgesses of the borough to recover the sum of £50 as compensation for damages sustained through the negligence of the defendants or their servants in discharging the plaintiff's daughter from the Lowestoft Isolation Hospital on August 29th last in a verminous and infectious condition. The child had been an inmate of the hospital for nine weeks and three days, suffering from scarlet fever, and the plaintiff maintained that in consequence of being discharged in the condition alleged the child infected two other children of the plaintiff with scarlet fever, whereby the plaintiff had suffered loss as represented by the amount of the claim. The case occupied five hours and amongst the witnesses was Dr O K Millard, medical officer of health of Leicester. The question had arisen as to whether lice could be instrumental in communicating scarlet fever. Dr Millard stated that he did not know of any authenticated cases in which infection had been so spread. We are not aware of any observations on this point, but it is certainly a matter of importance to know if infection can be carried by vermin. Scarlet fever can be conveyed from an infected person by means of fomites and as cutaneous particles are a source of infection it would seem quite possible that lice might carry with them from one person to another the pathogenic organisms. Dr J R O'Brien of Lowestoft was of opinion that the fever might be transmitted by insects or flies as well as by means of linen and other clothes. The judge entered judgment for the defendants for reasons which he proceeded to enumerate. His speech was a lengthy one and dealt fully with the matter. On points of law his remarks were very interesting and more or less correct. From the medical evidence he came to the conclusion that lice were not the cause of the spread of the disease, but we should prefer to consider this matter as well worthy of future investigation. The subject of "return" cases of scarlet fever is still an open one. The matter was under consideration at the last meeting of the British Medical Association. Dr Millard, who opened the discussion, regarded "return" cases as essentially a 'bor nomenon" and recommended as the most effectual means the prevention of such cases the isolation of convalescents n acute cases prior to discharge from hospital The fful supervision of cleanliness in all patients about to be harged should also be insisted upon, and under this ane would be included the freedom of the head from or other vermin

THE HUNTERIAN SOCIETY

HE annual Hunterian oration will be delivered in the idon Institution, E C, on Wednesday, Feb 11th, at) P M., by Mr T H Openshaw, C M.G The subject he oration is John Hunter His Influence on Surgery, h some Remarks on the Treatment of Appendicitis." y member of the medical profession can be present at the ivery of the oration The annual dinner of the society l take place on Friday, Feb 13th, at 7 P M. in the cadéro Restaurant

SHELL-FISH AND SEWAGE CONTAMINATION

HE question of the pollution of shell fish with sewage we are glad to see, not going to be dropped. Indeed, subject is being discussed throughout the country by all nicipal authorities and we may hope that as a result some portant step in sanitation is likely to be advanced. In a ent report presented to the sanitary committee of the corration of the City of London the medical officer of health, W Collingridge, publishes the results of a very interesting quiry into this question, while it is established beyond dis te by the experiments of Dr Klein that cockles and oysters e frequently polluted with sewage Further, there can be doubt that shell fish in general are often the origin of an tbreak of enteric fever Similarly the public health mmittee of the London County Council presented a long port upon the subject at a meeting of the Council on b 3rd, and after some discussion the recommendation the committee was adopted, "that a letter be addressed the Local Government Board expressing the Council's e that in the interests of the public health the ard will as soon as possible take steps to obtain an amend nt of the law so as to prohibit under heavy penalties the ing down of all edible forms of shell fish in sewage-luted creeks or other dangerous localities and the sale of h shell fish for human consumption, and that all un luted layings fattening beds, and storage ponds at ent in use may be protected from pollution by sewage by person or sanitary authority

THE LATE DR FEDERICO RUBIO Y GALI

r Federico Rubio y Gali of Se ille died on August 31st, at the age of 75 years, as mentioned in THE LANCET Oct. 11th, p 1023 He was one of the most eminent cons in Spain and in recognition of his great reputation high professional position he was among the dis-uished foreigners who received the honorary diploma R.C S Eng on the occasion of the centenary of the al College of Surgeons of England. Another notable nish medical man Dr Salvador Cardenal Fernandez Barcelona, received the honorary Fellowship at the e time.[1] Dr Rubio's obsequies were solemnised at lle on Dec. 6th in the presence of a great con se of sympathetic friends and amid the animated es of an impressive ceremonial. We have received a and minutely detailed account of the proceedings, for h we are indebted to a correspondent, who makes icular mention of the kind reception given to him by Dr on de la Sota y Lastra, Dean of the Seville Medical ulty, Dr Laborde, who retains pleasant memories of two years spent at Guy's Hospital, and Dr Lasso de la Vega. The company, consisting of graduates and students of Cadiz and Seville, assembled in the large academic hall of the school founded in Seville by the deceased Led by the Dean the gathering passed into the street and so into the Church of the Mother of God, which is the chapel of the medical school. The centre of this long narrow building, roofed with carved wood, was occupied by a stately catafalque four squares of black and gold terminating above in a funeral urn. On the conclusion of Divine service the company returned to the large hall where eloquent and touching addresses were delivered by Dr Laborde and Dr Lasso de la Vega

CHOREA ELECTRICA

CHOREA electrica a rare nervous disease of children, was first described by Dubini in 1849 Most of our knowledge of it, however, dates from the observations made by Henoch 20 years ago In the *Berliner Klinische Wochenschrift* of Dec 22nd, 1902 Dr Ludwig Bruns of Hanover gives an account of the main varieties of this disease based on a study of 30 cases The disease is found to occur exclusively in children of both sexes, the ages varying from nine to 15 years. The characteristic attacks consist of sudden muscular shocks or contractions limited to the neck and shoulder muscles—viz, the sterno-mastoid, levator anguli scapulæ, pectorales major and minor, and the trapezius The muscular contractions are sharp and sudden "as though induced by an electric shock"—hence the name chorea electrica. The disease, adds Dr Bruns, is not related to Sydenham's chorea. He recognises three varieties of chorea electrica —viz., chorea electrica proper, a hysterical variety, and an epileptic variety The hysterical variety of this affection is readily cured by the therapeutics ordinarily employed for hysteria. He records a case of this as exemplified in a girl, aged nine years, the child of a highly neurotic mother Separation from the mother with firm and judicious management soon cured her of the trouble The epileptic variety is very refractory to treatment, as the condition is due to a grave lesion of the cerebral hemispheres Hydrotherapy, an open air life, and a diet that is digestible and free from irritating or highly stimulating ingredients are among the general methods of treatment for the epileptic form and the same remarks apply to chorea electrica proper, which is rather more amenable to such treatment.

THE BRITISH GYNÆCOLOGICAL SOCIETY

THE Fellows of the British Gynæcological Society and their friends attended the annual dinner on Jan. 29th at the Café Monico, Piccadilly circus, London, W in large numbers. Sir John Halliday Croom, President of the Royal College of Surgeons of Edinburgh, was accorded an enthusiastic reception on taking the chair as president of the society Dr S Buckley President of the North of England Obstetrical and Gynæcological Society, in the course of his speech while giving the toast of "The British Gynæcological Society discoursed on the fame of the names that occurred in the lists of its officers The society, he said, was known throughout the gynæcological world and he described how the formation of the North of England Obstetrical and Gynæcological Society had been followed by excellent results in securing good fellowship amongst its members. Sir John Halliday Croom, in acknowledging this toast, well sustained his reputation for wit and humour The next speech was by Dr H Macnaughton Jones who was intrusted with the task of proposing the toast of Universities and Medical Corporations He deplored the disappearance of the Queen's University in Cork. He showed how many brilliant men had been trained for useful service to the State in the Queen's University, and explained how important it was to have teaching universities and not merely examining boards to test knowledge. After Mr W Parson, the Master of the Society of Apothecaries of London, had spoken in answer to the toast, Dr F F Schacht said a few words, remarking that the universities had at last turned their attention to the medical aspects of the education which they provided. In giving the toast of the "Sister Societies," Dr Heywood Smith warmly urged the foundation of a Royal Academy of Medicine. The evening concluded by the President of the Clinical Society of London, Mr Howard Marsh, acknowledging this toast in an effective and thoughtful speech

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[1] THE LANCET August 4th, 1900 p. 329.

QUICK LUNCHES

PROPOSALS have recently appeared in the daily press in favour of the inauguration of a system of quick lunches by which the busy man may have a substantial midday meal served expeditiously, the partaking of which shall occupy but a few minutes We do not hesitate to ask that all our readers will impress upon their patients that the adoption of this proposal would be a wicked physiological step The repair of the body is not a process to be trifled with in this way, eating should not be done in a hurry The demands of business may be pressing, but the demands of the body are in reality more serious Just as by stoking a steam engine to cramming point the fuel burns badly and the intensity of the fire is lowered, so by bolting his food the vital processes within a man's body are hindered rather than helped Necessarily food eaten rapidly escapes in a great measure the preparatory processes of digestion and sooner or later a breakdown in the maltreated human machine supervenes In a word, hurrying over eating is fatal to the healthy sustenance of the body

LECTURES of the Royal College of Physicians of London for 1903 will be delivered at the College, Pall Mall East, on each of the following Tuesdays and Thursdays at 5 o'clock. Milroy Lectures The Causes, Prevalence, and Control of Tuberculosis, by Dr H T Bulstrode, on March 5th, 10th, and 12th Goulstonian Lectures Theories of Immunity and their Clinical Application, by Dr A. S F Grünbaum, on March 17th, 19th, and 24th Lumleian Lectures On Infective Endocarditis mainly in its Clinical Aspects by Dr T R. Glynn, on March 26th, 31st, and April 2nd.

THE Eleventh International Congress of Hygiene and Demography will be held in Brussels from Sept 2nd to 8th under the patronage of H M the King of the Belgians The secretary general of the Congress is Professor Dr F Putzeys All information and programmes can be obtained from Dr Paul F Moline, 42, Walton street, Chelsea, London, S W, the honorary secretary of the British committee

A MEETING of the Medico Legal Society will be held on Tuesday next, Feb 10th, at 8 P M. at 20, Hanover square to continue the discussion upon Dr Littlejohn's paper on Medico Legal Post-Mortem Examinations and to hear a paper upon the Whitechapel Murders (Jack the-Ripper) Members of the profession are invited to be present

Dr C Luxmoore Drew has appointed Dr S Ingleby Oddie, barrister at-law of the Middle Temple, to be deputy coroner for the Western Division of London, vice Dr H. R. Oswald, who was recently selected as coroner for South east London.

NEW METHODS OF MEDICAL TREATMENT

A PAPER READ BY PROFESSOR BOUCHARD AT A GENERAL MEETING OF THE MEDICAL CONGRESS HELD IN CAIRO FROM DEC 19TH TO 23RD, 1902

(*Translated and abstracted specially for* THE LANCET.)

OFTEN a patient when he has recovered attributes his cure to the medical man, it is rare for a medical man, if he is well educated, to consider himself the cause of the cure. It is, however, quite exceptional that he has not been useful, he has relieved, he has helped on the acts which lead naturally to cure, he has avoided possible dangers, he has kept up the strength of the patient, and has given him the necessary time in which to get well. He is not directly responsible for the processes which heal, for these processes come about gradually during the succeeding phases of the illness. *Natura medicatrix*

Spontaneous cure is the rule, at least in acute diseases. It is not the same thing in chronic diseases, which are chronic precisely because they have no natural tendency towards cure It is just in these cases that medical assistance is necessary and that the art is shown in its dignity and power. Empiricism has given us opium, which does not often cure but which relieves almost always, and the empiricism of olden days has given us nearly all our drugs, among which are several which cure, such as quinine mercury, the iodides, arsenic, colchicum, and salicin—all drugs the use of which we have learnt by happy accident. Each of these drugs cures a special disease, and almost exclusively that disease, its action being specific Our forefathers did not know or even suspect the reason, but most of us to-day know the secret of their action. They influence the poison by means of constitutional treatment

We now know something about the causes of malaria and actinomycosis, but that of rheumatism is still under discussion, and we have neither seen nor cultivated the micro-organism of syphilis Our ancestors discovered remedies without knowing the cause of their action, but in modern days we have not discovered new specifics, though I must not forget the serums which are the new and brilliant victory of the nineteenth century

I have often thought that in both local diseases and general diseases which are localised if a general drug treatment exercises a specific cure one might confine the administration of the remedy exclusively to the diseased tissue and attempt the cure by injecting into the affected part the drug which is of known utility when it is distributed all over the body In a case of acute articular rheumatism a man weighing 135 pounds, who takes every day by the mouth 90 grains of salicylate of sodium, sees all his joint affections disappear Every day a grain of the drug has entered into every pound and a half of his body, and of course a very small proportion of this has found its way to the soft parts surrounding the affected joints. As a matter of fact, an acute articular rheumatism disappears after the injection *in situ* of extremely small quantities of salicylate of soda. I will not say that I have cured a case with one sixth of a grain, but I have seen rheumatic joints rapidly cured by half a grain, and it is exceptional if a symptom is not cleared up by from two to three grains dissolved in a drachm of water

In no case of acute rheumatism can the local treatment however satisfactory it appears to be, be considered sufficient. It is true that it reduces the temperature when only one joint is affected but it does not prevent the development of affections of other joints or the invasion of serous membranes In such cases general treatment is absolutely necessary and if it proves insufficient local treatment can be used as an aid Of course, it must be understood that I am not speaking of true rheumatism and not of infectious rheumatic conditions such as gonorrhœal rheumatism, which, however, can have its pain relieved by local salicylic treatment.

Several times an injection into the painful thoracic muscles has stopped an early pleurisy and in the case of pericarditis I have seen an injection of one and a half grains lower the fever from 102° to 100° F, then a second injection was made and in three days friction had disappeared endocarditis I have failed and cannot pretend to attain the success of Moritz Benedikt, who with a solution of carbolic acid (2 per cent) has seen cardiac affections disappear without leaving any trace behind. I have, however, cured cases of painful muscular contraction of the adductors of he thigh and I have seen good results in neuritis such as ciatica. In these cases I injected in the neighbourhood of he diseased tissues, not in the tendons or nerves. In he same way, when it is a question of inflammation of the serous linings of joints or of internal organs, I have not introduced the drug into the affected cavities, but into the neighbouring tissues as near as possible to hem.

The success which I have mentioned made me wonder if it would be possible to apply local salicylate treatment to other painful nervous affections. I tried it in tabes dorsalis but obtained no result and Professor Déjerine also met with no success. I then tried injections of iodide of potassium (3 per cent.) and these injections have permanently eased the pain in some cases of ataxy I did not inject more than 30 minims each time, being about one grain of the iodide I then resolved to join biniodide of mercury to the iodide of potassium and thus triumphed over many acute obstinate pains

These early experiments encouraged me to try the local treatment of syphilis by the same small doses of specific drugs. I have not had either the time or the opportunity to collect numerous cases as I have been able to do for rheumatism, so I will simply state what I have seen A man with an ulcerating gumma on the back had been treated by mercury and iodide and the two combined. He had also had inunctions and subcutaneous injections of mercury far from the gumma. As all this general treatment seemed *to be unavailing I stopped it and injected near the gumma* iodide of potassium. After one grain of iodide had been injected the gumma healed. In another case, after unsuccessful general treatment and its being relinquished, the gumma disappeared under the influence of three injections each of one grain of iodide of potassium A woman suffering from severe syphilis had on several parts of her body deeply ulcerating condylomata. I gave her mercury and iodide in the ordinary way, but at the end of a month her stomach could no longer take the iodide, the injections of benzoate, and later of cyanide, of mercury produced lumps of the size of a nut and her general condition was no better I therefore stopped the former treatment and experimented on some of the tumours by injecting into them iodide of potassium and biniodide of mercury In three days a condyloma into the base of which I had made two injections was cured Another ulceration was healed after six injections. During this time the other condylomata were not treated at all and showed no improvement. The patient's weakness increased and her hair again began to fall out.

With or without general *treatment* I venture to hope that local treatment will some day triumph over those painful or dangerous local manifestations which we sometimes see developing on the face, in the tongue or on the eye. One may even hope that some day deep lesions will be treated by this method. It is not of course, quite certain how these infinitesimal local doses produce their action. Local treatment, because it is local, brings the drug into the affected spot and makes it antiseptic without a general toxic diffusion in the whole body Ophthalmic surgeons whom we ought to have imitated long ago bring the drug whether it is specific or not, as near as possible to the affected part Again, local treatment of a nasal coryza often prevents a general infection of the respiratory passages, and local antisepsis of the digestive canal is used to prevent gastric fermentation and intestinal putrefaction.

It is silly and dangerous to try to cast the horoscope of this twentieth century I am certain that our successors will open new paths which we do not suspect. but I can at least say in what direction treatment is tending to-day Without neglecting general treatment local means are being more and more employed sometimes by setting up an antiseptic action, sometimes by awakening antitoxic processes, by which methods the treatment becomes a cure.

Modern treatment, above all is inspired by the ideas of infection, which are the glory of the nineteenth century and which usher in the twentieth full of the teaching and the memory of those two benefactors of all ages, Pasteur and Lister

RECENT RESEARCHES IN MALARIA

A VALUABLE contribution to our knowledge of several questions connected with malaria has recently been published in Calcutta.[1] It forms No 2 of the new series of Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India and is from the pen of Captain S P James, I.M.S, on special duty with the Royal Society's Commission on Malaria. In some of the work here recorded he was associated with Dr J W W Stephens and Dr S. R. Christophers The volume consists of 106 large pages, contains many illustrations, and is divided into seven chapters headed respectively Methods of Investigation, Observations on Anopheles Mosquitoes and their Larvæ, Malarial Infection of Native Children, Prevalence of Malaria in Different Parts of India, Enlarged Spleens and Malarial Infection, Malarial Parasites and Fevers of India, and Observations on Birds.

In his classification of Indian anopheles Captain James recognises 16 species, among which anopheles fluviatilis and anopheles culicifacies are the most common conveyers of malaria, of anopheles Rossii he says that it is almost certainly the commonest species in India and that the three species of the human malaria parasite can be made experimentally to develop in it but he has never yet found it infected in nature. Of the remaining species most are either of rare occurrence or are very seldom found in human habitations or have not been found to be infected with malaria in the natural state. It has been suggested that the naturally uninfected anopheles may bite only cattle and horses It has been discovered that the embryoes of filaria sanguinis hominis can develop in anopheles nigerrimus and anopheles Rossii. In consequence of the difficulty which is usually found in the identification of the different species of Indian anopheles Captain James recommends a classification in three primary subdivisions determined by the palp markings—namely (1) palpi unbanded, (2) palpi with four white bands, and (3) palpi with three white bands. Dr Christophers has made the important observation that anopheletes not only select their breeding places but that each species has a particular kind of breeding ground that it prefers to any other There is evidence to show that the mosquitoes which infest human habitations will readily fly to a breeding place a quarter of a mile away but that they will hardly ever fly over three quarters of a mile.

It was discovered by Professor Robert Koch and independently by Dr Stephens and Dr Christophers that a large percentage of native children in Africa constantly have malaria parasites in their blood although at the time they may present none of the more evident clinical symptoms of malarial fever Captain James has confirmed and extended these observations for certain parts of India, in some of which there is an infection of from 60 to 75 per cent of the children under ten years of age with no infection of adults. This percentage of infected children he says, affords a very true test of the endemicity of malaria and the figure representing it may be termed the "malarial endemicity index" or shortly, the "endemic index." These children are the chief source from which anopheles mosquitoes become infected. As in Africa so in certain highly malarious districts of India, there is a diminished infection of the children with advancing age and the adults are relatively immune, but in less malarious districts in India the immunity of the adult native is not so marked and the diminished infection of the children at advancing age-periods is not shown It has been said that these infected children present no clinical symptoms of malaria. Captain James remarks that this is no doubt true in the early part of the day, but in the evening many of them have to lie down, their temperatures rise, and careful examination shows that their general health is seriously affected. One of the children in whom quartan parasites were found was only nine months old. Some parts of India, such as Calcutta and the plains of Bengal, are almost free from malaria while others suffer greatly In Calcutta anopheles is abundant, numerous breeding grounds are close at hand,

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[1] Malaria in India. By Captain S. P James I M.S Issued under the authority of the Government of India. Calcutta, 1902, pp. 106 price 2s. 3d. Obtainable from seven bookselling firms in London from Williams and Norgate, Oxford, and from Deighton Bell and Co Cambridge.

and apparently every condition is favourable to the development of malaria, and yet of 182 children examined by the Commissioners of the Royal Society of London none had either parasites in their blood or enlargement of the spleen Practically the only species of anopheles which was present in the localities where these children lived was anopheles Rossii. The mere fact that it could exist in large numbers without producing any infection in the children was in itself suggestive that the species was not a good carrier of malaria. Excluding some peculiar instances of which Calcutta is one, it may be said that there is a direct relation between the extent and nearness of breeding grounds, the abundance of anopheletes, and the amount of malaria While in Calcutta there were abundance of anopheletes Rossii and no malaria, on the other hand, in the Duars (a line of sub Himalayan valleys in north east Bengal) there were a relatively small number of anopheletes fluviatilis (of which, however, 6 25 per cent. were found to be infected with sporozoites, and a large amount of malaria. In many parts of India the seasonal variation in the amount of malaria is very marked especially in the north, where the climatic conditions undergo great changes Thus at Mian Mir in the Punjab the malaria carrying species of anopheles (anopheles culicifacies) is rare until the beginning of June, from July until the end of October the anopheletes increase very rapidly, during November they gradually decrease, and by the middle of December they have completely disappeared, not to be seen again until May Correspondingly, the "endemic index" in the Mian Mir syce lines was 56 per cent in October and 15 per cent in December

Captain James disapproves of the routine treatment of "fever" by the immediate administration of quinine He believes that if the case is really one of malaria to withhold quinine for a few days (in the absence of parasites from the peripheral circulation) will not endanger the patient in any way and if the case is not one of malaria the administration of quinine in doses suitable for a case of that disease is certainly harmful In conclusion, Captain James says that complete protection from malaria may be insured by any individual who is willing to take the trouble to pay scrupulous attention to the use of a good mosquito curtain at night and to protect himself from being bitten during the evening hours If these precautions are taken it is quite unnecessary to use quinine as a prophylactic. He had visited the most malarious parts of India without having a day's fever merely by using the mosquito-net and wearing high boots or putties in the evening By means of the same precautions, also and without taking any quinine Dr Stephens had previously passed two years in the most malarious parts of Africa without a single attack of malaria.

ROYAL COLLEGE OF PHYSICIANS OF LONDON

AN ordinary Comitia was held on Jan. 29th, Sir WILLIAM SELBY CHURCH, Bart., K C B, the President, being in the chair

The following gentlemen having passed the required examination were elected Members of the College Arthur Herbert Hayes, L R C P Lond, Goldwin William Howland, B A, M B Toronto, L R C P Lond, Frederick William Price, M B Edin, Henry Edmund Symes Thompson M A Cantab, L R C P Lond, George Lestock Thornton, M A Cantab, L R C P Lond, John Abernethy Willett, M B Oxon, L R C P Lond, and Herbert Williamson, M A, M B Cantab, L R C P Lond

Licences were granted to 94 gentlemen who had passed the necessary examinations

Diplomas in Public Health were granted jointly with the Royal College of Surgeons of England to the following gentlemen Bertram Leeds Thomas Barnett, M B, B C Cantab, L.R.C P Lond, M R C S Eng, Herbert James Barratt, L.R.C P Lond, M R C S Eng, John Bell, L R.C P Lond, M R.C S Eng, James Bennett, L R C P Lond, M R C S. Eng, Edward Collins Bousfield, L.R.C P Lond, M R.C S Eng, Edwin Harold Brown, M D Brux, M R.C P Lond, L.R.C S Edin., Richard Foster Clark, L.R C P Lond, M R.C S Eng, Alexander Gordon Davidson, M D, C M Edin, Arthur Briggs Dunne, M.B, B C Cantab, L R C P Lond M.R.C S Eng, L.S A., Ernest Gardiner Hill, L R C P Lond, M R C S Eng, Gwilym Prosser Wozencroft James, L R.C P Lond, M R.C.S Eng, William Charnett Lodwidge, L R C P Lond, M R C S Eng, Thomas Stratford Logan, L R C P & S Edin, F F P S Glasg, [illegible] Milburn, L R C P Lond, M R C S Eng, David James Morgan, M B, B C Cantab, L S A, William Murray, M B Ch B Edin, John Moir Petrie M B Ch B Aberd., and William John Shannon, M B, B Ch R U I

The PRESIDENT announced that he had nominated Dr. E F Trevelyan (Leeds) as Bradshaw Lecturer for 1903 and that the Council had nominated Dr William Williams (Cardiff) as Milroy Lecturer for 1904

The PRESIDENT also announced that the Gilbert Blane medals had been awarded to the following officers Christopher Louis White Bunton, Surgeon R N H.M.S. *Forte*, and John Falconer Hall Staff Surgeon R.N. Naval Brigade North China

The following communications were received —1 From the Clerk to the Privy Council, announcing the opening of the International Medical Congress at Madrid on April 23rd next. 2. From the Controller of His Majesty's Stationery Office, stating the terms of an agreement with the College to print and to issue a new edition of the "Nomenclature of Diseases" 3 From the Board of Trade Marine Department, in reply to the College, stating that a translation was being prepared of the report of the Norwegian Commission on Beri beri.

The following Fellows were elected Councillors —Dr D B Lees, Dr J A. Ormerod, Sir Isambard Owen, Dr Percy Kidd, and Dr T Stevenson. Dr Theodore Williams was reappointed a representative of the College on the Court of Governors of the University of Birmingham

The following motion was proposed by the Second Censor (Dr G VIVIAN POORE) and seconded by Dr J K FOWLER —

> That the President be requested to nominate a small committee to consider and report to the College as to whether or not any change be desirable in the date and arrangements for the annual Harveian festival.

The motion was carried and the PRESIDENT nominated the following Fellows as members of the committee The Treasurer (Sir Dyce Duckworth), Dr Poore, Dr Fowler, Dr T T Whipham, Dr F W Pavy, and the President.

A report was received from the representative of the College (Dr Norman Moore) in the General Medical Council on the proceedings of the Council affecting the College at the November session

The quarterly report of the College Finance Committee was received and adopted

A report was received from the committee of management dated Dec. 29th, 1902 The following recommendations were embodied in the report —

> 1 That the Rotunda Hospital Dublin be recognised as a place of instruction in midwifery and gynæcology for the certificates required by Clauses 5 (*h*) 6 (*d*) and 11 par ii. Section I of the Regulations of the Examining Board in England
>
> 2. That the University of Minnesota United States be added to the list of universities at which the curriculum of professional study required for the diplomas of the Royal Colleges may be pursued and whose graduates may be admitted to the Final Examination of the Examining Board in England on production of the required certificates of study

The report was adopted.

After some further business the PRESIDENT dissolved the Comitia.

MEDICINE AND THE LAW

The Peasenhall Case

THE man Gardiner, twice tried without result for the murder of Rose Harsent at Peasenhall on June 1st, 1902, has been set at liberty, and no one has ventured to express disapproval of the decision of the Attorney-General authorising the entry of a *nolle prosequi* against him. The two abortive trials which have taken place, each resulting in the disagreement of the jury, have called attention to the undesirable state of affairs which at times arises owing to the law requiring a unanimous verdict in order that a prisoner may be convicted. This, however, is not the only cause which has awakened the sympathy with Gardiner that has been expressed since his second trial. There appears to be no doubt that a very considerable majority of the jury who tried him were in favour of a conviction, so that he at least cannot complain of the fact that in England the verdict of ority, however large, is not sufficient. It was, how- ealised by the public after the second jury had dis- l that the crime for which he was indicted, admittedly a murder committed by somebody, had taken place in 1902, that Gardiner had been tried for the first in November and again in January, 1903 and that was to be once more sent before a Suffolk jury uld have to lie in prison for more than a year before timate decision of his fate. Writing of this case in LANCET after the first trial[1] we commented upon the is hardship involved in the long interval that would before the second hearing if it was to take place at unty assizes as then arranged. The necessity for this estioned and in the light of what has since occurred rdship appears to be even greater, although no doubt, her course than that actually pursued would have been ovation. It is clearly not right that the State should it is avoidable, increase the punishment of a criminal lict an undeserved penalty upon an innocent person lding prolonged mental torture to the anxiety and s inseparable from an accusation of serious crime. cuteness of the mental distress caused to the prisoner rial that lasts for several days and by the expectation while he lies in gaol, cannot be precisely gauged. It vary in degree according to the temperament of the n subjected to it and other circumstances, but what- the temperament may be, all will consider that the hening of the period of suspense must increase the upon the mind undergoing it and that where the life e prisoner is at issue the strain must in all cases be very . In some cases it may reach, or almost reach, the point epriving the prisoner of reason altogether It should be remembered, apart from the question of inflict- unnecessary pain, mental or otherwise, that accused ns, whether they can pay for advocacy or not, have to nd largely upon themselves for the guidance of their ice and that a man, however broken down by anxiety waiting he may be, may nowadays practically have no e but to face in the witness-box a jury eager to judge of uilt or innocence by his appearance and demeanour as as by the readiness and clearness of his replies to ination and cross-examination

is last innovation in the criminal procedure of the try made by the admission of the accused, or the and or wife of the accused, to give evidence is aps more calculated than any that preceded it to intro- a doubt into the minds of one or two jurymen which not affect the judgment of their fellows, so that what happened in the case of Gardiner may at any time occur n while the interval between his two trials is the usual rval that occurs between country assizes. In London, ever the Central Criminal Court sits practically every th and there is special provision made by statute for removal to it of cases otherwise out of its jurisdiction re it appears expedient to the ends of justice that should be so removed. The removal of a trial in ing the evidence of a number of witnesses to London the imposing of it upon a London jury is not a light ter, but it is not unheard of, and few would complain in e exceptional cases in which the object was to relieve a w-creature from needless suffering The recent case of . Penruddocke, transferred to the Central Criminal Court account of the alleged feeling against the accused in tshire, affords an instance of a trial transferred in un- al circumstances of a different kind from those which ounded the Peasenhall case, but we have not heard that nesses or jury expressed any dissatisfaction at the course en. At the same time we are not aware that delay alone ever been made the cause of such removal, although many ges and others have called attention to the long time ing which prisoners are often kept awaiting their trial. atever course, however, might have been taken with ard to Gardiner his case has shown that in this country ay may occur before the acquittal or condemnation of an used person which English laymen, at all events, have ally only associated with foreign courts of justice. It also shown that public opinion and public sympathy are ongly opposed to such delay, apart from any views that y be held with regard to the prisoner's guilt or innocence.

Flannelette and Fire

Two inquests held on the same day recently by Mr ontbeck showed that both the deaths under consideration were due to the wearing of flannelette underclothing which had caught fire. In the one case an adult, a woman, aged 60 years, was the sufferer She died in St George's Hospital. In the other the victim was a small boy aged three years and nine months, who was wearing flannelette and in the absence of his mother set himself on fire by playing with matches. He died in King's College Hospital. THE LANCET has often called attention to the inflammability of flannelette and so have the lay newspapers, chiefly in reporting deaths due to it, but whether such warnings as these reach the ears of the persons who most need them may be doubted. It might do some good if the sellers of flannelette, or of garments made of it, were compelled to deliver with each portion or article sold a printed warning as to its dangerous peculiarity

The Drink Question.

Mr J T Bottle, a justice of the peace at Great Yarmouth, has contributed an interesting letter to the *Times* upon the drink question Mr Bottle does not share the views of the Home Secretary as to the impossibility of judges and magistrates keeping records for the guidance of those interested in the public health as to the number of convictions taking place before them in which the offence is traceable to drink. Mr Bottle has himself kept a record of such convictions where he himself has sat as a magistrate, and he considers that in the last 12 years 60 per cent. of these have been due, directly or indirectly, to drink. In his letter Mr Bottle calls attention to the power that drink sellers have to diminish the evils of drunkenness by exercising care in carrying on their trade, and he illustrates this from recent experience at Great Yarmouth, a town of which he says, "The number of licensed houses is 306 with a population of 51,000 or 1 to 167, whilst the proportion of on licences is 1 to 189, a more ominous record probably than that of any other considerable town in England."

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH

A QUARTERLY meeting of the Royal College of Physicians of Edinburgh was held on Feb 3rd, SIR THOMAS R. FRASER, Vice President, being in the chair

David James Galloway, M.D, M.R C P Edin., Singapore, was admitted by ballot to the Fellowship of the College.

The REGISTRAR reported that since the last quarterly meeting 37 persons had obtained the Licence of the College by examination

The Parkin prize, which is in the gift of the College, was awarded after competition to Charles James Lewis, M.D, F R C P Edin The subject of the essay on the present occasion was, in terms of the deed of bequest 'On the Curative Effects of Carbonic Acid Gas or other Forms of Carbon in Cholera, for Different Forms of Fever and other Diseases.

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN 76 of the largest English towns 8880 births and 5229 deaths were registered during the week ending Jan. 31st. The annual rate of mortality in these towns, which had been 18 5 17 5, and 20 1 per 1000 in the three preceding weeks declined again last week to 18 1 per 1000 In London the death rate was 17 7 per 1000, while it averaged 18 2 in the 75 other large towns. The lowest death rates in these towns were 7 6 in West Ham, 8 2 in Handsworth, 9 2 in Devonport, 10 1 in Burton-on-Trent, 10 8 in Wolverhampton, 11 5 in Barrow in Furness, 11 6 in Wallasey and 12 0 in Swansea, the highest rates were 23 1 in Hanley 23 3 in South Shields, 23 5 in West Bromwich, 23 7 in Norwich, 24 0 in Oldham, 24 6 in Rotherham, 25 1 in Newcastle-on-Tyne, and 26 0 in Wigan The 5229 deaths in these towns last week included 493 which were referred to the principal infectious diseases against 504 450, and 539 in the three preceding weeks, of these 493 deaths 163 resulted from whooping-cough, 105 from measles, 71 from diphtheria, 60 from diarrhœa, 47 from scarlet fever, 34 from 'fever' (principally enteric), and 13 from small pox. No death from any of these diseases was registered last week in Ipswich, Wolverhampton, Handsworth, Wallasey, Bootle, York, or Stockton on Tees, while the highest death rates from these principal infectious diseases were recorded in Croydon, Hanley, Walsall, West Bromwich, King's Norton, Manchester, Oldham, and Newport (Mon.) The greatest proportional mortality from measles occurred in Manchester, Hull, Middlesbrough, South Shields, and Newport (Mon.), from diphtheria in Reading, Hanley, Coventry, and Middlesbrough, and from whooping cough in Croydon Tottenham, Northampton, Bristol, Hanley, King's Norton, Smethwick, Stockport, and Oldham The mortality from scarlet fever from "fever," and from diarrhœa showed no marked excess in any of the large towns. Of the 13 fatal cases of small-pox registered in these towns last week six belonged to Liverpool, three to Leicester, and one each to Walsall, Birmingham, Bury, and Manchester There were seven cases of small pox under treatment in the Metropolitan Asylums hospitals on Saturday, Jan. 31st, against numbers declining from 21 to four on the six preceding Saturdays, six new cases were admitted during last week, against four, two, and 0 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2219, 2125, and 2074 at the end of the three preceding weeks, had further declined to 2019 at the end of last week, 227 new cases were admitted during the week, against 223, 192, and 227 in the three preceding weeks The deaths referred to diseases of the respiratory organs in London, which had been 354, 310, and 411 in the three preceding weeks, declined again last week to 355, but were 59 below the corrected average number Influenza was returned as the primary cause of 25 deaths in London last week, against 39 34, and 43 in the three preceding weeks The causes of 59, or 1 1 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner All the causes of death were duly certified in Bristol, Leicester, Salford Leeds, Newcastle-on Tyne, and 42 other smaller towns, the largest proportions of uncertified deaths were registered in Birmingham St. Helens, Warrington, Sheffield, Hull, and South Shields.

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[1] THE LANCET Nov 29th 1902, pp 1474 1475

HEALTH OF SCOTCH TOWNS

The annual rate of mortality in eight of the principal Scotch towns, which had risen from 18 5 to 24 6 per 1000 in the eight preceding weeks declined again to 21 3 per 1000 during the week ending Jan. 31st, but was 3 2 per 1000 in excess of the mean rate during the same period in the 76 large English towns The rates in the eight Scotch towns ranged from 12 4 in Perth and 17 8 in Edinburgh to 23 0 in Aberdeen and 24 8 in Greenock The 696 deaths in these towns included 32 which were referred to whooping cough, 20 to measles, 13 to diarrhœa, seven to diphtheria five to "fever," and four to scarlet fever, but not one to small pox. In all 81 deaths resulted from these principal infectious diseases last week, against 78, 76, and 102 in the three preceding weeks. These 81 deaths were equal to an annual rate of 2 5 per 1000 which was 0 8 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping cough, which had been 24, 32, and 52 in the three preceding weeks, declined again last week to 32, of which 27 occurred in Glasgow and four in Edinburgh The deaths from measles, which had been 15, 12, and 11 in the three preceding weeks, rose again to 20 last week, and included 14 in Aberdeen, two in Glasgow, two in Edinburgh, and two in Leith. The fatal cases of diarrhœa, which had been 18 and 21 in the two preceding weeks, declined last week to 13, of which six were registered in Glasgow, three in Aberdeen, and two in Dundee. The deaths from diphtheria, which had declined from 13 to five in the four preceding weeks, rose again to seven last week, and included four in Glasgow The fatal cases of "fever," which had been three and eight in the two preceding weeks, declined again last week to five, of which three occurred in Glasgow where two of the four deaths from scarlet fever also were registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 152 174, and 183 in the three preceding weeks, declined again last week to 173, were but 32 in excess of the number in the corresponding period of last year The causes of 30 or more than 4 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN

The death rate in Dublin, which had been 26 8, 30 0, and 28 1 per 1000 in the three preceding weeks, further declined to 24 8 per 1000 during the week ending Jan. 31st. During the past four weeks the death rate has averaged 27 4 per 1000, the rates during the same period being 18 7 in London and 19 1 in Edinburgh. The 180 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 24 from the number in the preceding week, and included 10 which were referred to the principal infectious diseases, against 14 16, and 10 in the three preceding weeks, of these six resulted from diarrhœa, three from scarlet fever, and one from diphtheria, but not one from small pox, measles, whooping cough, or "fever" These 10 deaths were equal to an annual rate of 1 4 per 1000, the death rates last week from the principal infectious diseases being 1 7 in London and 1 4 in Edinburgh The six fatal cases of diarrhœa showed an excess of five over the number in the preceding week, the deaths from scarlet fever which had been one and two in the two preceding weeks, further rose last week to three, while the fatal cases of diphtheria, which had been four and three in the two preceding weeks, further declined to one last week. The 180 deaths in Dublin last week included 27 of children under one year of age and 50 of persons aged 60 years and upwards, these numbers were respectively four and 13 below those recorded in the preceding week Five inquest cases and three deaths from violence were registered, and 65 or more than a third of the deaths occurred in public institutions The causes of 12, or nearly 7 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified —Fleet Surgeons E H. Saunders to Deptford Victualling Yard, and F J Lilly to the *Vivid*, for Keyham Naval Barracks. Dated Feb 2nd, 1903

ROYAL ARMY MEDICAL CORPS.

Captain A. W Hooper, D S O, joins at Aldershot and is posted to the Cambridge Hospital for duty Captain J R. McMunn joins at Aldershot and is posted to the 3rd Station Hospital for duty Captain P Evans (attached Medical Officer with the Grenadier Guards) proceeds to Aldershot for duty

The undermentioned gentlemen to be Lieutenants on probation (dated Jan 31st 1903) —John Grenville Bell, Maurice Guy Winder, Frederick Walter Witney Dawson, John Martin Maynard Crawford, Robert Maurice Ranking, Thomas Seymour Coates, Albert Edward Bathurst Wood, Roland Harley Bridges, Joseph Gatt James Charles Gordon Carmichael Francis O Lambert, James Bernard Meldon, Reginald Cameron Wilmot, Charles Walter Holden, James Ainsworth William Webster, Charles Bramhall, Thomas Ernest Harty, Henry Hubert Swanzy, Kenelym Cobhoun Edwards, John Hay Duguid, Harry Beatty Kelly, George Herbert James Brown, Edward Mansergh Pennefather, Benjamin Howard Vella Dunbar, John Evan Skey, Henry Thompson Stack, Donald Gordon Carmichael, David Ahern, Burnet Graham Patch, and Geoffrey Wallace Grainger Hughes

The undermentioned Lieutenants on probation are seconded under the provisions of Article 349 of the Royal Warrant March 24th 1902 (dated Jan 31st, 1903) —Frederick Walter Whitney Dawson, Geoffrey Wallace Grainger Hughes, and Francis O Lambert.

IMPERIAL YEOMANRY

The City of London (Rough Riders) George Fernandex Mitchell Clarke to be Surgeon Lieutenant. Dated Jan. 20th, 1903.

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers) 1st Lanarkshire Surgeon Lieutenant T Kay to be Surgeon Captain Dated Feb 4th, 1903. *Rifle* 1st Lanarkshire Surgeon Captain F V Adams to be Surgeon Major Dated Feb 4th, 1903. 4th (Nottinghamshire) Volunteer Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiment) Frederick William Johnson to be Surgeon Lieutenant Dated Feb 4th, 1903.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS)

The London Companies Lieutenant A Granville to be Captain. Dated Sept. 20th, 1902.

MEDICAL STAFF COLLEGE.

The Secretary of State for War has approved of the appointment of the following physicians or surgeons as clinical teachers to the Medical Staff College —

Medicine Dr S J Sharkey (St Thomas's Hospital) and Dr. W Hale White (Guy's Hospital)

Surgery Mr A. Pearce Gould (Middlesex Hospital) and Mr Stanley Boyd (Charing Cross Hospital)

Dental Surgery Mr J H. Badcock (Guy's Hospital)

Dermatology Dr T Colcott Fox (Westminster Hospital)

Laryngology Mr F J Steward (Guy's Hospital)

Midwifery and Gynæcology Dr W R. Dakin (St. George's Hospital)

Ophthalmology Mr E Treacher Collins (Royal London Ophthalmic Hospital)

Otology Mr A H. Cheatle (King's College Hospital)

Pædiatrics Dr A. E Garrod (Hospital for Sick Children, Great Ormond street)

Psychological Medicine Dr M. Craig (Bethlem Royal Hospital)

Major W B Leishman, R.A.M.C has been appointed Professor of Pathology, vice Dr A. E Wright, who has resigned the appointment. Dated Feb 1st, 1903.

ROYAL VICTORIA HOSPITAL, NETLEY

The *Army and Navy Gazette* of Jan. 31st says "At a recent inspection of the Royal Victoria Hospital, Netley, it was found that the annexes were in a very unsatisfactory condition as to sanitation. Owing to their size and shape it has been found impossible to arrange them internally according to the most recently approved designs and requirements without pulling down and rebuilding The cost of doing this is considered to be prohibitive, owing to the large amount which would have to be spent and the great inconvenience which would be incurred. It has therefore been decided to commence on an early date a complete system of changes so as to render the building better fitted for the purposes for which it is used, and votes will be taken in next year's estimate to enable the necessary works to be proceeded with."

THE TRAINING OF SICK BERTH STEWARDS.

The Royal Naval Hospital, Stonehouse, is in future to be recognised as a depôt for probationers to be trained as sick berth stewards, owing to the authorities at Haslar being unable to train all the probationers who present themselves there. The permanent complement of probationers at the Royal Naval Hospital will be 25 and 19 have already entered. Their training is to be supervised by an additional surgeon (Surgeon G Ley, R.N) who will be assisted by an additional ward officer The culinary instruction will be under the direction of the lady cook at Haslar Hospital who will pay periodical visits of inspection. In addition the men are to undergo a daily course of physical drill and gymnastics The period of instruction will extend to four months, at the end of which time qualified probationers will receive their appointments to different hospitals and ships

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LITERARY INTELLIGENCE —The following new books will shortly be issued by Messrs J and A. Churchill —The seventh edition of Sir William Moore's 'Manual of Family Medicine and Hygiene for India,' published under the authority of the Government of India. The new edition has been thoroughly revised by Major J H Tull Walsh, I M.S. Vol I. of 'A System of Clinical Medicine for Practitioners and Students," giving an account of the diagnosis prognosis, and treatment of disease, by Dr T D Savill. The second edition of Corbin and Stewart's Handbook of Physics and Chemistry" adapted to the requirements of the first examination of the Conjoint Board. A new work on the Microscopical Examination of Foods and Drugs, by H. G Greenish, Professor of Pharmaceutics to the Pharmaceutical Society Vol. IV (Electric Lighting and Photometry) of Groves and Thorp's Chemical Technology The writers of this volume are Mr A G Cooke and Mr W J Dibdin

Correspondence.

"Audi alteram partem."

THE RISE OF BLOOD PRESSURE IN LATER LIFE

To the Editors of THE LANCET

SIRS,—The interesting letters of Sir R Douglas Powell and Professor T Clifford Allbutt in THE LANCET of Jan. 24th (p 265) and 31st (p. 329) respectively, on the rise of blood pressure late in life tempt me to endeavour to supplemen the imperfect remarks which I made when the paper on thi subject was read

In my judgment Professor Allbutt's use of the term increased viscosity of the blood, unless it is intended to be merely figurative, is misleading and it might send young investigators upon a vain research That there is increased resistance to the onward movement of the blood is certain and I have long held that this resistance has its primary seat in the capillaries which would practically be implied i viscosity were the cause but the cause need not be viscosity in a physical sense Attraction between the wall of a capillary tube and contained fluid has an importan influence on the flow of the fluid along it Water rises against gravity in a capillary glass tube, and apparently stil more readily along the stalks of flowers in close contact, as is often seen by its dripping over the edge of a vase by no means full. Mercury does not rise in a glass tube to the level of the mercury outside and presents a convex instead of a concave surface at the top or the column. Water again, would refuse to enter the same tube in which it had previously risen, except under pressure, if the interior of the tube had been greased

It is obvious that the rate of movement of the blood in the capillaries must be affected by the relation between the blood and the capillary wall. The living capillaries are extremely sensitive to the presence of certain substances, organic or saline, and when these are added in minute amount to fluid passing through them the flow immediately diminishes (the vaso-motor nerves having been divided) as was shown many years ago by Dr Sidney Ringer I have long contended with Sir Douglas Powell that products of imperfect metabolism or imperfect elimination, or ordinary products of metabolism may play the part of Ringer's digitaline or lime salts in bringing about capillary obstruction. The clinica observation that obstruction in the peripheral circulation with the consequent increased blood pressure in the arteries can be modified by eliminants is a matter of every-day experience.

Arteriole contraction under nervous stimulation can no doubt increase the obstruction to the blood current immediately and very greatly and, whether partial or general, i can so far raise the blood pressure as to give rise to increased secretion of urine but I cannot accept it as the cause or the persistent high pressure which is the subject of the presen discussion.

Professor Allbutt's object in bringing up for consideration the rise of blood pressure late in life is to call attention to the fact that the condition of the vessels heart, and kidneys found after death in the subjects of this affection is the final result of a long process. The structural changes leading up to this arterio-sclerosis, as it has come to be called are, in a very large proportion of the cases undoubtedly initiated by obstruction in the arterioles and capillaries, and were traced years ago by Sir George Johnson Clinically, the course of the arterial thickening and degeneration can be followed sometimes from youth, often from early manhood, practically always from middle age if i is to be found at all late in life, by the artery being persistently full between the beats of the pulse so that it can be rolled under the finger, by the gradua change which can be recognised in the walls of the vessel when the blood is pressed out of them, and by their increasing tortuosity At first small, from defensive contraction of the muscular coats they gradually yield to the distending influence of the fluid pressure within them and we have ultimately the large, tortuous, inelastic, thick walled, leathery tube of advanced sclerosis. The process cannot only be recognised, it can be modified and checked at any time before advanced degeneration has taken place by suitable diet and eliminants.

It may be added that high blood pressure and the cardio vascular changes incident to it are not necessary effects of advancing years. Many persons at the age of 70 or 80 have arteries as soft and elastic as those of a child. Nor are these changes the only ones met with in old age The artery at the wrist may be thin and compressible when calcareous points, or plates or rings can be felt in its walls, the blood pressure is not high and never has been Again, there may be the special changes in large and small arteries due to syphilis, an account of which cannot now be given

I am, Sirs, yours faithfully,
Brook street, Feb 3rd 1903 W H BROADBENT

To the Editors of THE LANCET

SIRS,—I venture to send you a line on this subject, partly because it is one to which I have contributed somewhat, but mainly because it is of supreme importance that we should have perfectly clear ideas of circulatory phenomena Professor T Clifford Allbutt was good enough to send me a proof copy of the interesting paper which he read recently before the Royal Medical and Chirurgical Society, and were it not for the correspondence which has already appeared in your pages I would not have thought it necessary to crave space for any remarks from me. The correspondence leads me, however, to ask Professor Allbutt if he would kindly make his position more clear to an ordinary mind such as my own Professor Allbutt is such a master at literary garnishing that I am not quite sure I have succeeded in clearly determining the precise character of the viands he has displayed so attractively The particular point regarding which I at present seek enlightenment is as to the precise place he gives to the condition of spasm contraction of arteries, for which I have proposed the term "hypertonus"

In a paper which appeared in THE LANCET in 1901[1] I drew attention to the part taken by this "hypertonus" in determining arterio sclerosis and I so fully realise how important it is that the physician should understand what Professor Allbutt calls "the pathology of processes" that I wish to restate what I indicated then—namely, that certain conditions of blood lead to tightening up and thickening of vessel walls which is often mistaken for true structural alteration, that the recurrence of this "hypertonus" or spasm contraction leads ultimately to structural changes in the vessels, and that along with this "hypertonus" and subsequent structural change there may, or there may not, be raised blood pressure.

The conditions of the blood which lead to this "hypertonus" are, I think, sufficiently indicated by the word *impurity* This is, if I understand aright, Sir R Douglas Powell's position. Does Professor Allbutt accept this reaction of vessels? Or does he contend for some physical alteration in the blood which he terms *viscosity* and which, by impeding its flow, leads to heightened pressure, but to no active contractile reaction on the part of the vessel walls? Whatever the experimentalists may say, clinical observation surely puts it beyond doubt that impurity of the blood causes this contraction of vessels which in the vigorous is usually accompanied by heightened pressure That, however, all tightening up of vessels should be spoken of, or thought of, as heightened pressure or raised *tension* is a fundamental error which we cannot too strenuously seek to correct. In seeking to know "the pathology of processes" it has appeared to me that this vessel response to impure blood was the first step When it is accompanied by decidedly high pressure the thoughtful practitioner recognises it and hence the diet restrictions and the blue pill Without the heightened pressure the condition is not usually recognised, and yet, if my contention be correct, herein lies the beginning of a process the recognition of which would prevent or delay those static manifestations which Professor Allbutt so picturesquely indicates

I am, Sirs, yours faithfully
Edinburgh Jan 31st 1903 WM RUSSELL

THE ANATOMY OF GLENARD'S DISEASE

To the Editors of THE LANCET

SIRS,—I have to thank you for your kindness in affording me an opportunity of perusing Dr Arthur Keith's paper on the Anatomy of Glénard's Disease, which you were good enough to forward to me, and your annotation on which called forth the comment contained in my former letter I must, however, add that my acquaintance with the original document has in no way modified the opinions expressed in my letter regarding the contents of the annotation in question or those contained in that which I afterwards forwarded to you on the subject of the editorial comment which you appended to my published letter This latter comment, indeed, rather surprised me and—emphatically—calls for some reply, on the two fold ground that it misrepresents me and misstates some very important facts in physiological anatomy The critical rejoinder in question consists of three sentences The first is "Dr Knott is criticising a paper which he has not read" I beg leave to state that Dr Knott was doing nothing of the kind he was criticising an annotation on a page of THE LANCET which lay open before him. This fact must be very obvious to everyone who has read my letter The second sentence runs as follows "His remarks as to the action of the diaphragm are mostly academically correct, but had he read the paper he would have gathered that several of his premisses are probably incorrect, particularly that which assumes the relative immobility of the central tendon" I do not propose to ask my critic to offer a scientific distinction between the conditions of being "*academically*" *correct* and *absolutely correct*, or to explain how a statement can be *academically correct* of which the logical premisses are "*probably incorrect*", or how far the "theory of *probabilities*" can be utilised to influence opinion regarding the hard facts of physiological anatomy It is my province to deal with the latter, and the only question in this domain referred to in the sentence which I have just quoted is that of "the relative immobility of the central tendon" The *arguments* of the quotation I take the liberty of relegating to the department of transcendental metaphysics, to which they appropriately belong With regard to the movements of the cordiform tendon during inspiratory expansion of the chest, I had been already aware that one of the mysteries revealed by the x ray illumination was the considerable downward displacement of this fibrous shelf during inspiration I have seen the phenomenon very skilfully and effectively displayed in the course of a brilliant demonstration by an x ray specialist. But I saw at the same time—what the accomplished physicist in question did not appear to have seen—that the descent in question was rather apparent than real, rather relative than absolute, for the *appearance* was produced almost wholly by the *ascent of the ribs and sternum*, which had, of course, the same effect on the objective field thus offered to the observer in an antero-posterior view of a translucent thorax. To my critic, and to all readers who are specially interested in the study of the action of the diaphragm, I would suggest the following experiment There will be no danger, I think, of its being brought within the jurisdiction of the existing law against "vivisection" or even of those for the "prevention of cruelty to children" Let him *purchase* the friendly confidence of a lively "street Arab" of eight or nine, undress him, and place him standing on a table so that the denuded epigastric region will be (approximately) on a level with the visual organs of the observer Let him then induce his youthful friend—under the appetising influence of a further present—to proceed to swallow, with a minimum expenditure of valuable time, three consecutive mouthfuls of dry oatmeal The result will be a perfect display of the aberrant physiological phenomenon familiarly known as "hiccup" He will then have the best possible opportunity of seeing that with each *unmodified* contraction of the diaphragm the six lower ribs are drawn *upwards* and *inwards*, the degrees of displacement increasing from above downwards. This form of displacement is a mechanical necessity which could be foretold by any physiological anatomist, as the translation of every part of the disturbed chest-wall is towards the adjacent part of the circumference of the cordiform tendon of the diaphragm It will also be seen how little real expansion of the chest takes place in this action. Indeed, without any such *objective* experiment, everybody's *subjective* recollections of the operation of *hiccuping* will have informed him how little tendency it produces to *inspiration* of the surrounding air—even if the glottis had been left wide open. The fact that the ribs are so extensively displaced in this movement is, I venture to suggest, an unanswerable reply to the misstatement that the cordiform tendon undergoes much downward change of position *Both ends* of the muscular fibres cannot be *very much displaced* at the same time.

The third, and last, sentence of your criticism reads as follows "As to the assertion that the lower ribs are drawn downwards and backwards by the simultaneous contraction of the diaphragm, intercostals, and serratus posticus inferior it is sufficient to remark that clinicians who have opportunities of watching the isolated actions of muscles in disease are all agreed that the diaphragm *elevates* the lower ribs' The disingenuousness of the attempted argumentation of this sentence can hardly be surpassed, even in the records of legal, or theological, sophistication. Whose I wonder is the *assertion* that the lower ribs are drawn downwards and backwards by the simultaneous contraction of the diaphragm, intercostals, and serratus posticus inferior'? Most assuredly it is not mine, as every reader of my letter can see. I have made the incontrovertible statement that *such is the action of the serratus posticus inferior acting singly* By so acting on the ribs it corrects the influence of the contracting diaphragm which, if left unopposed, would have the effect of *narrowing* the basal section of the thorax, where most expansion is attainable" (I quote my own words) It is of course, superfluous to point out to those who have perused, and understood, my description of the action of the diaphragm that the testimony derived from 'clinicians who have opportunities of watching the isolated actions of muscles in disease' was instruction wasted—so far as the present writer is concerned as well as being conspicuously imperfect.

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[1] THE LANCET June 1st 1901 p 1519

The contents of Dr Keith's original paper call for comment under many other heads, but I will select only a few On the first page, as the author discusses 'the causes of the variability' of the level of the diaphragm after death, we are told that "the elasticity of the lungs draws the diaphragm up as far as it will yield. The high or low position of the diaphragm depends very little on the distension of the abdomen or of the bowel." Regarding these statements I must say that in the present state of physical and anatomical knowledge they read rather "funny' It is unnecessary of course, to point out that the lungs, or their elasticity have no *direct* connexion with the diaphragm. And every tyro in physiology knows, or surely should know that the expansion of the lungs during inspiration is due to the atmospheric pressure—the regulation 15 lb (14·7) to the square inch—on the *mucous* surfaces when the active contraction of the muscles of inspiration has expanded the chest, by bearing a certain proportion of the same pressure from off the *cutaneous* (external) surface. The external weight lifted (or pushed) off the surface of the body is represented by that used by the internal limb of the gaseous balance in distension of the tubes and vesicles as the pulmonary pleura follows the movements of the walls of the expanding chest. And when the inspiratory muscles have ceased to act the chest walls follow the contracting elastic tissue of the lung till equilibrium or balance between the external and internal pressures is again reached. This atmospheric pressure acts with obvious directness on the circumferential chest-wall in squeezing it—in corset fashion—back to its original position, but it appears to be sometimes forgotten that the *atmospheric pressure is* also *the sole efficient agent in pushing up the diaphragm* during ordinary expiration, and more especially still in that which constitutes the last obvious movement of life.

On page 2 the reader is told that he 'must look upon the diaphragm as a fan shaped digastric muscle.' This appears to be Dr Keith's own special discovery "The central tendon corresponds to the intermediate tendon of such a muscle as the digastric or rectus abdominis" To this physico-metaphysical statement I take leave to take special exception. The preposterous statement that the diaphragm is a digastric muscle cannot for a moment be entertained by any skilled physiological anatomist. It would be less intolerable, indeed to speak of it as a myno-gastric muscle, but even such description would be very unsatisfactory It is rather difficult to comprehend how anyone acquainted with the diaphragm can hold the view that the action of each individual portion is to draw its circumferential attachment towards the spine. Everybody who knows its structure knows that the lateral fibres, on either side, pass from the ribs towards the central tendon and that the only possible effect of their contraction—in addition to reducing the upward convexity—is to draw these yielding bones towards that tendon, that is to say upwards and inwards The fibres attached to the *central leaflet* of course, have necessarily the collective action of drawing the xiphoid cartilage and adjacent cartilages of the lower ribs towards the spine. But this movement may almost be regarded as incidental. The modern geometer "squares the circle' by treating every *infinitely small* segment of the circumference as a straight line. By this—"*quam proxima*" correct—assumption he resolves the space into a series of infinitely *narrow parallel* rectangles. The calculation is then easy But his rectangles must be parallel. The diaphragm undoubtedly may, for fanciful purposes, be looked upon as a structure composed of an infinite number of infinitely small rectangular digastric muscles The rectangular bundles are, however not parallel, and cannot possibly be made so, and, accordingly, the mathematical methods of summation of series" cannot be made to apply

I more especially wonder how it is that in this unusually original thesis Dr Keith has ignored the incontrovertible fact that if the diaphragm acted according to his view—by drawing all its distal attachments towards the spine—it would very seriously limit the space behind the (almost vertical) posterior fibres of the muscle, which is precisely the region where under existing arrangements, the lungs undergo the greatest proportion of expansion. A glance at Fig 1 of his own paper will show this I must also point out the fact that the greater firmness of the chest-wall in *this region renders the wearing of corsets* more tolerable than could otherwise be the case

In the discussion of the "action on the ribs" we are told in regard to that on the abdominal ends of the six lower ribs "this of the three directions in which it expands (? expends) the force of each contraction is the most difficult to understand.' And the writer proceeds to ask, "How is it that the ends of those diaphragmatic ribs *do not* move in towards the origin of the diaphragm from the lumbar region of the spine?" In this connexion I beg leave to state that both difficulties are wholly of Dr Keith's own creation. If the diaphragm were, as he states, a digastric muscle, the phenomenon would be simply impossible to understand, even *after* the *most* careful perusal of his preposterous explanation But as the diaphragm is *not* a digastric muscle endowed with only antero-posterior activity, the difficulty only exists in his own imagination

There are *other* points in this very original paper of Dr Keith's which may very easily be *made to* yield to criticism, but it is probably better to add nothing further to an already too lengthy communication.

I am Sirs, yours faithfully

JOHN KNOTT, M D Dub

THE RAPID TREATMENT OF CONGENITAL HIP-MISPLACEMENT

To the Editors of THE LANCET

SIRS,—The profession having now had time to cool down from the excitement caused by the demonstrations of Professor Lorenz—a little study and calm reflection will show it that miracles must not be expected. Already a long list of failures and very serious accidents have been recorded, and as the public, which is *ignorant of such matters*, will be clamouring for marvellous cures it is necessary that practitioners should be on their guard when advising, and though an effort has been made by medical and other papers to caution the public that complete cures are not to be expected and that the plan is not free from considerable risk it is unlikely that this will reach the very extensive circle to which the operation is known. Hence much may rest with the advice medical men give, though the public is prone to take matters into its own hands when such promising results are expected. Should Professor Lorenz ultimately succeed in demonstrating anything approaching a *complete* cure he will be a great benefactor to humanity and I shall try to be the first to congratulate him In the meantime it seems to me that the odds are heavy against forcible reposition as they were against the open cutting methods and for the following reasons The child walks late, usually about the end of the second year and though she falls about the parents think she will grow out of the trouble, so that these cases are often not brought for treatment until the child has walked some time. Hence the head and neck of the femur are more or less deformed, the acetabulum remains very incomplete the ligaments are overstretched, and some of the muscles are shortened and others lengthened. How is it possible to correct all this by any method? It is quite right to try to do our best to remedy the deformity but to run considerable risk in so doing unless we can guarantee something better than by older plans, seems to me to be scarcely justifiable Of course, if one could promise something more permanent than has hitherto been done and more nearly reaching a perfectly anatomical and functional condition then one may run the risks after explaining their possibility to the parents As this cannot be done it is better to adhere to more gradual plans in the interests of the patients and the surgeon.

As most of the soft parts which normally help to keep the bone in place are torn through before reduction, so-called, is accomplished and as the limbs are put up at about a right angle and kept so for many months, where can the pressure of the femoral head to mould and to enlarge the acetabulum come from? And as the gaps in the torn parts are filled and they become elongated it seems to me that a loose joint, very liable to displacement in almost any direction, is made and consequently secondary displacements—supposing a true reduction has been made—are common Seeing that the head of the femur is larger than the acetabulum and of a different shape how can it possibly keep in place? Even by the open cutting plan when the acetabulum has been enlarged and shaped to the head it very frequently becomes displaced on walking unless ankylosis has occurred, and as in this operation it was found to be a fault to cut the muscles, surely when they are torn through the weakening effect must be at least as great. Moreover, in the "splits" position a large part of the femoral head is downward outside the acetabulum and the small part remaining in contact, even if it do so, would need constant pressure on the sole of the foot or through the knee to produce absorption. Why Professor Lorenz prefers patients aged four years for his operation I cannot understand, for walking increases the mischief and the earlier treatment is undertaken the more hope is there for improvement.

I am, Sirs, yours faithfully,

London W H A. REEVES.

A CASE OF HERNIA INTO THE FOSSA DUODENO-JEJUNALIS

To the Editors of THE LANCET

SIRS,—In THE LANCET of Jan. 24th, p 236, is a paper bearing the above title This paper contains the record of a case of internal hernia, with comments upon the anatomical condition of the parts, but it completely ignores all the work that has recently been published upon this subject. The description given is clear and leaves one in no doubt that the condition found was one of left duodenal hernia. The fossa in which this hernia always lies is known as the fossa of Landzest. The fold bounding the orifice of the fossa in front is known as the plica venosa from the fact that it is raised up by the inferior mesenteric vein for which it forms in early life a sort of mesentery There is neither need nor justification for any new term such as that suggested for the subject is already burdened by a florid and exuberant nomenclature. The hernia does *not* occur into the fossa duodeno jejunalis, indeed, it is doubtful whether a hernia has ever occurred into this fossa. The probability is that the hernia is always congenital and the condition of the fossa in which it lies must therefore be studied in the fœtus or the young child When examined thus early it will be found that a hernia into the fossa of Landzest and the fossa duodeno-jejunalis (the inferior duodenal fossa) are quite distinct. A specimen in the museum of St Thomas's Hospital shows the hernia in an earlier stage than any other museum specimen in this country The anatomy and surgery of the duodenal fossæ are fully discussed in the works of Jonnesco and Brösike and in my own work on "Retroperitoneal Hernia."

I am, Sirs yours faithfully,

Jan. 31st 1903 B G A. MOYNIHAN

BRISTOL AND THE NON-VENTILATION OF SEWERS

To the Editors of THE LANCET

SIRS,—The Bristol argument is really based on a double fallacy The first fallacy is that the Bristol sewers are non ventilated and the exposure of this fallacy by your Special Sanitary Commissioner could scarcely be more complete.[1] The second fallacy is that Brighton and Croydon are ventilated towns. This is not true, either in a legal or a sanitary sense. The Bristol position is therefore doubly false and when we consider what the practical outcome of it is, or may be, it is perniciously false.

In regard to the second fallacy your Commissioner touches the real truth when he says "The example of Bristol seems to indicate that the ventilation of sewers has been so badly managed in some towns that Bristol without any management has obtained [health] results which are quite as good if not better" "Badly managed" is perhaps not the most appropriate term to use in the circumstances, for the trouble does not really lie in "the management" but in the means of ventilation employed in the towns misnamed ventilated.

Brighton and Croydon have been singled out as examples of ventilated towns in this discussion, I presume, because they have adopted, to a large extent at least, the high shaft system Now, if the grid system is inadequate much more so is the high shaft system High shafts are altogether a delusion, having not only all the faults of the grid system but in a greater degree and are therefore less efficient as a means of ventilation under all atmospheric conditions. In addition they are most expensive and unsightly and, as in the present case, fraught with public danger in the false conclusions to which they are capable of leading sanitary authorities honestly desiring to do their appointed public duty The true inference, therefore, to be drawn from the fact that the results at Brighton and Croydon are no better than those at Bristol is that the system at Brighton and Croydon requires improvement and not that the Bristol practice should be set up as a model to be copied by other towns

Your Commissioner's article is a most invaluable one, not only within its own limits but in the questions to which it gives rise. For example, how is it that with such a splendid public health service we are continually seeing the public health break down under severe epidemic foul air disease? I am fully convinced that the key to the answer lies in the fact that the advantages of proper sewer ventilation to public health are not yet understood by sanitary authorities Again, how is it that after so much discussion, scientific research, and costly experimentation the sewage disposal problem is to-day in the unsatisfactory condition it is? Again, I am convinced that the key to the answer is to be found in the fact that the solution of the sewage problem should as I have submitted in my evidence before the Royal Commission, begin with the perfect ventilation of the sewers. Your Commissioner, therefore, has rendered a greatly needed service to the public and I trust it will have an immediate and practical outcome, for in a few weeks the bad sewer gas period will be on us again

I am, Sirs, yours faithfully,

W BROWN

Victoria street Westminster S W Jan 20th 1903

WHY IS NOT SMALL-POX SPEEDILY "STAMPED OUT" LIKE OTHER EPIDEMIC DISEASES?

To the Editors of THE LANCET

SIRS,—This question is often asked, yet the answer is very simple The only true check to the spread of variola among dense communities of people is systematic and efficient vaccination of all infants and the revaccination of children at the school age. Unfortunately this disease alone of all others has been made the sport of political schemers and place hunters who are content to sell their birthright—vaccination—for "a mess" of unseemly pottage. Yielding to the ignorant outcry against the protective influences of sterilised lymph our Government has introduced the bogey of "the conscientious objector" As a practical illustration of the advantages of intrusting compulsory powers for vaccination to a central government authority directly concerned with the maintenance of public health and the prevention of epidemic disease I herewith send some details from a letter just received from a clergyman who has permanent charge of a mission station in the island of Barbados. Fortunately the authorities in this and many of our *distant* colonies are not fettered in their action by *the wire pullers* of political parties, so that whatever is really beneficent for the community can be carried out under the advice of the executive medical officers.

The Government of the island, viewing with alarm the rapid spread of small pox among the native population in what may be called a virgin soil, "acted promptly" and "appointed lay vaccinators all over the island." The payment of 6*d* a head to the wage-earning class gave a great impetus to the vaccination crusade, so that in the brief period of four months 100,000 people had been vaccinated and the epidemic brought entirely under control We do well to contrast this result with the efforts of our Local Government Board to parley with the ignorance of the anti vaccination leaguers. The epidemic which has prevailed for over three years and is now spreading rapidly in the Midlands at a very heavy cost to the rates is the direct result of the pusillanimous action of our executive authorities. What can the proletariat say now in opposition to this perfect *method of providing immunity from* the *deadly* effect of small pox epidemics? The educated classes at least have a claim to protection from the ignorant and even criminal neglect of their poorer neighbours and servants. Is it possible that any of the opponents to vaccination are prompted to take a line directly antagonistic to the expert and scientific conclusions of unbiased investigators because by *the decimating effect of uncontrolled epidemic disease* populations and families are thereby kept in check? The *Times*, in its leading article approving of the establishment of the Imperial Vaccination League, says that "small pox has been shown by a large amount of experience to be in great measure preventable by simple and harmless means."

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[1] THE LANCET Jan. 17th 1903, p 202.

The disciples of Jenner who can look back to the time when every infant was brought for vaccination as regularly as for baptism and can show the proportionate immunity from the ravages of small pox *pari passu* with the spread of effective measures for stamping out the epidemic, have a right to claim national protection from such a fatal and disfiguring disease. Union is strength. It is important, therefore, *that our leading* statesmen, employers of labour, and those who have the training *of the* young, should coöperate effectually with the medical men and join the Imperial Vaccination League.

I am, Sirs, yours faithfully,
Jan 31st 1903. FREDERICK CHURCHILL, F R C S

MULTIPLE PREGNANCIES

To the Editors of THE LANCET

SIRS,—You may consider the birth of triplets worth recording as the mother and children have all thriven. The triplets were born at 36, Prospect-street, Plymouth, in February of last year and are now healthy and strong babies, all girls The mother also is quite well and the King's bounty was kindly sent to her on my application to the Privy Purse Office through Sir Dighton Probyn. There were three separate placentæ.

I am, Sirs, yours faithfully,
GEORGE BATE, M.R C S Eng
Plymouth Jan. 23rd, 1903.

THE NATIONAL HEALTH AND ARMY RECRUITING STATISTICS

To the Editors of THE LANCET.

SIRS,—I venture to think that the views expressed in the leading article in THE LANCET of Jan. *31st*, *p*. 315 headed "An Impeachment of the National Health," being a consideration of the points brought forward by Major-General Sir F Maurice in his article in the *Contemporary Review* entitled "National Health a Soldier's Study,' will commend themselves to the majority of army medical officers having practical experience of army recruiting and the subsequent career of the accepted men when placed under service conditions. Neither medical nor army men will doubt the importance of the question raised, whether as viewed *from* the larger aspect of the general health or from the more limited sphere of the recruiting grounds, but the subject itself is not a new one Several years ago Sir T Crawford published a paper based on army statistics in which he deduced that the physique of the nation was deteriorating—an opinion opposed by the *Times* in a leading article, and among minor fry who have also contributed to the subject I may range myself, the conclusions being embodied in two communications to one of the leading journals in India in 1890 and being markedly in accord with those advanced in THE LANCET in the article referred to Yet, whether new or old, its importance to the community is such that any new light which can be thrown upon it, and especially a presentation of it from the military side by one to whom the War Office and the country may listen, cannot but be acceptable, and, moreover, the desirability of ascertaining the true bearing of the facts is apparent.

Now I think it will be granted that no army can properly *reflect the national characteristics and conditions unless* it be composed of all sections and classes, in *amount in* proportion to their dominance or otherwise in the general population—an essential which conscription fairly carried out may be said to meet—and that no section in its physical and health aspect can be taken *as* a *true representation of* the whole community unless the conditions and circumstances capable of influencing the results are generally present and weigh equally *on* all the *several components*. In the case under consideration the question turns on the validity of the conclusions drawn from the data of *army recruiting* as elucidatory of the national state respecting physique and health. To detail fully all the points which may be advanced against this view would go far beyond the reasonable limits of a letter, but suffice it to suggest the following for consideration. Is it not a fair inference from the statistics that the majority of the volunteers for army service in height, weight, and chest measurement are below the average of our race? and does not a comparison of the recruit as we see him in the streets of the recruiting centres for the line with the passing mass of his fellow countrymen and the experience of the inspecting medical officers as derived from the ranks of the passed *recruits presented to them* at the depots or at joining stations at home or abroad fully corroborate this inference from the figures? Do not the occupation columns show that among those presenting themselves in the recruiting offices labourers and servants largely predominate, while mechanics and artisans are few and *the middle strata rarely figure*, and are *not the localities* from which the majority are drawn the large towns and these giving anything but their best—poor material,- regard it as we may? Would 1000 of our general population, or even 1000 of the classes and sections represented in the *recruiting rooms* taken generally give such a large proportion of rejections from inability to comply with the present physical *standard or from bodily defects* or diseased states (273 75 per 1000 candidates in 1900) as the results for many-consecutive years indicate? Surgeon General Balfour *stated* that "about two fifths of the rejections arise from causes connected with general bad health or feeble constitution, and among *the components* of rejection figure defects and diseases attributable to bad and insanitary dwellings and bad feeding producing an impoverished and poor physique and opposing normal bodily development, constitutional debility, and impairment", but granting that such conditions are too frequently to be met with can *they be regarded as* characteristic of the country as a whole and as producing such a ratio of defects as the recruit sections demonstrate? The more thought is given to the subject the more does the conclusion strengthen that the limited *range of the* community from which the recruit is drawn is such as to furnish *no* adequate basis to work upon on the question of decadence or otherwise of the race and that, to use the words of THE LANCET, "the health statistics of the class desiring *to enlist in the army* are not those of the population of Great Britain as a whole." What Sir F Maurice's proportion of wastage—two only out of five effective soldiers at the end of the second year of service—shows is that the present recruiting grounds *cannot* supply a sufficiency of human material capable of withstanding the pressure of military life. We know well how this poor material succumbs to *foreign* service conditions and disease—what a gap it leaves in the numbers of a regiment required for active service, and the results show that it *ought not to* be subjected to conditions which it is manifestly unable to bear It is true that the two of the five who do get beyond two years of military duty—the survival of the fittest—develop, as a rule, under the fostering influences of good food, good housing gymnastic exercises, &c., into excellent army material, but why, in the face of the experience we now have, we should continue to draw from our present restricted and poor stratum only the necessary human basis on which rest in no small degree the prestige and security of our nation is one of those puzzles to which the average intellect cannot furnish a satisfactory answer Nor is it medical profession can assist in solving this soldier's question of an adequate and efficient recruit supply beyond what is already well known The causes which determine the physical and moral decay of humanity and the conditions which are illustrated in the recruiting offices are already apparent, and granting that the necessities are again set forth and right action taken thereon it cannot be supposed that the results can have any appreciable influence on recruit supply, it remaining in its present narrow limits, within the present generation Meanwhile the army wants are present and urgent and what the recruiting statistics and the accumulated knowledge suggest is that the War Office, facing the facts, should place before the country the necessity of broadening and improving the recruiting area, so making the army a true representation of our race and drawing the recruits from those physical strata of our community fitted to bear the stress of military service, in other words, that the patriotic duty of defending our country should be generally borne and not relegated to sections of which the larger number of their components are from physical and other reasons unfitted to have such a national and Imperial responsibility placed upon them

I am, Sirs, yours faithfully,
FRANCIS H. WELCH F R C S Eng,
Lee Feb 2nd, 1903. Surgeon Colonel (retired), M S

THE SURGICAL TREATMENT OF RHEUMATIC FEVER.

To the Editors of THE LANCET

SIRS,—I have read with considerable astonishment the medical treatment mentioned in an article on the Surgical Treatment of Rheumatic Fever by Dr J O'Conor in THE LANCET of Jan. 24th, p 228, and I am still more astonished to see that in THE LANCET of a week later there is no word of comment on his methods His surgery is no doubt above reproach, but I must crave a few lines to point out that one of the most powerful drugs in the Pharmacopœia suffers quite unmerited disgrace at his hands. In my work, "Uric Acid," published in 1892, I showed that salicylates cured arthritis by eliminating uric acid, and that there are certain conditions—e.g, heat and perspiration—in which they are no longer solvents of uric acid but become precipitants of it. Hence in these conditions they not only fail to do good but may even do great harm and in the fifth edition of the above mentioned book I record a good many cases to illustrate these points. In a word, alkali with heat and sudorifics is a solvent of uric acid salicylate with cold is a solvent of uric acid, but salicylate with heat, sudorifics, and alkalies is not a solvent at all Dr O Conor says "I have no hesitation in stating that this patient's heart has been practically ruined through my delay in operating" This sounds to me very like the old cry of "there is nothing like leather," but in my opinion the heart was ruined by the use of a powerful drug in a manner in which it could not possibly do anything but harm. I can only ascribe this truly terrible, and I have good reason to believe not infrequent, result to the fact that the professional mind has been so completely given over to the hunting of microbes that it has almost entirely lost sight of the solubility of uric acid and the chemistry and physiology that condition this If salicylates properly given fail to relieve the arthritis and bring the temperature to normal in from 24 to 36 hours the disease is not acute rheumatism and the drugs should be given up and then surgery or any other treatment has the field to itself In my book previously referred to I have mentioned that it has even been proposed to call the arthritis met with in India something other than rheumatism because salicylates fail to relieve it A quite rudimentary knowledge of the chemistry of salicylates in their relation to uric acid would demonstrate that salicylates in India are never solvents of uric acid unless the patient is in a freezing chamber and covered only by one sheet. My book has now been 11 years before the profession and yet these important facts are to day almost unknown, and I hear of similar mistakes in the use of the salicylates not in one direction but in all directions. I beg to agree with Dr F P Atkinson[1] that "the greatest friend of truth is time," but meanwhile heaven help the poor patients whose hearts are exposed to the dire effects of these drugs, so powerful for good if given rightly but so powerful also for evil if given wrongly, and whose joints are to be exposed to the surgeon's knife because salicylates which could cure them easily in 36 hours are given under conditions which render all cure by them impossible.

I am, Sirs, yours faithfully,
ALEXANDER HAIG, M.A., M.D Oxon., F R.C P Lond
Brook street, W Feb 2nd 1903

CLEAN MILK *v* BOILED MILK

To the Editors of THE LANCET

SIRS,—Dr Clement Dukes in THE LANCET of Jan 31st, p 331, draws attention to the impairment of the nutritive value of milk by boiling it and its effects on those children who are brought up on it. I wish to indorse his views So frequently have I been convinced that boiled, sterilised, pasteurised milks do not satisfy or nourish *all* children that in my practice I have for some time now advised bottle fed children who showed signs of malnutrition, loss of weight, constipation, and pale flabby tissues to be given unprepared milk, and I can recall no case in which the result was not entirely satisfactory All the children were those of well to-do parents and had the advantage of drinking milk obtained from the best dairies in London where every precaution is taken to prevent the contamination of the milk Still there existed the risk of these children drinking some disease producing milk and if this can be prevented by the rapid cooling process advocated in America it behoves every practitioner to use his efforts to bring this into general use A certain proportion of children who are brought up on boiled milk do certainly thrive, but it is necessary to supplement the milk by the addition of broth or raw meat-juice, &c, at a much earlier period than is required for those children fed on unboiled milk

I am, Sirs, yours faithfully,
Brechin place S W Feb 2nd, 1903 F ASHTON WARNER

THE ABUSE OF MEDICAL CHARITY

To the Editors of THE LANCET

SIRS,—My attention has been drawn to an article under the above heading in THE LANCET of Jan 31st, p 314, mainly based upon some statements in a lecture delivered by Mr F H. Bentham at the Bradford Liberal Club a few weeks since referring to the alleged neglect of inquiry as to the circumstances of the parents of children admitted into our hospital, and whilst I entirely exonerate Mr Bentham from any intention to misrepresent the case it will be seen from the following extract from the annual report of the hospital submitted to the meeting of the governors held on Jan. 30th that in his remarks as quoted by you he has unintentionally done so —

> Very many of the cases treated at the hospital are received on the recommendation of the medical gentlemen in the town who naturally satisfy themselves that the position of the families is such as to justify an appeal to the charity but the bulk of the in patients are drafted into the hospital by the honorary medical staff from the out patients department after careful examination and inquiry as to the circumstances of each family and when such circumstances are found not to justify admission patients are invariably refused A further inquiry is subsequently made by the house committee and if deemed necessary other investigations are instituted in the case of *all* in patients and by these means the risk of abuse of the charity is greatly diminished and the board is satisfied that little abuse, if any, prevails

I am, Sirs, yours faithfully,
HERBERT J JEFFERY,
Hon Sec. Bradford Children's Hospital.
Bradford Feb 3rd, 1903

THE TRAINING OF GYNCÆOLOGICAL AND MONTHLY NURSES

To the Editors of THE LANCET

SIRS,—We are directed by the council of the British Gynæcological Society to request the favour of your insertion of the following —

It is generally conceded that the present condition of the nursing world is in many respects unsatisfactory. There is apparently neither any accepted standard nor system of education, nor any reliable method of distinguishing well trained from untrained nurses Women are now able to term themselves 'nurses," and thus may obtain most responsible work in that capacity, when their education and training have been quite insufficient to qualify them to undertake it There is no means by which trained nurses can be controlled or of freeing their ranks from those who prove themselves dangerous to the public and discreditable to their calling

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[1] THE LANCET Jan. 31st 1903 p 343

The special attention of the Gynæcological Society has been lately drawn to the nursing question Its Fellows employ nurses chiefly for maternity or gynæcological cases, and constant complaints are made of the unsatisfactory character of the present education of such nurses. A most careful investigation of the whole subject on behalf of our society has proved, *inter alia*, that a great number of nurses pass through the larger general hospitals and in still greater proportion through the smaller, without having had any training in the nursing of gynæcological patients, while that of monthly nurses varies from six weeks to three months in duration and is quite inadequate for the responsible duties they are called upon to discharge. For these reasons, the Gynæcological Society has resolved to move in the direction of establishing such examinational tests as will have the effect of bringing about those improvements which are obviously necessary in the education and supervision of gynæcological and monthly nurses The society is strengthened in this determination by the excellent results achieved by the Obstetrical Society of London in the elevation of the education of midwives and by the Medico-Psychological Association in the improvement of the training and work of asylum nurses and attendants, in consequence of the systems of examinations and certificates instituted and carried on by those two societies respectively

The British Gynæcological Society has therefore decided at once to institute examinations and to grant certificates in monthly and gynæcological nursing The three cardinal principles which will be enforced are —1. That every nurse certificated by the society must work only and entirely under the directions of qualified medical practitioners 2. That no woman will be eligible for the society's examination unless she has had sufficient training both in general and special nursing 3. That the society's certificate will be withdrawn from any nurse who at any future time proves to be unworthy of professional trust.

Medical practitioners employing such certificated nurses will thus not only have a guarantee that they are of good character and competent to perform the duties required of them, but also that they are under professional control and subject to rules of professional ethics which, it would seem, nurses generally are at present free to disregard A representative board of examiners has been appointed and the examinations of the society will be held in future once in every quarter —We are, Sirs, your obedient servants,

HEYWOOD SMITH, President.
J H. SWANTON, } Honorary
S JERVOIS AARONS, } Secretaries

Hanover square W, Jan. 31st 1903

MEDICAL CORONERS AND THE APPOINTMENT OF THEIR DEPUTIES

To the Editors of THE LANCET

SIRS —For many years you have advocated the appointment of medical coroners. You have done so for the reason that whilst the law in connexion with coroners' inquests can be, and is, learnt readily by an educated man, the medical details in such inquiries *cannot* so easily be acquired without a previous medical training Medical candidates for vacant appointments as coroners have been successful owing to the large measure of support which you and the editors of other medical journals have given them. One would naturally imagine, therefore, that medical coroners in making their appointments of deputies would continue to support the principle that a knowledge of medicine is an essential to the office of coroner What do we find, however, in London? To quote instances, Dr G Danford Thomas appoints Mr Schröder and Mr Danford Thomas. Neither of these has any medical training Dr F J Waldo also appoints as his deputy Mr Danford Thomas. Strange to say, Mr Troutbeck, a lawyer, appoints a medical practitioner and it is greatly to his credit that he does so I do not question the right of these medical coroners to appoint whom they like and do not question the capacity of the "legal" deputies to carry out their duties faithfully and honestly I merely call attention to the anomaly that medical coroners do not carry out in the appointment of their deputies the principle upon which they received the support of the medical press and their professional colleagues when they themselves were candidates for the office of coroner Is this being true to their profession? Is it not likely to influence the county councils in the future to appoint other than members of the medical profession and to cause them to consider that medical knowledge is not an essential in making such appointments?

I am, Sirs, yours faithfully,
A MEDICAL DEPUTY TO A MEDICAL CORONER.

Feb 4th 1903

THE MEDICAL EXAMINATION OF LUNATICS IN WORKHOUSES

To the Editors of THE LANCET

SIRS,—*Apropos* of your leading article in THE LANCET of Jan. 24th, p 249, on the Medical Examination of Lunatics in Workhouses a recent experience of mine may be of interest. A working man patient of mine became maniacal and on my advice the relatives informed the relieving officer After some delay I received from him a scrap of paper on which he had written a form or certificate to the effect that —— was a person who should be placed under care and control The relatives informed me that if I signed this the relieving officer would come with two assistants and remove him to the workhouse, presumably by force if necessary I naturally declined to sign any such document and sent a message to the effect that if he wished me to certify the man a lunatic I would do so but only on the proper form This eventually he sent and the man was taken before a magistrate and certified in the usual manner On the relieving officer coming to pay the fee he expressed surprise at my objection to sign his form and told me that had he not been pressed for time he would have informed the poor law medical officer who always signed a form in this manner and sent the patient to the workhouse where the proper certificate was filled up by the infirmary medical officer who also pocketed the fee. I found his statement to be correct on inquiry of the poor law medical officer who seemed to think that he was unfairly used but had obeyed the instructions of the guardians. My contention is that the scrap of paper in question is either for the time being a legal certificate of insanity—in which case surely the man who takes the responsibility of signing it should receive what fee there is—or that it is a valueless expression of opinion and the relieving officer who forcibly removes a man from home on the strength of such a document is acting in an illegal manner

I am, Sirs, yours faithfully,
M.D LOND

Feb 3rd, 1903

THE SUPERVISION OF NURSING HOMES

To the Editors of THE LANCET

SIRS,—In view of the scandals that have recently been made public about nursing homes I should be very glad to know whether the medical profession as a body indorses your views as to the desirability of registration and inspection and if there is any chance of active measures being taken to secure legislation on the subject. My own idea is that all nursing homes should be placed under the supervision of the county or borough medical officers of health, though I fear that hardworked body of gentlemen will not support my suggestion. Inspection could be limited to the food and sanitary condition of the house so long as the patients were under constant professional care. For chronic cases some such arrangement as obtains for the medical supervision of certified mental cases could be legally enacted.

I am, Sirs, yours faithfully,
MATRON OF SUBURBAN NURSING HOME.

Jan. 24th, 1903

THE UNIVERSITY OF LONDON AND THE ENGLISH ROYAL COLLEGES OF PHYSICIANS AND SURGEONS

To the Editors of THE LANCET

SIRS,—Mr F C Langford in his letter in THE LANCET of Nov 22nd, 1902, p 1424 wanders off the subject matter to indulge in an unnecessary demonstration of the superior abilities of the Conjoint man as compared with the university man This can only be considered unfortunate Hitherto the whole crux of the question has been taken to be not a matter of personal ability but of opportunity in the case of the two classes of men The larger number of students first enter at a hospital and then consider what qualification they will aim at, these form the Conjoint men, for having paid their fees, &c, they do not feel disposed to retrace their steps and undergo the ordeal of a matriculation and preliminary scientific examination A few men give anxious consideration to the question of a qualification before they enter a hospital, most of such shape their course for the university When I joined a London hospital I was one of four who had decided to go in for the university, the remaining 56 students were Conjoint men. It might be reasonably expected that out of 56 men there would be a greater probability of a display of brilliant work than out of a forlorn number of four men But even apart from any such probability there was no question about the capabilities of the Conjoint men as a whole and of two of them in particular, one of whom took all the hospital scholarships, and the other exhibited consummate ability in the numerous resident posts he held. We university men were a scratch lot. Opportunity and an indulgent Providence rather than personal merit made us what we are.

Mr Langford gives instances of examinational croppers suffered by the intellectually great. We all know of such—the explanation of them belongs to that hazy land of speculation where the voice of the fool alone is heard pondering on the imponderable—a striving and a striving and an ending in nothing To Mr Langford and all other Britishers who are consumed by a wearing anxiety about the quality of a man's qualifications let me say that throughout South Africa we pay no regard to such matters, with us a "doctor" is a properly qualified practitioner By his merits do we judge a man, he may be an M.D of any university, but should he make an ass of himself and a mess of his cases we forthwith catalogue him among the fools Throughout this letter I have spoken of "Mr" Langford—may Providence once more be indulgent to me for thus bending the knee in the house of Baal. Let all Conjoint men take heart from the opinion of a Rhodesian wayside store keeper on university graduates, many of whom float round South Africa like dentists. In a burst of confidence he said to me, 'You know, doctor, 'Varsity men are no good as waiters"!

I am, Sirs, yours faithfully,

Transvaal, Dec 30th, 1902. AFRICANDER.

NOTES FROM INDIA

(From our Special Correspondent)

The Walker Hospital at Simla —Improvements at the Medical College, Calcutta —The Export of Goats' Skins and the Practice of flaying Goats alive —A Successful Crusade against Mosquitoes —The Epidemic of Plague

Among the recent improvements at Simla is the new hospital where Europeans can find improved accommodation during their hours of illness The old and unsuitable wards formerly used have by the gift of the generous donor been replaced by a properly equipped building erected on the lines of the Eden Sanatorium at Darjeeling Mr Walker's handsome gift was of the well known Gordon Castle Estate, but Government acquired this for administrative buildings, and the present site of the new hospital has more suitably been found on a spur situated at the back of Snowdon. The main building, consisting of a central portion with cross arms or wings at the end, is two-storeyed. It is very largely composed of timber, but ample provision has been made against the risk of fire

The new pathological and physiological building to be added to the Medical College, Calcutta, also requires notice. It forms one more step in the reconstruction of the college upon modern lines. The first improvement undertaken was the anatomical block and then came the chemical block, both of which are in full occupation. The present addition is three-storeyed and is designed to harmonise with the two others. The entire fitting up has been carefully thought out and will render this building when completed the best institution of its class in Asia It is anticipated, however, that the beginning of 1904 will be the earliest date by which it will be ready for use. On the ground floor will be rooms for normal histology and physiological chemistry and an experimental class-room, besides small rooms for the professors, diagrams, photography, &c. On the first floor will be rooms for morbid histology and bacteriology besides the large theatre The second floor will be chiefly taken up with the museum

The common practice of flaying goats alive in different parts of India has been nurtured by the demands for long necks in the skins. The export of goats' skins is enormous and a certain percentage—said to be only small—have long necks. The religious method of killing is to decapitate by a cut through the neck, but for long necks an incision is made round and under the jaws and over the top of the head, the skin being turned back, and then the head severed from the body This, of course, is horrible cruelty and one could wish that only 1 per cent of exported skins as stated was at least not exceeded, but this is doubtful The practice is being actively investigated by the honorary secretary of the Calcutta Society for the Prevention of Cruelty to Animals, and in a note he urges on consumers or users to reject long necks and to alter the bases of measurements, fixing it from the base of the neck instead of from the apex If the trade would coöperate in this direction there would be no inducement for the continuation of this atrocious form of cruelty This question deserves to be ventilated throughout the whole of Europe and especially in the countries to which these skins are exported

An effective crusade against the anopheles mosquito has been carried on during the past year at Jaidulpur in the Central Provinces The local conditions were particularly unfavourable in consequence of numerous tanks and open drains, but mosquito brigades have set to work actively Formerly 28 per cent. of the patients in the hospitals were cases of malaria fever, but during the last five months the percentage has dropped to 11 55 per cent.

Upwards of 16,000 deaths from plague were recorded throughout India for the week ending Jan. 10th. This is an increase of 511 on the previous week and 5829 more than in the corresponding week of last year The Bombay Presidency reported 8340 deaths, an increase of 1045, the Bengal Presidency reported 1854, an increase of 92, the United Provinces 1712, an increase of 52, and the Madras Presidency 596, an increase of 151. The Punjab alone reported any decrease—viz., from 2238 to 1736 Other returns of importance are Calcutta, 29 deaths, Bombay city, 352 deaths, and Karachi, 25 deaths In all three of these cities plague is increasing, especially in Bombay, where 169 additional deaths occurred during the past week. The Hyderabad and Mysore States, the Chitral Provinces and Berar, continue to be infected. A commission has been appointed to inquire into the lamentable accident which occurred in the Punjab in connexion with inoculation. Without any disparagement to the members appointed I think that officers should have been selected who are well acquainted with the methods of manufacture of the prophylactic serum and of the practice of plague inoculation. The President of the Commission is a judge, not a scientific expert, and in an investigation of this kind it is difficult to see where his abilities can be utilised.

Jan. 15th

BIRMINGHAM

(From our own Correspondent)

Health of the City

The returns of the medical officer of health, Dr A. Hill, for the week ending Jan. 31st, show improvement in some directions and some cause for anxiety in others. The death rate was 17 1 per 1000 against 21 4 the previous week, but, on the other hand, there are an outbreak of small pox and a large number of cases of scarlet fever There are now 18 cases of small pox in the isolation hospital, one patient having died during the week. 66 fresh cases of scarlet fever were notified during the week, the total number in the hospital being 475 The type is not a virulent one, fortunately There is no doubt that the dissemination of small pox is caused mainly by tramps who occupy the tramp wards at workhouses and by the common lodging houses of the city The difficulty of dealing with these carriers of contagion is almost insurmountable. Of course they are isolated and complete disinfection is carried out as soon as the discovery is made, but in many cases the mischief has already been done. In connexion with this subject a circular letter, signed by the Lord Mayor, the chairman of the health committee, and the medical officer of health, has been addressed to the medical practitioners of the city, pointing out that chicken pox has been added to the list of notifiable diseases, the object being that all cases of chicken pox in children over seven years of age may be visited by the medical superintendent of the hospital with the view of promptly discovering any modified case of small pox that may be among them. That this course has proved to be justified is shown by the fact that in several instances cases of small pox were found. Of course, all these examinations are made in consultation with the ordinary medical attendant or with his consent

The New Licensing Act

One of the most emphatic attempts at a needed social reform is exhibited in the powers of the new Licensing Act in dealing with drunkards and drunkenness. Some typical instances have been already dealt with by the magistrates of the city where the requisite number of previous convictions have been proved. Several separation orders also have been obtained by the husbands of inebriate wives.

St John Ambulance Association.

The annual meeting of the Birmingham branch of this association was held on Jan 21st under the presidency of the Lord Mayor The accounts showed a surplus of £19 odd. Four classes had been held during the year in connexion with manufactories and the attention of employers of labour was called to the importance of inaugurating classes in connexion with their works. It was pointed out that the Birmingham centre was formed in 1880 and that it had qualified nearly 8000 men and women in rendering first aid Last year 22 classes had been held and 284 members had received certificates. The Lord Mayor was of opinion that it should be made compulsory that most public servants should hold certificates. The advantages and the sense of security he thought would be obvious. The Birmingham corps had seven divisions with a membership of 150, which it was considered should be greatly increased. Votes of thanks to the medical officers and others were passed unanimously

The Women's Hospital

A strong appeal has been issued for funds towards the building of a new women's hospital in the city At a meeting held on Jan 15th the following resolution was passed —

> That the meeting is of opinion that it is necessary to build a new hospital on freehold land as soon as possible with beds for 40 patients and also a new convalescent home with accommodation in proportion.

The reasons for desiring additional space and modern equipments were pointed out by the President who stated that a sum of £30,000 was needed to realise their expectations. Already large sums have been promised and the enthusiasm and energy with which the work has been commenced have occasioned much encouragement.

Midland Counties Home for Incurables

The annual report, read at a meeting on Jan. 16th, showed that while the need of this institution continued to increase in every direction, the expense had been kept within the income for the year This fact in the history of such homes cannot but be regarded as satisfactory The subscriptions for the year amounted to £2245 the donations to £289, and the patients' payments to £2487 The total amount collected for the third section extension fund is £2209 but in regard to this extension the committee recommended the governors to rescind the plans for a chapel and recreation room in one building and to authorise the work being undertaken in two separate portions, the nurses dining room and the recreation room being put in hand at once A new plan had been prepared containing a room suitable for week day entertainments and also when required for Sunday afternoon services. Various legacies were announced and votes of thanks were accorded.

The Queen's Hospital.

At a meeting held on Jan 30th Dr J G Emanuel was elected to the new post of casualty physician and Dr Arthur Stanley Barnes was appointed pathologist to the hospital.

Feb 3rd.

LIVERPOOL

(FROM OUR OWN CORRESPONDENT)

Liverpool Royal Infirmary Annual Meeting Changes in the Honorary Staff

THE annual meeting of the friends and supporters of the Royal Infirmary was held in the board room on Jan. 29th, Mr T Sutton Timmis (the President) occupied the chair The committee lamented the loss by death of Mr William Rathbone, its senior member, whose election dated back to 1860 He took an active part in building the present infirmary and to him the charity was chiefly indebted for the existing admirable nursing system. Under the operation of the laws Dr Richard Caton's term of office expired in July, 1902 Appointed in 1886, he worked for 16 years, to the immense benefit of both patients and students, and had earned the friendship and respect of all. So also in November, 1902, after a devoted service of 26 years, came Sir William Mitchell Banks's retirement in the same circumstances Both as a surgeon and a professor his long connexion with the hospital had been of inestimable value. By an arrangement with the committee, and by the courtesy of his colleagues, ten beds in the surgical wards are still at his disposal, whereby the benefit of his advice and experience will be retained for some time longer To the posts of honorary physician and honorary surgeon, rendered vacant by the retirement of Dr Caton and Sir William Banks, Dr John Hill Abram and Mr George Gibson Hamilton had been respectively elected Dr E. E Glynn and Mr T C Litler Jones had been elected to the vacancies caused by the promotion of the latter two gentlemen So great had been the progress within recent times of surgical science that a rearrangement of the operating theatre was deemed wise. The two new theatres that had been constructed through the munificence of Mr Ralph Brocklebank were opened in October last by Sir Frederick Treves. They had in practice proved, as anticipated, all that could be desired. Each honorary surgeon had now a separate theatre, thus the harassing delay to patients awaiting operation was avoided, while every modern appliance to insure their speedy recovery had been adopted. The number of major operations had risen from 770 in 1881 to 1372 in 1901 Through the generosity of a member of the committee an electrical department for the treatment of skin diseases had been opened. 3415 patients had been treated in the house and 20,441 in the out-patient department, giving a total number of attendances of 78 017 The average number resident was 244 The expenditure had been £14,800 and the receipts £12,957 The debt now stood at £2809 The chairman of the committee (Mr E. Kewley) made a feeling allusion to the death of Mr Hamilton B Gilmour which occurred on Jan. 24th The late Mr Gilmour had been closely connected with the infirmary for over 30 years and was chairman of the general committee for 18 years Mr James Lister was elected as President for the ensuing year Mr Lister is also an old member of the committee, having served on that body for nearly 30 years. Mr Sutton Timmis (the retiring President) announced his intention of contributing 200 guineas to the funds of the charity

Another Increase in the Number of Small pox Cases

According to the report of the medical officer of health presented to the health committee on Jan. 29th, it appeared that there were 274 cases of small pox under treatment in the corporation hospitals. 51 fresh cases were reported, as against 42 in the previous week. The outbreak in the Prescot workhouse and neighbourhood is, happily, abating 23 cases are under treatment at Wigan.

Liverpool School of Tropical Medicine Dr A. Logan Taylor's Visit to the Gold Coast

The Governor of the Gold Coast, Sir Matthew Nathan, in a letter dated Accra, Jan. 10th, acknowledges that so far as he can judge from official and non-official opinions, Dr Logan Taylor, who had been sent out by the Liverpool School of Tropical Medicine, had already effected considerable improvement in the sanitary condition of Cape Coast Castle, and asked that he might continue as health officer there until the arrival of one of the assistant colonial surgeons who takes considerable interest in sanitary work and who was due to return to the colony about the middle of March.

Feb 3rd.

NORTHERN COUNTIES NOTES

(FROM OUR OWN CORRESPONDENT)

The Visitor of the General Medical Council for 1903

I AM pleased to announce that Professor Sir George Hare Philipson has been appointed by Sir William Turner, the President of the General Medical Council, on behalf of the General Council of Medical Education and Registration of the United Kingdom, the visitor during the year 1903 of the final examinations of the University of Edinburgh.

Social Medical Meetings in Gateshead-on Tyne

The sixth annual dinner of the Gateshead Medical Association was held on Jan. 14th at the Royal Hotel. The President of the association, Dr H. J Gilbert, occupied the chair and was supported by Mr John Todd who acted as vice chairman Nearly all the medical practitioners of the town were present and a most enjoyable evening was spent About 40 members and guests sat down to dinner, among the guests being Mr Rutherford Morison of Newcastle and Dr H B Densham of Stockton on-Tees The chief toast of the evening—"The Gateshead Medical Association"—was very ably proposed by Mr Rutherford Morison who spoke of the many important advantages derived from such an association and the unfortunate lack of business principles in medical men generally, and he bestowed a well deserved eulogium on Dr Alfred Cox who was the pioneer of the association, and to whom the great success which attended it in bringing together the practitioners, both medically and socially, was due. He also said that Dr Cox was not only the pioneer but the moving spirit in the medical organisation in the counties of Durham and Northumberland, which organisation had recently been attended with very great success and served as an example to the rest of England.

Gateshead Dispensary

The annual full and fancy dress ball in aid of the Gateshead Dispensary was held on Jan. 16th in the town hall. More than 200 guests were present, the majority being arrayed in fancy dress It was the most successful gathering which has been held for some years, the company including a considerable number of medical men. Mr Andrew Dougall and Mr A. White acted as honorary secretaries

Feb 2nd

WALES AND WESTERN COUNTIES NOTES

(FROM OUR OWN CORRESPONDENTS.)

Carmarthen Asylum

WHEN the Commissioners in Lunacy visited the Carmarthen Asylum in the autumn of last year they reported that the institution was overcrowded and that there were 26 patients in excess of the number for which there is accommodation In his annual report the medical superintendent (Dr E Goodall) states that at the end of 1902 there were 650 patients in residence, the asylum being full on both sides, but that if the patients from other counties than those for which the institution is provided—viz, Cardigan, Carmarthen and Pembroke—were excluded there would be 33 vacancies. If patients are taken exclusively from the three counties the present accommodation will suffice for another five or ten years. There are 42 private patients in the asylum and as a result of a recommendation contained in Dr Goodall's previous annual report a sub-committee has had under consideration the further provision of accommodation for this class of patient. It was recommended by the sub-committee that from 15 to 30 acres of land should be acquired and that an additional block of buildings should be erected, but the committee of visitors refused to carry out the recommendation. The medical superintendent deals in his report with the question of the boarding out of harmless patients and appears to be of opinion that the weekly cost would not be less than *10s* per patient, so that in the case of the Carmarthen Asylum, where the average weekly cost is less than *8s 9d*, no actual economy would result from the adoption of the system. Dr Goodall considers some of its advantages to be that convalescents are removed from the asylum buildings with their associations and disturbing sights and sounds and are placed in a half way house on the road home, while enfeebled chronic cases are provided for under more home-like conditions. In 1901 tuberculous diseases accounted for 40 per cent. of the total number of deaths in the asylum, but in 1902 this percentage was reduced to 29

Newport Medical Society

At the meeting of the Newport Medical Society held on Jan. 29th it was recommended that several hand ambulances should be provided at suitable centres in the town for the removal of accident cases to the hospital. Dr William Sheen of Cardiff gave a description of the diseases of the umbilicus with a summary of the abnormal conditions met with there He referred to the meagre manner in which the subject was dealt with even in the latest and standard text-books, and said that he had been at some pains to collect data and cases of the various conditions found He classified the morbid conditions under the following headings —Hæmorrhage, septic and infective processes, syphilis *fistulæ* (fæcal, urinary bilious, and purulent), conditions dependent upon the persistence of the omphalo-mesenteric duct and vessels, conditions dependent upon the persistence of the urachus, hernia, and tumours (innocent and malignant) In connexion with infective processes Dr Sheen referred to the case of the island of St Kilda in which about 80 per cent of the infants died from the "nine day fits," a condition which was found to be due to infection of the umbilicus with the tetanus bacillus

Newport and Monmouthshire Hospital.

The new buildings connected with the Newport (Mon) Hospital were first occupied last year, so that the annual report of the directors of the institution is of more interest than usual The number of in patients treated during 1902 was 898, an increase of 172 over that of the previous year The expenditure amounted to £4596 and the receipts to £5863. Included in the latter sum are £1400 collected weekly by the working men of the town. There is still one of the hospital wards unoccupied.

Royal United Hospital, Bath

The annual meeting of the subscribers of this institution was held on Jan. 28th under the presidency of the Mayor The medical report stated that during 1902 the in patients numbered 1389 against 1321 in 1901. 7891 out-patients were attended, a decrease of 103 as compared with the previous year 349 patients were visited at their homes as compared with 245 in 1901 The financial statement showed that the total receipts amounted to £5774, and that the total adverse balance now amounted to £4297 The meeting unanimously decided that in future, as far as advisable, a charge shall be made to those in patients who can afford to pay something The fee shall not exceed two guineas weekly and all such cases shall be treated in the general wards on the same status as ordinary patients A resolution, which was the unanimous recommendation of the medical staff—namely, that the resident medical officers shall discontinue to visit patients at their own homes—was agreed to

Bath Water supply

Allusion has already been made in THE LANCET of Nov 1st, 1902, p 1225, to the proposals of the Bath corporation for increasing the water supply of the city At the end of October last the city council decided by 13 votes to seven to promote a Bill in the ensuing session of Parliament to enable works to be carried out at an estimated cost of £44,000 but a persistent minority of the inhabitants has endeavoured, fortunately without success, to defeat the desires of the majority Although at the statutory meeting of the ratepayers which was held on Dec 20th a resolution consenting to the promotion of the Bill was carried by 12 votes to 52 a poll was demanded the result of which shows that 6344 ratepayers are in favour of the Bill and that 1591 are against it. The action of the city corporation is thus sufficiently justified

Feb. 3rd

SCOTLAND

(FROM OUR OWN CORRESPONDENTS.)

Queen Victoria's Jubilee Institute for Nurses

THE report of the council of the Scottish Branch of Queen Victoria's Jubilee Institute for Nurses for the year 190 shows that the work of that admirable and most valuabl stitution has been progressing and developing in a satisfactory manner. The annual income, however, has not creased proportionately to the demand for nurses. At the id of October 1902, the Scottish council was responsible r the maintenance of 51 nurses and probationers. During ie year 18 candidates entered the training home for the quired month of probation before receiving hospital training, of these five failed. 34 probationers who had received ospital training entered the home for six months' district aining, of these one failed. 31 nurses completed their aining. Two nurses completed their training in the Higgin- tham Home, Glasgow, and two in the Dundee Home. ectures were given during the year on hygiene, fevers, nd diets, obstetrics, district nursing and sick cookery. 31 urses on completion of their training were engaged from ne home by local committees. 30 nurses resigned during ne year. 11 new branches were established by local comnittees and on showing that the required conditions were lfilled were affiliated to the institute. The superintendent nd assistant inspector made 176 inspections of single nurses nd small homes. There are now 224 Queen's nurses in cotland under 150 affiliated branches, of which 24 are under wo county associations. With regard to the work done uring the year in Edinburgh by the nurses from Castle-errace and by the two nurses in Leith the visits paid umbered 103 and 474 respectively. There was during he year an increase of 397 cases and 10 686 visits. The uperintendent reports that the work had been very heavy s there had been no addition to the staff to meet the ncrease in work. The nursing of maternity cases showed great increase, while there had also been a considerble number of operation cases. The ordinary income mounted to £2334 12s. and the ordinary expenditure to 3164 17s. 11d. The council regrets that it has again to raw upon its small amount of available invested funds o meet this excess of expenditure. It is hopeful that he special appeal at present being made in the interests f the Institute by the Duchess of Buccleuch on behalf f "The Queen Victoria Memorial Endowment Fund" will be largely responded to. A summary of the work done y the Edinburgh nurses gives the following figures as howing by whom patients were recommended:—from ispensaries 720, from hospitals 233, by clergy, 51, by istrict visitors 156, by patients and their friends, 285, by medical men, 3240. Of the cases nursed 1725 were medical, 1122 were surgical, 393 were gynæcological, and 1402 were obstetric.

Induction of the new Principal of the University of Edinburgh.

A meeting of the Senatus of the University of Edinburgh was held in the Senate Hall, Old University Buildings, on Jan. 31st, when Sir William Turner was formally inducted as Principal of the University in room of Sir William Muir, resigned. The proceedings were in private. Professor A. Crum Brown as senior professor presided and the senior dean Professor Chrystal presented the new principal to the president of the Court. The secretary to the Senatus, Professor Sir Ludovic Grant, Bart., read the commission appointing Sir William Turner to the principalship and at the completion of the formal induction ceremony his late colleagues in the professoriate cordially welcomed Sir William Turner as the new principal.

The Chair of Anatomy in the University of Edinburgh.

For the remainder of the winter session the entire responsibility and management of the anatomy department in the University of Edinburgh will be in the hands of Dr. David Hepburn who at present holds the post of lecturer in regional anatomy and principal demonstrator of anatomy in the department. This arrangement has been made in order to enable Sir William Turner to devote his attention to his new duties as principal.

Edinburgh Royal Blind Asylum and School.

At a meeting of the directors of the Royal Blind Asylum and School, Edinburgh, held on Jan. 26th, the directors after other business considered a report from Dr. George Mackay, ophthalmic surgeon to the Royal Blind Asylum, on the eyesight of the women and children at the West Craigmillar Asylum. The report concluded by stating that nearly one-third (31·8 per cent.) of all the cases admitted owed their blindness to purulent inflammation of the eyes occurring in the newly born through want of simple precautions in cleansing the eyes immediately after birth. The directors agreed in view of the great significance and importance of this statement that Dr. Mackay's report should be sent to all local dispensaries and medical institutions.

Health of Aberdeen: the Increase in Infantile Mortality.

At a meeting of the Aberdeen Secondary Class Teachers' Association on Jan. 28th Professor M. Hay delivered a lecture on the Increase in Infantile Mortality. After quoting Addison's Vision of Mirza on the hills of Bagdad, he pointed out that this vision of the bridge of life could be dealt with in a scientific manner, and this he proceeded to do by means of diagrams in which he showed that the death rate in the first year of life in Aberdeen was enormously high, but that there was a reduction in mortality during the school age and at other periods during the last 25 and 50 years. In Aberdeen, as he had pointed out in reports to the town council, the infantile mortality showed an increase instead of a decrease, having within the last 25 or 30 years risen from 145 to 176 per 1000 per annum, or one in six of all born. If this high rate of mortality existed among lambs or calves or foals it would have attracted greater attention long ago. Professor Hay proceeded to point out that, while many of these deaths of infants were due to prematurity and defects of development, yet a great proportion was due to the increased use of the feeding bottle as a substitute for nursing and the indiscriminate feeding of infants with food which, while suitable enough for adults, was as poison to them. Then the chances of children in the first year dying from whooping-cough and measles were enormously greater than at a later period. While no Scottish or Aberdeen mothers would willingly injure their children, yet there was a vast amount of ignorance and thoughtlessness amongst them. To him the time did not seem to be far remote when the question of the preservation of infants would become one of State importance. What they needed for themselves and their children was more fresh air. That was much required in their houses, especially in their poorer houses. He believed that the time was coming when it would be regarded as foolishness to have windows continually shut. On the motion of Herr Hein, a hearty vote of thanks was awarded to Professor Hay for his excellent lecture and Professor Hay, in acknowledging this, stated that while he preferred the natural system of ventilation for houses there was not sufficient cubic space for it in schools, and therefore artificial ventilation had to be resorted to.

Aberdeen University Medical Society.

A meeting of this society was held on Jan. 23rd, Mr. G. G. Macdonald being in the chair.—Mr. W. W. Lawson described a case of Congenital Cystic Hygroma which occurred in a child and filled up all the triangles on the left side of the neck, extending round to the right side also. No operation was performed and the child died from dyspnœa.—Mr. W. Clark Souter described a case of Suppurative Perforating Appendicitis which occurred in a girl aged 13 years. Constipation varied with occasional diarrhœa had been observed for six weeks previous to treatment, but symptoms of appendicitis did not present themselves till within four days of operation and death. The appendix was found to be ulcerated almost to its base, near which it was perforated. A fæcal concretion of the size of a raisin was extracted.

Feb. 2nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Small-pox in Dublin.

ON Feb. 2nd a woman believed to be suffering from small-pox was removed from a tenement house in Church-street to the isolation wards, North Brunswick-street. There were 25 other persons in the house from which she was removed and they have all now been conveyed to the refuge in Nicholas-street while the house is being disinfected.

Cork-street Fever Hospital, Dublin.

At a meeting of the committee of management of Cork-street Fever Hospital which took place on Jan. 29th Dr. Herbert U. Byrne was elected visiting physician.

Jervis-street Hospital, Dublin.

Dr. Edward FitzGerald Stapleton was elected by the governors surgeon to Jervis-street Hospital in room of Mr Austin Meldon who has resigned

The Belfast Maternity Hospital

At a meeting of the governors of the Belfast Maternity Hospital, one of the oldest medical charities in the north of Ireland, held on Jan 27th, Professor John W Byers was elected physician. This hospital has recently been placed upon a new constitutional basis and it is intended in a short time to remove from the present situation in Clifton-street and to erect a new and more commodious lying in charity The appointment of Professor Byers has given great public satisfaction, as it is at this hospital that the students of the Belfast Medical School mainly obtain their midwifery practice, and it was felt by the authorities of the hospital that the occupant of the chair of obstetrics at Queen's College, Belfast, should, as is the case in Edinburgh, be a clinical teacher at the Maternity Hospital

Ulster Medical Society

The third meeting of the session of this society was held in the Medical Institute, Belfast, on Jan 29th Dr John Campbell, the President, being in the chair Dr Henry Whitaker (medical superintendent officer of health) opened a discussion on the Notification of Infectious Diseases and there was a large attendance, as in the circular summoning the members it was stated that the council of the society had heard with great regret that grave charges had been made in the City Council and elsewhere with regard to the notification by medical practitioners of illnesses as infectious without sufficient grounds The council of the society felt that it had not sufficient evidence to warrant it in taking any direct steps in this matter, but with a view to prevent in future such practices, if they had occurred through carelessness or otherwise, it had arranged this discussion on the working of the Notification Act Members were therefore specially requested to be present at this meeting, as such allegations seriously involved the honour of the profession. In his address Dr Whitaker pointed out how cases had been notified on insufficient grounds. In the subsequent discussion some of the members thought the matter must be left in the hands of the public health committee, as without full evidence the society could not take action, and it was elicited that of three medical men who were blamed one was dead and only one was a member of the society Some of the speakers pointed out that the Notification Act was carried out most imperfectly, that far more cases of typhus and typhoid fever occurred than were reported, and that medical men in better class practice did not report cases as they should, and that the part of the Act requiring heads of households—as well as the medical men—to notify cases of infectious diseases was completely in abeyance. Further, some of the speakers found fault with the proposed situation of the infectious diseases hospital, owing to its distance from the city Finally after a long discussion, which showed clearly that the Notification of Infectious Diseases Act in Belfast was by no means fully in force, it was decided to ask the council of the Ulster Medical Society to consider the question of the action of members of the medical profession in this matter, and the honorary secretary was instructed to ask the public health committee to provide details of cases in which there had been defects on the part of medical men in carrying out the provisions of the Act —Three new fellows and two new members were elected, and Dr William M. Killen showed a series of interesting eye cases

The Belfast Hospital for Sick Children.

At the thirtieth annual meeting of the subscribers to this institution it was reported that during the year 1902 there were treated in the wards of the hospital 694 cases with 26 deaths, while 5916 new cases were treated in the extern department (2736 medical 1364 surgical, 1196 eye and ear, and 620 dental) The number of patients treated in the wards was larger than in any previous year in the hospital's history A large number of senior students are in attendance at the hospital cliniques It is to be regretted that the financial condition is not satisfactory, as there had been spent £650 more than was subscribed, and the year before a sum of £230 had been spent more than the income. The deficit is largely due to the fall in the number of legacies, but as Lady Jaffé (the wife of the treasurer) has offered to give £100 if before July 1st ten others will join her in giving similar amounts it is hoped that the institution will soon be out of debt

Rainfall in January in the North of Ireland

January has been the wettest first month of the year since 1886, as the rainfall has been 5 33 inches, falling on 24 days.

Health of Belfast

At a meeting of the city council held on Feb 2nd it was reported that the death rate (24 2 per 1000) was rather higher than usual, due almost exclusively to a bad epidemic of measles. There were 145 deaths from zymotic diseases, 106 from pulmonary consumption, and 218 from diseases of the respiratory organs. In the corresponding period of last year the death rate was from all causes 20 12.

Action against a Medical Man Alleged Neglect.

At Bandon quarter sessions, before County court Judge Bird, the remitted action brought by Patrick Byrne, labourer, of Innishannon, against Dr John Reid was heard. The plaintiff sought to recover damages on the grounds that the defendant had treated him negligently and had not exhibited sufficient medical and surgical skill. The plaintiff suffered from fracture of two or three ribs and dislocation of the collar bone, the result of a fall into a quarry He sent for the late Mr Alcock who was the dispensary medical officer of the district, but as Mr Alcock was absent on leave Dr Reid attended as his substitute. The plaintiff in his evidence alleged that Dr Reid had promised to call on the following day and had not done so, the bandages had loosened and he suffered great pain He stated that he still suffered from pain in the arm and that he could not work as well as previously Dr Reid gave evidence to the effect that he had adopted the usual methods for treating injuries of the kind and impressed emphatically on the plaintiff that he had sustained an injury which could not be completely cured and that he should not afterwards blame him (the defendant) for the result. Professor C Y Pearson of Cork stated that the result of the treatment of this class of injury was scarcely ever successful, the muscles of the upper part of the plaintiff's arm were well nourished, from which he concluded that he had been using it pretty freely Dr J Cotter of Cork gave similar evidence and the judge having summed up, the jury, after deliberating for about 40 minutes, brought in a verdict for the defendant. Judgment was accordingly marked for the defendant with costs

Chloral Hydrate Poisoning Important Observations by the Coroner

Mr Coroner Murphy held an inquest at Cork recently regarding the death of a commercial traveller It appeared from the evidence that the deceased had been drinking recently and had been in the habit of taking chloral. His wife went to Cork to nurse him and on calling him in the morning got no answer, and it was then found that he was breathing his last. A medical man who was called in stated that death was due to the action of chloral hydrate on a weak heart. The coroner commented on the fact that the deceased had obtained the prescription for the chloral hydrate as far back as one and a half years ago and that it had been compounded several times since by druggists in various parts of Ireland He said that the druggists must have known that the drug was a dangerous one and he considered it a great shame that they should have gone on supplying a medicine of the kind without insisting on the necessity for the deceased to procure more recent medical advice as to the suitability of the drug for the treatment of his case

Feb 3rd

PARIS

(FROM OUR OWN CORRESPONDENT)

The Overcrowding of the Medical Profession and Compulsory Military Service.

THE constant increase in the number of medical men in France, which makes the future of medical men appear very gloomy, has given rise to much thought and many are the reasons assigned for this increase One reason which is very commonly mentioned is the law concerning military service which makes it compulsory upon every French male who has attained the age of 21 years to make out three years' military service. There are, however, certain persons exempted from serving three years and such persons are excused with one year's service. Among them are young men who are entering the liberal professions, it being considered by the law that to take three years from a young man's course of study would seriously prejudice his future and would diminish the cultivated portion of society Two of the professions thus dispensed are medicine and civil law, and accordingly there is a rush into these two professions of young men who do not want to serve three years as a soldier The profession more sought after of the two is medicine, it being thought that a medical man can begin to make money for himself sooner than a lawyer can and also that the latter profession is more risky than the former So marked appears to be the relation between the overcrowding of the medical profession and the one year's military service that medical men are giving vent to the wish that for the future medical students shall not be dispensed from the three years service. Dr. Brouardel, who has just brought out a very interesting book dealing with the medical profession at the commencement of the twentieth century, argues that the military question has nothing to do with the overcrowding of the medical profession, for the situation in France is paralleled by that seen in other countries where the regulations as to military service are different. In Germany for instance, last year 1350 men received medical diplomas as against 800 ten years ago Dr Brouardel considers that social matters have most to do with the increase in the numbers of medical men. Science is becoming more appreciated by the public, newspapers give greater prominence to scientific communications, such as questions of hygiene, and even to new drugs or methods of treatment, while nearly every journal is interested in health and thinks itself capable of discussing medical subjects In addition, the medical man of to-day goes much more into general society than in former days Dr. Brouardel considers that the tendency of the middle classes to enter the medical profession is a necessary evil due to present-day social conditions and that the suppression of the right to be excused military service would not aid matters in the least. If the reasoning of Dr. Brouardel should bring about the imposition of three years' military service on medical students and so should interrupt their studies to the great detriment of their education as medical men, it will be very hard if the medical profession is allowed no compensating advantages for such sacrifices

The Alcohol Question.

The struggle against alcoholism in France is entering upon an acute stage. To the surprise of everyone M Duclaux, director of the Pasteur Institute, is heading a movement against teetotalism In interviews which have appeared in the public press and in pamphlets &c. the expense of the circulation of which has been defrayed by the syndicate of wine and spirit merchants, M. Duclaux has declared his view that alcohol is a most useful alimentary substance. In so saying he has not relied upon any recent personal investigations, but has adopted the conclusions of two American authors and has not taken into account the repeated and identical experiences of other observers. For it has been often demonstrated that if two groups of workmen in the same circumstances attack the same task, one relying upon water and the other employing alcohol the advantage gained by the latter will only be temporary, alcohol serving to bring energy into play but not being able to create it. M. Duclaux's statement as to the value of alcohol has, as might have been easy to foresee, been immediately seized upon and exploited for the good of the liquor trade, all engaged in which are now advertising their wares to the public as being *aliment indispensable pour la santé*" M. Duclaux's attitude is a reasonable one. He cannot deny the value of alcohol, and relies upon the growth of popular education to prevent the abuse of its employment. All the temperance societies—bodies which have in France a task of enormous significance, inasmuch as the country has the greatest consumption of alcohol per head—are, however, much excited by M. Duclaux's action and its results The Council of the Assistance Publique, several members of which recently formed a committee of inquiry into the practical methods for the prevention of tuberculosis has decided to placard Paris with the conclusions to which that committee came, inasmuch as they constituted mainly a warning against the dangers of alcoholism. The Prefect of the Seine and the Director of the Assistance Publique, who would be responsible for such placards, have been threatened by the syndicate of wine and spirit merchants with legal process, so that the situation is an acute one. Other circumstances are rendering it more so. Parliament will shortly be called upon to consider the position of the *bouilleurs de cru* whose privileges of distilling personally the products of their own industry are responsible for so much of the unrestrained drunkenness of France. The liquor trade are preparing to support their side with energy and money, so that M. Duclaux's excursion into the question at the present juncture is being made the subject of diverse comment by his colleagues.

Feb 2nd.

BERLIN

(FROM OUR OWN CORRESPONDENT)

Berlin Medical Society

THE election of officers of the Berlin Medical Society took place on Jan. 14th as appointed by the by laws. Hitherto it has been a practically invariable rule to re-elect the retiring officers every year till they either resigned or died and therefore there have hardly ever been any debatable questions raised as a prelude to the elections which have, in fact, become little more than a formality This year, however, some animation was imparted to the proceedings, because the death of Professor Virchow, who had filled the office of president for many years, had left a vacancy for which two candidates were put forward by different combinations of members. The two candidates were the first vice-president, Professor von Bergmann who had acted as president since the time of the accident to Professor Virchow, and Professor Waldeyer whom the committee of the society had chosen as vice president in the same circumstances Some of the medical papers discussed the various aspects of the matter and meetings of members were even held for that purpose, as on the occasion of a contested Parliamentary election. The principal argument against Professor Waldeyer was that he, together with other members of the faculty had signed a petition to the medical chamber praying for exemption from the payment of dues to the chamber. In this petition it was said that members of the university engaged in scientific research or in the teaching of subjects not included in the practical classes of the medical curriculum were not concerned with questions bearing on the interests of medical practice and that their position differed entirely from that of the medical practitioners This petition at the time caused some indignation, because the petitioners were understood to assert that no connexion existed between the representatives of the theoretical and practical branches of medicine and the feeling of resentment thereby aroused was sufficient to deter the majority of the Medical Society (a society consisting for the greater part of medical practitioners) from voting for Professor Waldeyer. He only obtained 88 out of 386 votes, the great majority voting for the acting president, Professor von Bergmann, although his (Professor von Bergmann's) rulings in connexion with the discussions had often astonished the society The other members of the committee were re-elected.—At the same meeting Dr Katz read a paper on the Prevention of Tuberculosis He said that the results of sanatorium treatment were not so successful as was alleged , many patients who had apparently been cured became tuberculous once more and found themselves unable to work very soon after returning to their homes. The alleged cure lasted only during the stay of the patient in the sanatorium. More radical measures must be tried. The modern systems for sanatoriums entirely neglected the influence of climate , it was now an accepted opinion that sanatoriums might be situated anywhere. This opinion, however, was erroneous. It was known that in certain climates tuberculous patients benefited a good deal and he proposed to make the utmost use of this curative agent. The climate of South Africa was specially suitable for this class of patients and as Germany possessed great territories there it should be considered whether colonies of tuberculous patients could not be formed in those countries. He had already discussed the matter before the German Colonial Society and his proposal had been met with sympathy from leading colonial men.—In the discussion Professor Senator declared that although the proposals of Dr Katz to settle tuberculous patients in such distant places as South Africa were scarcely realisable owing to the expense, yet he agreed with Dr Katz's criticisms as to the success of the treatment in sanatoriums.—Professor Fränkel explained that the alleged good results were partially due to the system followed in the selection of cases which, as a rule, was made in accordance with the results of a tuberculin test, every patient in whom the tuberculin test gave a positive reaction was regarded as tuberculous, even if he had scarcely any other symptom of the disease. This class of patients, of course, recovered and in that way improved the statistical results. He had, moreover, found that the tuberculin test reacted positively in patients suffering from rheumatism, gastric troubles, and other conditions where not the least suspicion of tuberculosis existed. This test he said, did not prove anything as to the presence of tuberculosis, and he believed that many of the patients in sanatoriums were not tuberculous at all.

Professor von Esmarch's Birthday

The eightieth birthday of Professor von Esmarch was celebrated on Jan. 9th at Kiel. The former assistants of the celebrated surgeon, the German Surgical Association, the First Aid Society, the University of Kiel, the city of Kiel, and many other public bodies sent representatives, who called in the morning at Professor von Esmarch's residence to congratulate him. Many honours have been conferred on Professor von Esmarch, among others the freedom of the city of Kiel. Special numbers were issued by the *Archiv fur Chirurgie* and the *Zeitschrift fur Chirurgie* and a special work was published dealing with surgical questions and edited by Professor von Esmarch's present and former assistants. The Samaritan Association has founded an "Esmarch medal," which will be awarded by the association to persons of special merit in the first-aid and accident service. The banquet in the evening was attended by Prince Henry of Prussia, who proposed the health of Professor von Esmarch, the representatives of the various associations, and the leading men of the university and city of Kiel.

Death of Professor Saenger

Professor Max Saenger of Prague, who died there on Jan. 12th, was a German by birth and until three years ago, when he went to live in Austria, he had always held appointments in Germany. He was born in 1853 at Bayreuth, and after the completion of his medical curriculum at Wurzburg and Leipsic he become qualified in 1876. He was soon appointed an assistant in the pathological institute of Leipsic under the late Professor Wagner and also an assistant in the medical polyclinic. In 1878 he began work in gynæcology as an assistant to the late Professor Crédé; in 1881 he was recognised as *privat docent* and in 1890 he was appointed extraordinary professor. In 1887 he was at the head of a private clinic for diseases of women where he held classes which were well attended especially for post-graduate study. In 1899 he left Germany on being appointed ordinary professor at Prague. Professor Saenger's work was directed to many questions in gynæcology, both practical and theoretical. His researches on deciduoma malignum, on Cæsarean section, and on disinfection are of considerable value.

Feb. 2nd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

A Case of Inverted Viscera.

WHILE endeavouring to localise the position of a revolver bullet by means of the Roentgen rays in a case of attempted suicide a few days ago Professor Casati of Ferrara discovered that his patient was the subject of inversion of the viscera. The revolver had been discharged in such a direction that the bullet had entered the left side of the front of the chest at the level of the third rib and had passed downwards and outwards to lodge among the muscles in the left post-axillary line. Fortunately for the patient the bullet had apparently been diverted by the rib and it is doubtful whether it actually entered the thoracic cavity. Had it done so the result in ordinary circumstances must have been fatal. It was found, however, that the heart was on the right side, some distance away from the line of fire, the liver occupying the left hypochondrium with the stomach lying to its right. Such a disposition of the internal organs is sufficiently rare, but that anyone should owe his life to the abnormality is probably unique.

Small-pox in Malta.

The Prefect of Syracuse has put in force in that port the provisions of the Maritime Sanitary Law against ships coming from Malta on account of an outbreak of small-pox in the island.

The Supposed Discovery of the Germ of Rabies.

From a second communication made to the Medical Academy of Pavia it appears that Professor Sormani cannot yet claim to have proved his thesis that the coccus discovered by him is the causal organism of rabies, since the animals inoculated with cultures of the microbe did not die from the disease nor was it possible to identify in them its characteristic anatomical lesions. He contends that his microbe differs from that described by his assistant Dr. Levy who also claims the discovery. The Academy has appointed a special commission to watch the experiments and to report the result.

The Health of Palermo.

Alarming reports having reached Rome of a severe epidemic of typhoid fever said to be raging in Palermo I have made inquiries of trustworthy persons residing there regarding their truth. The result is reassuring, for it appears that although before the October rains fell an outbreak of fever did occur it very soon died out, and that the town at the present time is in a particularly healthy state, being free even from influenza which has been prevalent in many of the northern cities of Italy during the past few weeks.

Jan. 31st.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The Isthmian Canal Commission.

Professor William H. Welch of Baltimore drew up and presented at the recent meeting of the American Association for the Advancement of Science the following motion which was adopted by that body:—

> Inasmuch as the construction of the Isthmian Canal is through a region in which without energetic sanitary control there is sure to be an enormous loss of human life from preventable diseases particularly from pernicious malaria and yellow fever as well as great waste of energy and of money from disabilities caused by such diseases and inasmuch as the measures for the restraint of these diseases, which have already achieved even their partial extermination in Cuba under American administration require expert knowledge based upon practical familiarity with tropical diseases experience in the application of these measures and large authority in their administration; Resolved that the American Association for the Advancement of Science begs most respectfully and earnestly to call to the attention of the President of the United States the importance of appointing as a member of the Isthmian Canal Commission a medical man possessed of the qualifications indicated. The association is convinced that the mere employment of such a sanitary expert by the commission will not be likely to secure the desired result.

The construction of the Isthmian Canal will undoubtedly be attended with much loss of life and sickness. The country through which the canal will pass is notoriously unhealthy, so that it will be necessary that a medical sanitary expert shall hold a position of authority over the workers. There will also be a great opportunity to put to the test on a large scale the value of the discoveries relating to the conveyance of malaria and yellow fever by mosquitoes. It is thought that in order to exercise the needed authority the sanitarian should himself be a member of the commission. The American medical journals have taken the matter up with the view of influencing the President to favour this plan. —The New York Academy of Medicine has petitioned the Government to appoint as a member of the Isthmian Canal Commission a medical man of proper qualifications to advise on all matters of a sanitary character. The petition states that it is well known that the previous excavations for an Isthmian canal have been attended with a large amount of illness and a heavy mortality due mainly to malaria and yellow fever, but recent discoveries as to the causes of these diseases have enabled medical officers to control their ravages to a marked degree. The success which has crowned medical efforts in Cuba in apparently abolishing yellow fever is another evidence for the belief that if proper hygienic precautions are taken at Panama and other situations along the route of the canal the death rate of the past can be greatly decreased or made to disappear. The Academy of Medicine believes that the amplest powers should be given to the medical officers in charge of the sanitation of the canal and that to attain this end a medical officer should be a member of the commission which the President of the United States is authorised to appoint to conduct the affairs of the proposed canal.

Formalin in Septicæmia

Much interest has been manifested recently in New York in some experiments made with formalin used as an antitoxic agent in septicæmia Dr Charles C Barrows of New York, the assistant of Dr Polk in the obstetrical ward of Bellevue Hospital had under his charge on Dec 25th, 1902, a negro woman who had given birth to a child eight days before. She had a temperature of 104 3° F when admitted and 24 hours after the temperature had risen to 107° The blood examined bacteriologically showed the presence of streptococci and it was undoubtedly a typical case of puerperal fever The patient, of course, was in an extremely critical position and Dr Barrows asked for permission to inject formalin solution. This request being granted an intravenous injection of 500 cubic centimetres of 1 in 5000 of formalin was made into the right arm of the woman with the effect that by the next day the temperature had fallen to 101° On the second and third day after the injection the temperature began to rise again, and on the third day it had reached 103°, when a formalin solution of the same strength was again injected, the quantity being increased to 750 cubic centimetres. The temperature has been normal ever since and the patient is to all appearances practically well. Many examinations of this woman's blood have been made since the second administration of formalin but no streptococci have been found. Formalin solution since Dr Barrow s use of it, has been administered for septicæmia following child birth in three other instances in New York hospitals. In one case it is said to have been successful but in the other two cases the results were not satisfactory In the discussion which followed the reading of a paper by Dr Barrows before the New York County Medical Society on Jan. 19th, in which he recounted the history of the patient treated by him with formalin solution at Bellevue Hospital, the view generally taken was that great hopes should not be entertained of the ultimate success of the method. Dr J W Williams of Johns Hopkins Hospital probably expressed the opinion of those present when he said ' This will prove a very great boon to suffering women if it can be substantiated but I regard it with reserve." Reference was made at the meeting by Dr Barrows to the tests with formalin made by Dr Maguire of London who has experimented on animals and on himself.

Bubonic Plague in San Francisco

There has been much uneasiness in the public mind over the repeated reports of the existence of the oriental plague in San Francisco The local authorities have constantly denied the truth of these reports and still they have been repeated and in several instances by expert medical examiners Finally, the matter has reached such an acute stage that the surgeon general of the Public Health and Marine Hospital Service Department, acting under powers recently conferred upon that service, called a conference of State health boards to meet in Washington. The conference met on Jan 19th and the surgeon general laid before the members the following communication from one of the inspectors of the Department who had been sent to San Francisco to examine the situation 87 cases have occurred in Chinatown, six sickened in other parts of the city , none proved to have originated in the country Total six whites four Japanese, and 83 Chinese since March 1900 The inspector also reported that of 22 dead rats found in China town 11 were discovered to have been infected , of 354 rats caught alive four proved to have been infected. With these facts before the conference the following declaration was unanimously agreed upon 'The present danger to California and to the United States lies primarily in the persistence during three years of a definite nidus of plague infection in that part of San Francisco known as Chinatown but the gravity of this circumstance is greatly increased by the gross neglect of official duty by the State Board of Health of California and the obstructive influence of the recent Governor of California, by the failure of the city government of San Francisco to support its city board of health, and by the obstacles opposed to the operations of the United States Public Health Service. The conference will consider the safety of the country sufficiently assured as soon as satisfied that a competent city board of health of San Francisco and a competent State board of health, in coöperation with the United States Public Health Service, will proceed under definite, harmonious, and effective laws and ordinances that they are provided with ample funds and that they are jointly and severally in the free exercise of their lawful powers." The conference also declared its belief that the habitual publication of the actual facts relative to infectious diseases and their prevention is one of the best means to minimise the dangers of an epidemic.

Jan. 29th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT)

Dental Defence Association

AT a meeting recently held in Sydney attended by about 100 dentists and presided over by Sir James Graham, it was unanimously decided that—

> It is desirable to form a dental defence association, having for its objects To render assistance to any member who may be threatened with or involved in any action at law or prosecution arising out of the practice of his profession within this State to assist in any movement which will promote fraternity amongst the members or elevate and improve the social and legal status of dentists promotion of the welfare of the dental profession of New South Wales

A committee was appointed to draw up a scheme for the formation of the association.

Sydney Medical School

At its last meeting the senate of the Sydney University adopted a report from the Faculty of Medicine recommending an amended medical curriculum. In it the work of, the present first year is somewhat curtailed, while human anatomy and practical histology (microscopical anatomy) are introduced at the end of the first year instead of the second year as at present The other changes, with two exceptions, consist in moving the subjects generally to an earlier place in the curriculum so as to allow more time in the fifth year for hospital and clinical work. Materia medica as a single separate course is omitted, while special courses upon pharmacology or the physiological action of drugs, special therapeutics and posology and prescription writing have been established In the fifth year students will be required to select two subjects from the following diseases of children, diseases of the skin, diseases of the ear, nose, and throat, special bacteriology, and special therapeutics. In lieu of the present five annual examinations there will be in future only three marking the completion of the preliminary scientific, the medical scientific, and the applied medical work respectively There will also be two term examinations—one in organic chemistry in the second year and one in general pathology in the third year At the same meeting a letter was read from Dr Thomas Fiaschi offering to deliver a voluntary course of lectures on the history of medicine to medical students It was resolved that the offer should be accepted and that Dr Fiaschi should be cordially thanked. The following examiners were appointed anatomy Dr A E Mills physiology Professor E O Stirling, C M G , pathology Dr Sydney Jamieson , materia medica, Dr A Watson Munro medicine, Dr J Macdonald Gill , surgery, Mr G T Hankins , midwifery Dr S. H. MacCulloch , gynæcology Dr Fourness Barrington clinical medicine, Dr P Sydney Jones clinical surgery Dr Fiaschi , psychological medicine, Dr Eric Sinclair , ophthalmic medicine and surgery Dr Odillo Maher , and medical jurisprudence and public health, Dr W G Armstrong

Balmain Hospital Sydney

Some friction has occurred at the Balmain Hospital, Sydney, between the paid and honorary staff. Two of the honorary surgeons have resigned. One of the trustees is stated to have asserted that the paid medical officer neglected his work of attending to out patients while attending to operations for which he received a fee. The matter is to be dealt with by the rules committee during the month

Institution for the Treatment of Alcoholism, &c

The Central Methodist Mission in Sydney has established an institution at Tempe for the treatment of alcoholism narcotism, and neurasthenia. The Medical Retreat as it is termed was formally opened by the Premier on Nov 17th. The President, in welcoming the Premier said the institution was not an inebriates' home but a medical institution conducted on scientific lines They undertook to kill the desire for alcohol and to help to restore will power The British Medical Association was aware of the formulæ and the treatment, and most of their patients were sent by medical men.

Prevention of Lead Poisoning in Mines

Regulations for the prevention of lead poisoning in mines have been published in the *New South Wales Government Gazette* The principal points are as follows. A record is to be kept by the manager of a mine of cases of lead poisoning and transmitted every month to the Chief Inspector of Mines. An ample supply of good drinking-water is to be kept at every mine, properly protected, so as to prevent contamination by dust. Standpipes and hose are to be provided to lay dust by sprinkling Every person employed in a mine must wash his hands before meals At every mine or works where lead or lead compounds are mined or manufactured bath houses and changing rooms are to be supplied The baths are to include both shower and plunge tanks. Adequate provision is to be made to prevent as far as practicable the emission of flue dust from smelter stacks Workmen employed to cleanse the flues must wear a respirator over the nose and mouth If any person shall refuse or neglect to comply with any such regulation he shall be liable to a penalty not exceeding £20, and to a further penalty not exceeding £5 for every day during which the offence is continued.

Obituary

Dr Archibald Megginson, late of Pott's Point, Sydney, died on Nov 16th He was born in Scarborough and was 47 years old He arrived in Perth, Western Australia, about 25 years ago and held the position of medical officer to the gaols Resigning this post he came to New South Wales, and after practising for a time at Merriwa settled in Sydney, where he had an extensive practice —Dr J J Miller of Brunswick, Victoria, died suddenly on Nov 26th from septic poisoning He was a native of Melbourne and a graduate of the Melbourne University Besides a general practice in Brunswick he also conducted a special practice as an ophthalmic surgeon in Melbourne He had an extensive connexion with the local friendly societies and was a great favourite in his district. He was a surgeon in the militia and was buried with military honours. Great sympathy is felt for his widow, whose brother, Dr Doolan of Tass, New South Wales, died suddenly a little time ago from appendicitis

Dec. 25th, 1902.

Obituary.

ALEXANDER THOMSON, M D, L F P S GLASG

WE have to announce the death of Dr Alexander Thomson of Dumfries on Jan 18th at the age of 70 years. An attack of influenza a few weeks ago had apparently been recovered from and he was actively engaged in professional work when he caught a chill on the 14th which was followed by an acute pleurisy ending fatally after an illness of three days Dr Thomson was a native of Shotts in Lanarkshire and studied medicine at Glasgow University After a distinguished career as a student he was appointed house surgeon to the Glasgow Royal Infirmary He was also house surgeon to the Lock Hospital there and President of the Glasgow University Medical Society In 1861 he went to Dumfries where he rapidly built up a large practice Appointed visiting physician to the Dumfries and Galloway Royal Infirmary in 1872 he resigned after two years when a vacancy occurred on the surgical staff, and to this he was appointed and continued to fill the post till two years age The directors received his resignation with regre and appointed him consulting surgeon to the hospital

For many years Dr Thomson has been recognised as the leading surgeon in the south of Scotland. He was perhaps the first country surgeon in Scotland to operate on ovarian tumours, having successfully removed one in February, 1865 As President of the Border Counties Branch of the British Medical Association in 1888, he delivered an interesting address on ovariotomy For the long period of 33 years Dr Thomson acted as medical officer of health of the burgh of Dumfries, besides holding many other important public officers By his death his medical brethren in Dumfries and a large part of the south of Scotland have lost a friend and sagacious counsellor on whom they could always rely His great experience, sound judgment, and dexterity in operating made him trusted by patients and colleagues alike. Both in hospital and private practice the loss of his always highly valued opinion will be felt for a long time to come. Dr Thomson leaves a widow and two daughters to mourn their loss

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DEATHS OF EMINENT FOREIGN MEDICAL MEN —The deaths of the following eminent foreign medical men are announced —Dr M. Lavdoffski, Professor of Histology and Embryology in the Medico Chirurgical Military Academy in St Petersburg —Dr Gessner, Professor of Midwifery in Erlangen, quite suddenly, at the age of 38 years.

Medical News.

UNIVERSITY OF CAMBRIDGE —At the Congregation on Jan. 29th the following medical degrees were conferred —

M D—A M Ware, Pembroke.
M B—G R Wilson Trinity and E S Scott Pembroke.
B C—W M. Strong Trinity E S Scott, Pembroke H C Williams, Pembroke R Butterworth Christ's E T Harris, Christ's and W W Holtzmann Christ's

A grace was carried at the same Congregation for the appointment of two additional Demonstrators of Anatomy —Dr L E. Shore, St. John's, has been appointed a University Governor of Hartley University College, Southampton.—By the death of Dr Ferrers, F R.S, on Jan. 31st and of Sir G G Stokes, F R S, on Feb 1st, the University loses two of its most distinguished heads

FOREIGN UNIVERSITY INTELLIGENCE —*Cracow* Dr J Raczynski, *privat docent* of children's diseases, has been promoted to an extraordinary professorship. Dr Majewski has been recognised as *privat-docent* of Ophthalmology —*Gratz* Dr Fritz Harmann has been recognised as *privat docent* of Psychiatry Professor Von Hacker of Innsbruck has been offered the chair of Surgery in succession to the late Professor Nicoladoni.—*Leipsic* Dr Franz B. Hofmann, *privat docent* of Physiology, and Dr Perthes, *privat docent* of Surgery, have been promoted to extraordinary professorships.—*Odessa* Dr Zabaneieff has been recognised as *privat-docent* of Surgery —*Würzburg* Dr Karl Marbe, *privat-docent* of Experimental Psychology, has been promoted to an extraordinary professorship

THE AFTER-CARE ASSOCIATION —The annual meeting of the After Care Association will be held on March 4th under the presidency of Sir William S Church, Bart., K.C B, President of the Royal College of Physicians of London The association, which renders aid to poor persons discharged as recovered from asylums for the insane, is the only charity of its kind in the United Kingdom and is deserving of more financial support than it has hitherto obtained Subscribers of not less than 5*s* per annum and persons who give a donation of not less than £2 10*s* are entitled to membership of the association, but larger annual subscriptions and donations are greatly needed. The address of the secretary is Church House, Dean's yard, Westminster, London, S W

MANCHESTER MEDICO-ETHICAL ASSOCIATION —From the fifty fifth annual report of this association we find that during the past year papers have been written on the following subjects —The Advantages of a Daily Medical Inspection of Schools, by Dr A. W W Lea, a system that was heartily approved of by the association in the interests of public health. "Professional Ethics and the Scope of the Medico-Ethical Association" was the title of a paper read by Mr F H. Westmacott, in which he pointed out that many of the advantages accruing to the profession generally were due to the efforts of this association in the earlier years of its history The following office-bearers were elected for the year 1903 —President Dr D Lloyd Roberts Vice Presidents Dr C Macfie, Dr W Thorburn, Dr. J W Hamill, and Dr J C Eames. Honorary treasurer Dr J Ferguson Honorary secretaries Mr Westmacott and Mr S Bagley Committee Mr C R C Garrard, r J J Cox, Dr W E. Sawers Scott, Dr E. Vipont own, Dr A. Stewart, Mr D Owen, Dr. T Harris, Mr W H. Garstang, Dr A. B Ritchie, and Dr G H ncashire. Auditors Dr E. Annacker and Dr J G egg

PRESENTATION TO A MEDICAL PRACTITIONER —n Jan. 20th, at Launceston, the members of a ladies' rsing class in connexion with the St. John Ambulance ssociation presented Mr William Fookes Thompson, M.D, M. Edin., with a travelling bag as a mark of appreciation his services as honorary lecturer

BRISTOL NATURALISTS' SOCIETY —The fortieth nnual meeting of this society was held at University ollege, Bristol, on Jan. 22nd, when Dr A. B Prowse gave n interesting lecture on the Wansdyke in the neighbourhood Bristol Dr Prowse was elected president for 1903, and r A. E Hudd F S A., and Mr O K Rudge, M.R C S.Eng, ere elected vice presidents.

THE LADIES' PUBLIC HEALTH SOCIETY, MANHESTER.—One of the most useful agencies in promoting e public health of the poor districts of Manchester is hat of the Ladies' Public Health Society Its work is one quietly and unostentatiously in union with the anchester and Salford Sanitary Association and under e supervision of the medical officers of Manchester nd Salford. At the annual meeting, held on Jan. 20th nder the presidency of the Lord Mayor, much ineresting information was given in the report, the rty second of the series, as to the work of the society nd the condition and habits of the poor of the disricts covered by its operations. The abnormally high eath rate among infants had led to the giving of pecial work to some of the society's visitors by the anchester and Salford medical officers of health he visitors, in the ordinary course of their duty, inquire nto the feeding, clothing, and surroundings of the babies nd explain to the mothers where mistakes have been made nd how to remedy them. They also give instruction as to he importance of cleaning floors, burning refuse, washing clothes, and the bearing of hygienic measures on the arrest or cure of consumption. The health women, as they are sometimes called, live in their districts and visit from house to house in the localities as the lady superintendents direct They carry carbolic powder explain its use, and leave it where it is accepted. They also sell soap, explain the evils of bad smells, dirt, and want of fresh air, and give hints to the mothers as to feeding and clothing the children. They write daily reports of the work done and mention the sanitary condition of the houses visited. Mothers meetings are held at which simple talks are given as to health and sanitation This sketch of the work shows that the ' visitors, ' though women of the working class, must be possessed of a good deal of intelligence and of some education, for the work requires much tact and discretion and is not over well paid for at 16s a week. The committee feels this and wishes to increase the wage but the income of the society, as is too often the case, does not equal the expenditure and so a strong appeal is made for an increase of subscriptions Last year they amounted, with donations, to £362, and the year s working left a deficit of £23. As the Lord Mayor said the income ought to be quadrupled in a city like Manchester ' The society rendered much valuable help to the sanitary committee of the corporation, whose difficulties were often almost insuperable owing to the fact that the removal of insanitary property inflicted great hardships on the poor As a rule the visitors are well received their suggestions and help being gladly accepted, and the suspicion and jealousy common enough years ago have gradually disappeared now that their motive is known—that they have come to help and not merely to spy out the barrenness of the land. The lowest death-rate in the districts worked by the society is 25 1 in the St. George s North the highest 50 9 in Angel Meadow while n Ancoats West it is 42 0 The past year was one of many calls on the charitable, but it is to be hoped hat the appeal made for more help will meet with generous response as there is much ground yet ntouched for want of means. In supporting a vote of hanks to the Lord Mayor Dr J M Rhodes mentioned a few hings not flattering to our insular vanity but which it is ell we should now and then hear He said we were too harisaical as to infant mortality In France it was only 1 per cent. greater than in England and even in Italy only 1½ per cent. higher In England and Wales 154 per 1000 die within the first 12 months. And in Denmark, instead of being 15 or 16 the death rate was under 10 per 1000 There is no likelihood of our attaining to sanitary perfection for some time to come and the fight against disease must be waged with dogged persistence.

AT the recent Seaton (Devon) urban district council bye-election Mr G E A. Evans, L.R.C P Lond., M.R C S Eng, was returned by a considerable majority

DONATIONS AND BEQUESTS —Under the will of Miss Elizabeth Turner the Derbyshire Royal Infirmary and the Derby Children s Hospital receive £300 each

MEDICAL MAGISTRATE —Mr Ralph C Bartlett, M R.C S Eng, L.R.C P Lond, has been appointed a justice of the peace for the borough of Romsey, Hants.

WESTERN DISPENSARY, BATH —The annual meeting of the subscribers of this institution was held on Jan. 26th under the presidency of the mayor The medical report stated that during the year 807 patients were treated, including 400 who were visited at their own homes The financial statement was satisfactory and showed a favourable balance of £142.

DEATH OF A CENTENARIAN —Mrs Elizabeth Alsop, of Gosden, near Guildford has died at the age of 102 years, having been born on Nov 13th, 1800, in Swallow-street, London. For upwards of 70 years she was with the late Lady Audrey Ridsdale and family and was awarded the prize offered by the late Duchess of Teck for the longest record of service with any one family

ROYAL INSTITUTION —The Friday evening discourse at the Royal Institution on Jan 30th was delivered by Professor W E. Dalby, the subject being Vibration Problems in Engineering Science. Illustrations were taken chiefly from locomotive engines on railways and from the engines of steamships Many fine models of machinery in motion were shown.—A general monthly meeting of the members of the Royal Institution was held on Feb 2nd, Sir James Crichton Browne, treasurer and vice-president, being in the chair The following were elected members: Dr Louisa Garrett Anderson, Dr Henry T Böttinger, Mr W Child, Mrs. Ionides Miss Lea Smith, Sir Frederick Treves, Bart., and Mr W Whitehead.

NATIONAL DENTAL HOSPITAL.—The annual general meeting of the governors and supporters of the above institution was held at the hospital on Jan. 27th, Mr F Cavendish Bentinck presiding Among those present were Mr Alfred Farquhar, the treasurer, Captain Maxwell Earle, D S O, Mr W Ward Cook Mr F Canton, Mr. Alfred Smith, Mr Charles W Glassington, and Mr Sidney Spokes, Dean of the College The committee reported an increase over the total of last year in the number of patients treated of 2682, as well as a consequent general addition to the amount of the various kinds of work performed. It also had the gratification of stating that the new regulations which came into force on Oct 1st were working satisfactorily and promised a still greater improvement in the future. The committee regretted to have to call attention to the deficit as shown on the balance sheet, of £863, of which debt £296 were incurred in 1901 and £566 in 1902, and ventured to observe that it was not possible to execute such a largely increased amount of work without additional expense. The committee begged all supporters of the hospital to use their best endeavours to obtain further subscribers in aid of the work, the number of annual subscriptions being quite disproportionate to the growing requirements of the institution and the committee being very anxious that the work should not have to be curtailed in consequence of deficient income.

BOOKS, ETC RECEIVED

DAVIS F A. COMPANY 1914-16 Cherry-street Philadelphia.

Book on the Physician Himself and Things that Concern his Reputation and Success By D W Cathell M.D The Twentieth Century Edition being the eleventh edition revised and enlarged by the Author and his Son William T Cathell A.M. M D Baltimore Maryland Price $2.50 net, delivered

Surgical Anatomy and Operative Surgery For Students and

Practitioners By John J McGrath M D Professor of Surgical Anatomy and Operative Surgery at the New York Post-Graduate Medical School Price $4 00 net.

Fischer Gustav, Jena.

Anatomie des Nervensystems Bearbeitet von Prof Dr Ziehen in Utrecht und Prof Dr Zander in Königsberg i Pr Zweite Lieferung Makroskopische und mikroskopische Anatomie des Gehirns Von Professor Dr Th Ziehen in Utrecht. Price M. 6 (Lieferung 10 des ‘Handbuch der Anatomie des Menschen, herausgegeben von Prof Dr Karl von Bardeleben)

Klinisches Jahrbuch Unter Mitwirkung der Herren Prof Dr M Kirchner Geh Ober-Med. Rat und Dr Naumann, Geh Ob Reg Rat Herausgegeben von Prof Dr Freih v Eiselberg in Wien Prof Dr Flügge, Geh. Med Rat in Breslau Prof Dr Freih. von Mering in Halle a. S, und Prof Dr Werth Geh Med Rat in Kiel Zehnter Band. Zweites Heft. Price to subscribers M 5 to non subscribers M 6

Hadden, Best, and Co, 5, West Harding street, and 26 Fetter-lane E C

An Analysis of the Education Act 1902. Compiled by Hartley B N Mothersole, M.A. LL M of Trinity College, Cambridge, and the Inner Temple and South-eastern Circuit Barrister-at-Law Price 6*d* net

Harrison and Sons 45 St. Martin s lane W C

International Catalogue of Scientific Literature. First Annual Issue. R. Bacteriology Vol VIII, 1902 (December) M S completed May 1902 Price 21*s*

Hirschwald August, Unter den Linden 68 Berlin, N W

Sammlung Klinischer Abhandlungen über Pathologie und Therapie der Stoffwechsel und Ernährungsstörungen Herausgegeben von Prof. Dr Carl von Noorden, Oberarzt des Städtischen Krankenhauses in Frankfurt a. M 3 Heft Ueber die Schleimkolik des Darms (Colica Mucosa) und ihre Behandlung Von prof Carl von Noorden und Dr Carl Dapper in Kissingen Price Pf 80

Specielle Muskelphysiologie oder Bewegungslehre Von Dr R. du Bois-Reymond Privat docent in Berlin Price M 8

Karger S Karlstrasse 15 Berlin

Die Krankheiten der Nase und des Nasenrachens mit besonderer Berücksichtigung der Rhinologischen Propädeutik Für praktische Aerzte und Studirende. Von Dr Carl Zarniko in Hamburg Zweite gänzlich umgearbeitete Auflage Erste Hälfte: Propädeutik Price M 5 60

Handbuch der Pathologischen Anatomie des Nervensystems Herausgegeben von Dr E Flatau in Warschau Priv Doc. Dr L Jacobsohn in Berlin und Priv Doc. Dr L. Minor in Moskau I Abtheilung (Bog 1–20) Price M 10

Grundriss der pathologischen Histologie des Auges Von Dr Siegmund Ginsberg Augenarzt in Berlin Price M. 13

Kimpton Henry 13 Furnival street Holborn E C

The Principles and Practice of Gynecology For Students and Practitioners By E C Dudley, A.M M.D, Professor of Gynecology North western University Medical School. Third edition revised and enlarged. Price 21*s* net

Lewis H. K. 136 Gower-street, W C

Diseases of the Skin their Description, Pathology Diagnosis and Treatment, with Special Reference to the Skin Eruptions of Children By H Radcliffe-Crocker M.D Lond F R C P Physician for Diseases of the Skin in University College Hospital. Third Edition. Two volumes. Price 28*s* net.

Inoculation against Malaria By Dr Philalethes Kuhn, Staff Surgeon to the Imperial Troops of the South West Africa Protectorate. Translated by H. A Nesbitt, M.A Price 2*s* net

Massage and the Original Swedish Movements By Kurre W Ostrom, from the Royal University of Upsala Sweden Fifth edition revised and enlarged Price 3*s* 6*d*. net.

Life Assurance Medical Officers Association London.

Transactions of the Life Assurance Medical Officers Association London comprising the Report of the Proceedings for 1900 and 1901 Price not stated

Murray John Albemarle-street W

Experiments on Animals By Stephen Paget. With an introduction by Lord Lister New and revised edition Price 6*s*

Rebman Limited 129 Shaftesbury avenue W C

Biographic Clinics The Origin of the Ill health of De Quincey Carlyle Darwin Huxley and Browning By George M. Gould M D, Editor of American Medicine. Price 5*s* net

Clinical Obstetrics. By Robert Jardine M D Edin. M.R C S Eng F F P & S Glasg F R S Edin Senior Physician to the Glasgow Maternity Hospital Price 15*s* net

Anatomy and Histology of the Mouth and Teeth By I Norman Broomell D D S Professor of Dental Anatomy Dental Histology and Prosthetic Technics in the Pennsylvania College of Dental Surgery Philadelphia. Second edition, revised and enlarged Price 21*s* net.

A System of Physiologic Therapeutics. Edited by Solomon Solis Cohen, A.M M D Volume v: Prophylaxis Personal Hygiene, Civic Hygiene Care of the Sick. By Joseph McFarland M D Henry Leffmann M.D Albert Abrams A.M, M D and W Wayne Babcock M.D Price 12*s* 6*d*. net. Volume ix: Hydrotherapy Thermotherapy Heliotherapy and Phototherapy By Dr Wilhelm Winternitz of Vienna, assisted by Dr Alois Strasser and Dr B Buxbaum Balneology and Crounotherapy By E Heinrich Kisch of Prague. Translated by Augustus A. Eshner, M.D, and with notes by Guy Hinsdale M.D A. C Peale, M D J H Kellogg M.D, and Harvey Cushing M.D Price 12*s* 6*d* net

Stuber, A. (C. Kabitzsch) Würzburg

Beiträge zur Klinik der Tuberkulose. Herausgegeben von Dr Ludolph Brauer a. o Professor an der Universität Heidelberg. Heft 1. Price M. 5.

Urban und Schwarzenberg, Berlin and Vienna.

Encyklopädie der Mikroskopischen Technik, mit besonderer Berücksichtigung der Färbelehre. Herausgegeben von Prof Dr Paul Ehrlich Dr Rudolf Krause, Dr Max Mosse Prof. Dr Heinrich Rosin, und Prof Dr Carl Weigert. III Abtheilung (Bog 51 Schluss des Werkes) Preis M. 15, K. 18

Veit and Comp, Leipzig

Die Sehnenüberpflanzung und ihre Verwertung in der Behandlung der Lähmungen Von Dr Med Oscar Vulpius Privatdozenten der Chirurgie an der Universität Heidelberg Price M 6.

Vogel, F C W, Schillerstrasse, 8, Leipsic.

Hyperämie als Heilmittel. Von Professor Dr August Bier in Greifswald Price M. 10

Die Entwicklung des Glaskörpers. Von Dr M v Lenhossek o. Professor der Anatomie an der Universität Budapest. Vorgelegt der ung Akademie der Wissenschaften am 20 Oktober 1902. Price M 12.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week, for publication in the next number*

Bayly Hugh Wansey M.R C S, L.R C.P Lond has been appointed House Surgeon to the Hospital for Sick Children, Great Ormond street.

Eglinton George Walter L R C.P L.M.Ed., L.F P S Glasg has been appointed Medical Officer of Health for the Wells (Somerset) Rural District Council

Hutchinson Hy, L R C P, L F P S Glasg L.S.A Lond has been appointed Surgeon to the London and India Docks Employés for the Districts of East Ham Upton and Manor Park

Litler Jones, T C F R.C S Eng, has been appointed Honorary Assistant Surgeon to the Liverpool Royal Infirmary

Lynch M B L.R C.P I L R C S I has been appointed Medical Officer for Clashmore co Waterford Dispensary District.

McMordie D M.B C Ch R U I has been appointed House Physician to the Sheffield Royal Hospital

Marshall, R Prynne M R.C S Eng L R C P Lond has been appointed Medical Officer to the Third District of the St Olaves Union and Certifying Surgeon to the Bermondsey Borough Council.

Monckton, William L.R C P L M. Ed, M R.C S, has been appointed Medical Officer of Health for the Portishead Urban District Council

Schofield, F W M.B C Ch Vict., has been appointed Assistant House Surgeon to the Sheffield Royal Hospital

Shaw G H M.B Ch B Vict, has been appointed House Surgeon to the Sheffield Royal Hospital.

Stewart G N, M D Edin D.P H. Camb Professor of Physiology, Western Reserve University Cleveland, U S.A. has been appointed Professor of Physiology in the University of Chicago.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

Auckland Rural District Council.—Medical Officer of Health Salary £350 per annum

Birmingham General Hospital.—Resident Pathologist. Salary £100 per annum with board and residence.

Bradford Poor Law Union Hospital and Workhouse.—Resident Assistant Medical Officer unmarried Salary £125 with rations apartments, and washing

Bradford Royal Infirmary.—Dispensary Surgeon, unmarried. Salary £100 per annum with board and residence

Bristol Royal Infirmary.—Resident Obstetric Officer Salary £75 per annum, with board lodging &c Also Junior House Surgeon and Anæsthetist, and Casualty Officer Both for six months with salaries at rate of £50 per annum with board lodging and washing

Bury Infirmary.—Junior House Surgeon Salary £90 with board residence and attendance.

Cardiff University College.—Bacteriologist to the Joint Committee of the Glamorgan County Council and Cardiff Corporation and Lecturer in Bacteriology in the University College, Cardiff. Salary £300 a year

City of London Hospital for Diseases of the Chest Victoria-park E.—Second House Physician for six months Salary at rate of £30 per annum with board washing and residence

Devonshire Hospital, Buxton Derbyshire.—Assistant House Surgeon. Salary £70 per annum, with apartments board lodging, and laundry

French Hospital and Dispensary, Shaftesbury avenue.—Junior Surgeon.

Horton Infirmary Banbury.—House Surgeon. Salary £80 per annum with board and residence.

Hospital for Sick Children Great Ormond street, London, W C.—Clinical Pathologist and Bacteriologist. Honorarium 50 guineas.

INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY — Junior House Surgeon Salary £75 per annum with residence, board, and washing

KENT COUNTY ASYLUM Barming heath Maidstone.—Fourth Assistant Medical Officer unmarried Salary £175 per annum rising to £200 with residence, attendance &c.

LANCASHIRE COUNTY ASYLUM, Preston Whittingham —Assistant Medical Officer unmarried. Salary £150 with apartments, board washing and attendance.

LEEDS GENERAL INFIRMARY —Resident Medical Officer Salary £100 per annum with board residence and washing

LONDON COUNTY ASYLUM Hanwell, W —Junior Assistant Medical Officer Salary £150 per annum with board apartments and washing

MANCHESTER ROYAL INFIRMARY CONVALESCENT HOSPITAL Cheadle — Assistant Medical Officer unmarried for six months Salary at rate of £80 per annum with board and residence.

METROPOLITAN HOSPITAL.— Casualty Officer Pathologist and Registrar Salary at rate of £150 per annum.

NEWCASTLE ON TYNE DISPENSARY —Two Visiting Medical Assistants Salary £160

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC Queen square Bloomsbury —House Physician Salary £100 with board and apartments

PARISH OF ST PANCRAS SCHOOLS at Leavesden, near Watford Herts — Medical Officer Salary £150 per annum, rising to £200 and luncheon.

PRESTWICH MANCHESTER COUNTY ASYLUM —Junior Assistant Medical Officer unmarried Salary £150 increasing to £250 with board, apartments and washing

ROCHFORD UNION —Medical Officer and Public Vaccinator of the Rochford District Salary £64 per annum with fees. Also Medical Officer of the Workhouse Salary £50 with fees

ROTHERHAM HOSPITAL AND DISPENSARY —Senior House Surgeon Salary £110 per annum with rooms commons and washing

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST Ventnor —Assistant Resident Medical Officer unmarried Salary £100 per annum with board and lodging in the ho pital

SWANLEY KENT WHITE OAK OPHTHALMIA SCHOOL (METROPOLITAN ASYLUMS BOARD) —Assistant Medical Officer Salary and allowance £250 per annum

TORQUAY BOROUGH OF —Medical Officer of Health Salary £400 per annum, rising to £500

WEST DERBY UNION WORKHOUSE AND HOSPITAL, Walton Liverpool — Senior Resident Medical Officer unmarried. Salary £150 per annum with board and apartments and fees.

YORK, NORTH RIDING ASYLUM Clifton.—Senior Assistant Medical Officer unmarried. Salary £200 rising to £400

THE Chief Inspector of Factories Home Office London S W gives notice of vacancies under the Factory and Workshop Act for Surgeon, at Falkland in the county of Fife at Witney in the county of Oxford at Annbank, in the county of Ayr at Hawick in the county of Roxburgh at Kingswinford in the county of Stafford at Allendale, in the county of Northumberland and at Newton le-Willows and Ashton in Makerfield in the county of Lancaster

Births, Marriages, and Deaths.

BIRTHS

CARTER.—On Jan. 27th, at Dartford the wife of Arthur Burnell Carter M.R.C S of a daughter

DUFFUS —On Jan 27th at Thurleigh road Wandsworth-common S W, the wife of Henry Duffus M.A., M.B C.M Aberd. of a daughter

PATRICK.—On Jan. 30th, at Stoneygate, Leicester to J W Patrick M.D Durh. L.R C.S L.R C P Edin and Mrs Patrick—a son.

MARRIAGES

HOOLE—TURNER.—On the 27th ult at Solihull, Warwickshire John Hoole M.R C S Eng L S.A. Lond. of Parwich, Derbyshire to Mabel Adeline second daughter of J W Turner Esq The Croft, Yardley Worcestershire.

POCOCK—PLATTS —On Jan. 10th at S Mary's Church, *Poona*, Major Herbert Innes Pocock, R.A.M C to Edith Shepard Platts, eldest daughter of the late Francis Thomas Platts

DEATHS

CULPEPER.—On Jan 28th at Notting hill William Moe Culpeper, M R C S aged 83

TURNER.—On Feb 1st 1903, at 63 Queen Anne-street Cavendish square Martha Orr Turner formerly of The Bays Oakhill road Putney widow of the late Frederic Turner of Nizels Tunbridge Kent aged 74 Service at St. James Westmorland street, Weymouth-street W on Thursday Feb 5th, at 2.15 P M.

N.B —A fee of 5s. is charged for the insertion of Notices of Births Marriages and Deaths

Notes, Short Comments, and Answers to Correspondents.

THE PRESCRIBING QUACK

A CORRESPONDENT has forwarded to us a card in an envelope which was left at his house. The envelope is addressed in print To the Lady of the house The card inside a four page one, states on its front page that it is A private note from Francis E Bustard (M P S), Cash Price Chemist Medical Herbalist &c 663 Seven Sisters road South Tottenham. On pages 2 and 3 is the following —

> MADAM —A word to the wise is sufficient In all cases of Indigestion Persistent or Recurrent Headaches Habitual Constipation Anæmia Bad Legs and other forms of Female Weakness or Irregularity prompt attention is the only method of averting serious trouble
>
> If you present this Card at my counter you will be shown at once into my private consulting room I charge *nothing for advice* and I WILL HELP YOU IF I CAN At any rate a few minutes strictly private conversation with a fully qualified Chemist will cost you nothing and *a few herbs a box of pills or a bottle of* medicine IF TAKEN IN TIME may save you a great deal of suffering and expense I am Madam
>
> At your Service
>
> FRANCIS E BUSTARD (M.P S)

On page 4 we notice that Mr Bustard sells No 4 Special Female Pills Ladies Occasional Mixture Female Corrective Herbs and Female Injection Powder" From *these items* and *from* the references to ' Female Weakness or Irregularity on page 2 of the card it is quite easy to see what manner of trade Mr Bustard carries *on* and *we commend his business not only* to the notice of the Pharmaceutical Society but also to that of the police.

WANTED—SUGGESTIONS FOR TREATMENT

To the Editors of THE LANCET

SIRS —Will one of your readers kindly advise what treatment should be adopted in the case of a man about 42 years of age whose spleen is five times larger than normal At present he is not feeling in first class health but is suffering no inconvenience from the enlargement. Would it be advisable to remove the spleen? Has any other treatment been successful in similar cases? Have the Roentgen rays been used with success in such a case? The following is the result of an analysis of the blood:—Macroscopic appearance pale fibrin decreased coagulation slow *specific gravity* 1051 *hæmoglobin* 52 *per cent erythrocytes* 2,812 800 leucocytes 8933 ratio of leucocytes to erythrocytes 1—314 *Erythrocytes* —Normocytes pale microcytes many present macrocytes medium number poikilocytes considerable number schistocytes absent normoblasts 20 to the cubic millimetre microblasts absent megaloblasts absent blood plates decreased *Leucocytes* —Lymphocytes (small) 24·25 per cent. lymphocytes (large) 10 75 per cent polymorphonuclear neutrophiles 64·50 per cent eosinophiles 25 per cent myelocytes none basophiles 25 per cent. myelocytic eosinophiles none. *Parasites* —Plasmodium malariæ, none

I am, Sirs yours faithfully

Feb 2nd CLARKDON

THE SPRING AXLE BICYCLE

MR. S HALL of 56 St Augustine's-road Camden-square *London,* N W asks us to call attention to an invention which *consists* of helical springs having two and a half inches vertical play *contained in tubular plungers connected to* and forming part of the fork and frame of a bicycle and fitted to slide in tubes or cylinders rigidly fixed *to* the axles the upper ends of the springs bearing on the under side of capped nuts at the top of the plungers and their lower ends on the upper edge of small plates fixed across the cylinders long longitudinal slots in the plungers permitting the sliding action under the play of the springs. In the lower part of the plungers are similar but shorter springs the upper ends of which abut on the under edge of the small plates their duty being to prevent the plates coming in contact with the bottom of the slots when the springs proper cease *to* be *in compression Among* the advantages which the inventor claims for the spring axle" are reduction of wear and tear throughout *the machine* and greater comfort to the rider Theoretically the spring axle" bicycle seems to possess the advantages which its inventor claims for it but time only can prove its merits It should be mentioned that *the invention can be applied to motor cars* as well as to cycles

MOLASSES AS A "CURE FOR CANCER."

A MEDICAL man in Kent has sent us a cutting from a Queensland newspaper which states that two men in that colony claim to have been cured of cancer by taking about a tablespoonful of molasses four or five times a day In one of them the seat of the trouble was at the root of the tongue and quite disappeared after ten days treatment. The other patient suffered from the same complaint" in the stomach and for him a three months course of the remedy was required after which he was able to resume his work as a labourer on a wharf Each of these individuals seems to have been unconsciously neglectful of his duty both to himself and to his fellow men for he has omitted to supply the proofs of his case necessary to raise him to the position of a historical personage and (which is worse) he has authorised the publication of a claim to have been cured of cancer" which may delude some genuine sufferers and tantalise them by raising hopes foredoomed to disappointment

'THE GOLFER'S DIARY AND MATCH BOOK"

WE have received for review from Messrs John Walker and Co Limited of Farringdon House E C several specimens of the 'Golfer's Diary and Match Book which has been compiled for them by Mr T B Earle The immense popularity which golf now enjoys among men of all ages makes the game a factor in our national health so that perhaps to notice a pocket book devised for the use of the golf player is not going so far outside our proper sphere as it may appear to some to be As citizens it might be our duty to point out that far too much time is spent by many men in pursuit of this engrossing game but as medical men we are bound to weigh against this fact the other fact that in golf thousands find a form of exercise and relaxation which is their only safeguard against physical breakdown We have given the diaries to a member of our staff an enthusiastic golfer who has reported of them to us very favourably In enlarging on the merits of the game to us, and in an exposition which he insisted on making of certain of the procedures of golf etiquette he became technical to the point of incomprehensibility but his commendation of the diaries was perfectly clear He considered that if every regular golfer carried such a book about with him the opportunity of immediately referring to the rules would obviate many annoying disputes while a regular record of the year's performances would instil hope into some breasts and humility in others—his opinion apparently being that his fellow golfers are, as a rule, either unnecessarily depressed or unduly bumptious The diaries are supplied in various covers at prices ranging from 1s to 10s the contents being renewable each year for 1s

CURIOSITIES OF THE MEDICAL DIRECTORY

A CORRESPONDENT, encouraged we fear by the lapse from seriousness of a recent annotation in our columns writes to us as follows: 'It appears that in none of the sections London Provincial Wales &c., is there the name of any medical man beginning with X, which, perhaps, is not x traordinary In Wales there is no U which is un U-sual and there is no Y Z there which is too general a statement to be libellous In Scotland there is no Q which is certainly Q rious. In Ireland there is no Z which is Y the list finishes with a Y As for the dentists they have only got one I amongst them" We publish our correspondent's note but in doing so we warn him that a repetition of such facetiousness will shake our confidence in his ability to discharge his onerous and responsible duties.

MADAME SPITZNER'S GREAT MUSEUM

WE learn that this exhibition to which we called attention in THE LANCET of Jan 24th was raided by the police on Feb 4th The proprietress and other persons connected with the show were arrested and the place was closed.

THE TESTIMONIALS TO ODOL

A CORRESPONDENT points out to us that among the testimonials to the value of Odol which have reached him in a circular is one from Dr Leonard Wilde who has been dead he says two years We believe Odol to be a new preparation so that it is difficult to see how a physician who has been dead two years could have given a good report of it In view of recent communications to the medical press we think that the proprietors of Odol should be more careful about their circular advertisements

KEEN'S OPERATION IN TORTICOLLIS

To the Editors of THE LANCET

SIRS —I should be obliged if some one could tell me (through your correspondence columns) if Keen's operation should be done *on both sides* in a case of spasmodic torticollis in which the (clonic) spasm is now confined to the left side whereas 18 months ago it was found in the right side only having continued there for more than a year

Does this change indicate that the cells in the anterior cornua on the right side are now exhausted and therefore that a unilateral operation will be sufficient? I am Sirs yours faithfully

Jan. 27th 1903 A. C R.

A REVOLVER FOR 7s 9*d*

THE origin of the cheap weapons used by mischievous boys criminals, and persons mentally deranged is not always traceable At Bow street police court however evidence was given recently in the case of two burglars apprehended with revolvers upon them that they bought their pistols for 7s 9*d* each from Messrs Gamage and Co in Holborn The price and the ease with which such dangerous articles can be bought by anyone are the points to which attention should be directed The number of suicides by shooting that have occurred lately has been too great for attention to be drawn to individual cases The danger arising from the pistol traffic to public personages has also been emphasised by the incident which has taken place in Spain and by the trial at the Old Bailey of the lunatic who called at the German Embassy and failing to obtain an audience from any official within, shot a cab horse outside. No comment seems to be needed upon cases such as this perhaps when a valuable life has been sacrificed something will be done.

F S H—As a rule British diplomas and degrees entitle medical men to practise in Canada without any examination A licence must be obtained from the provincial medical boards and certain fees have to be paid for the registration of qualifications Complete information on the subject is contained in the 'Professional Handbook," No 11, issued by the Emigrants Information Office, 31, Broadway, Westminster S W Our correspondent might also apply to the same office for information with regard to his second question

P P (M.B) and Y D (M D)—We have published many protests in the sense suggested by our correspondents but with little effect. It is disgraceful and a terrible commentary on modern morals that papers with a wide circulation should spread such lies because advertisers have paid for their insertion With one of these articles—the one that removes all obstructions —we have dealt in our series of articles entitled 'Quacks and Abortion" (THE LANCET, June 24th, 1899 p 1739)

Inquirer—It would have been better to avoid the situation and we think that the town councillor would have been well advised to abstain from voting The election of his assistant is perfectly legal and public opinion, if nothing else may probably be trusted to make him a just representative of authority in spite of his personal relations with the medical officer of health

Lusitania—For a foreign medical man who desires to exercise his profession in Portugal it is necessary to pass an examination held by the Faculty of Medicine of Lisbon Coimbra, or Oporto He will then be able to practise in Portugal and also in Portuguese colonies. The total fees, including examination and registration, amount to about £60

General Practitioner is advised not to enter into such an arrangement. He will make himself the servant of lay employers The present system is preferable As far as we can see the emoluments are as large and every bit as certain, while the independence should be greatly prized

B B—We do not know any book that gives satisfactory information upon the point It will be best for our correspondent to seek the advice of an experienced friend on the general question If any particular points arise a medical man might be consulted.

T K C is thanked for his letter and its inclosure. We do not think that the official attitude is worth criticising it is so manifestly silly and opinionated

M D (Captain I.M S)—Our attention has already been drawn to the matter, but we believe the lady to have been the victim of injudicious friends

L. N—No

Medical Diary for the ensuing Week.

OPERATIONS

METROPOLITAN HOSPITALS

MONDAY (9th)—London (2 P M) St Bartholomew's (1.30 P.M), St. Thomas's (3 30 P M) St George's (2 P.M) St. Mary's (2.30 P.M), Middlesex (1 30 P.M) Westminster (2 P M) Chelsea (2 P M) Samaritan (Gynæcological by Physicians, 2 P M) Soho-square (2 P M), Royal Orthopædic (2 P.M) City Orthopædic (4 P.M) Gt Northern Central (2.30 P.M) West London (2.30 P.M) London Throat (9.30 A M) Royal Free (2 P M) Guy's (1 30 P.M)

TUESDAY (10th)—London (2 P.M) St. Bartholomew's (1.30 P.M), St. Thomas's (3 30 P.M) Guy's (1.30 P M) Middlesex (1.30 P.M) Westminster (2 P M) West London (2.30 P M) University College (2 P M) St George's (1 P M) St Mary's (1 P M) St. Mark's (2.30 P M) Cancer (2 P.M) Metropolitan (2.30 P.M) London Throat (9 30 A.M) Royal Ear (3 P.M) Samaritan (9 30 A M and 2.30 P.M.), Throat Golden square (9 30 A M) Soho-square (2 P M)

WEDNESDAY (11th)—St. Bartholomew's (1 30 P.M) University College (2 P M) Royal Free (2 P M) Middlesex (1 30 P M) Charing Cross (3 P M) St. Thomas's (2 P M) London (2 P M) King's College (2 P M), St. George's (Ophthalmic 1 P M) St. Mary's (2 P.M), National Orthopædic (10 A.M) St Peter's (2 P M), Samaritan (9 30 A M and 2.30 P M) Gt. Ormond street (9 30 A M) Gt. Northern Central (2.30 P M), Westminster (2 P M) Metropolitan (2.30 P M), London Throat (9.30 A M), Cancer (2 P M) Throat, Golden square (9 30 A.M) Guy's (1 30 P M)

THURSDAY (12th)—St. Bartholomew's (1.30 P M), St. Thomas's (3 30 P.M) University College (2 P M.) Charing Cross (3 P M), St. George's (1 P M), London (2 P M.) King's College (2 P.M) Middlesex (1.30 P M.) St Mary's (2.30 P M), Soho-square (2 P M) North West London (2 P M) Chelsea (2 P M) Gt. Northern Central (Gynæcological, 2.30 P M) Metropolitan (2.30 P M) London Throat (9.30 A M) St. Mark's (2 P.M) Samaritan (9.30 A.M and 2.30 P.M), Throat, Golden square (9 30 A M) Guy's (1.30 P.M)

FRIDAY (13th)—London (2 P M.) St Bartholomew's (1 30 P M) St Thomas's (3 30 P M) Guy's (1.30 P.M) Middlesex (1.30 P.M.) Charing *Cross* (3 P M), St. *George's* (1 P M) King's College (2 P M), St. Mary's (2 P M) Ophthalmic (10 A.M) Cancer (2 P M) Chelsea (2 P.M) Gt Northern Central (2.30 P.M) West London (2.30 P.M.) London Throat (9.30 A.M) Samaritan (9 30 A.M and 2.30 P.M) Throat Golden-square (9.30 A M), City Orthopædic (2.30 P M) Soho-square (2 P M)

SATURDAY (14th)—Royal Free (9 A.M) London (2 P M) Middlesex (1 30 P.M) St. Thomas's (2 P.M) University College (9 15 A.M.) Charing Cross (2 P M) St. George's (1 P.M) St. Mary's (10 P.M.) Throat Golden square (9.30 A.M.) Guy's (1.30 P M)

At the Royal Eye Hospital (2 P.M) the Royal London Ophthalmic (10 A M) the Royal Westminster Ophthalmic (1.30 P.M) and the Central London Ophthalmic Hospitals operations are performed daily

SOCIETIES

ONDAY (9th).—MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Discussion on the Treatment of Epilepsy (opened by Dr. J. S. Risien Russell and Sir Victor Horsley).

SOCIETY OF ARTS (John-street, Adelphi, W.C.).—8 P.M. Mr. J. Hubner: Paper Manufacture. Lecture II.—Soda Recovery, Manila Hemp, Jute and other Raw Materials, Mechanical Wood Pulp, Wood Cellulose, Beating, Sizing, Loading, Colouring. (Cantor Lecture.)

UESDAY (10th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Paper:—Mr. P. R. W. de Santi: A Report on Four Cases of Acute Septic Inflammation of the Throat with Bacteriological Examination of each. (A sequel to a similar paper read by Sir Felix Semon, April, 1895.)

WEDNESDAY (11th).—SOUTH WEST LONDON MEDICAL SOCIETY (Bolingbroke Hospital, Wandsworth Common).—8.30 P.M. Paper:—Mr. W. E. Miles: The Diagnosis and Treatment of Certain Common Affections of the Rectum met with in General Practice.

DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—5.15 P.M. Demonstration of Cases of Interest.

THURSDAY (12th).—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Dr. Macnaughton Jones and others. Dr. H. Smith (President): Introductory Address.

FRIDAY (13th).—THE INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH (9, Adelphi-terrace, Strand, W.C.).—7.30 P.M. Dr. E. W. Hope: The Renewal of the Vaccination Act.

CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Papers:—Mr. H. L. Barnard: Treatment of Suppurative Arthritis.—Dr. S. Barnes (introduced by Sir William Gowers): A Case of Local Panatrophy.—Mr. A. A. Bowlby, C.M.G.: A Case of Acute Pancreatitis.—Dr. F. Taylor: A Case of Acute Pancreatitis.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (9th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. J. Pringle: Clinique. (Skin.) 5.15 P.M. Mr. D. Drew: Diseases of the Breast.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Davis: Affections of the Bronchi.

TUESDAY (10th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. C. T. Williams: Clinique. (Medical.) 5.15 P.M. Mr. E. Clarke: Defects of Refraction.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Bidwell: Plaster of Paris Splints.

UNIVERSITY OF LONDON (Physiological Laboratory).—5 P.M. Dr. W. D. Halliburton: On the Chemistry of Muscle and Nerve. (Lecture on Advanced Physiology.)

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Sir Wm. Gowers: Degenerative Diseases.

WEDNESDAY (11th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Clarke: Clinique. (Surgical.) 5.15 P.M. Dr. C. O. Hawthorne: The Visual Field in Chronic Nervous Disease. I.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. D. Robinson: Pelvic Pain.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Discussion on the Present Shortage of Water available for Supply (opened by Mr. W. Whitaker). General discussion is invited.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. J. J. Perkins: The Abdominal Manifestations of Thoracic Disease.

THURSDAY (12th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Hutchinson, jun.: Clinique. (Surgical.) 5.15 P.M. Dr. C. O. Hawthorne: The Visual Field in Chronic Nervous Disease. II.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Baldwin: Treatment of Some Injuries and Emergencies.

UNIVERSITY OF LONDON (Physiological Laboratory).—5 P.M. Dr. T. G. Brodie: On the Circulation. (Lecture on Advanced Physiology.)

CHARING CROSS HOSPITAL.—4 P.M. Dr. A. Routh: Gynæcological Lecture. (Post-Graduate Course.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Voelcker: The Sequelæ of Diphtheria.

FRIDAY (13th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. R. Lake: Clinique. (Throat.) 5.15 P.M. Dr. H. Tilley: Purulent Nasal Discharges. II.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. E. Jones: States of Mental Depression—Melancholia, Katatonia.

UNIVERSITY OF LONDON (Physiological Laboratory).—5 P.M. Dr. A. D. Waller: On the Action of Anæsthetics and Narcotics. (Lecture on Advanced Physiology.)

EDITORIAL NOTICES

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It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES

THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1902, which was completed with the issue of Dec. 27th, and the Title-page to the Volume, were given in THE LANCET of Jan. 3rd.

VOLUMES AND CASES.

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METEOROLOGICAL READINGS

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 5th, 1903.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 a.m.
Jan. 30	30·28	W.S.W.	...	81	52	42	44	47	Cloudy
" 31	30·01	S.W.	...	72	47	42	41	43	Cloudy
Feb. 1	29·22	S.W.	0·05	64	45	33	41	43	Cloudy
" 2	29·32	N.W.	0·05	63	45	33	33	35	Overcast
" 3	30·23	W.S.W.	0·01	53	49	35	39	40	Overcast
" 4	30·37	W.	...	53	50	40	45	43	Overcast
" 5	30·36	S.W.	...	52	49	45	46	47	Overcast

During the week marked copies of the following newspapers have been received: *Tenby and County News, Dublin Express, Bradford Observer, Morning Post, Hereford Mercury, Daily Graphic, Sanitary Record, Local Government Chronicle, Mining Journal, Hertfordshire Mercury, Burton Chronicle, Dumfries and Galloway Courier and Herald, Walsall Observer, Halifax Evening Courier, Warrington Guardian, Yorkshire Post, Sussex Daily News, Colchester Gazette, Belfast News Letter, Birmingham Post, Aberdeen Free Press (Weekly), Folkestone Telegraph, Brighton Gazette, Surrey Advertiser, Bristol Mercury, &c.*

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ON

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Delivered before the Harveian Society of London on Nov 6th, 13th, and 20th, 1902,

BY ALBAN H G DORAN, F R C S ENG,
SURGEON TO THE SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN MARYLEBONE ROAD N W

LECTURE II.[1]

Delivered on Nov 13th, 1902

THE TREATMENT OF THE OVARIES IN HYSTERECTOMY FOR FIBROID

MR. PRESIDENT AND GENTLEMEN,—Mr J Bland Sutton, fortified by Dr G Crewdson Thomas's valuable statistics,[2] maintains that when more or less of the ovaries is left the catamenia are not, as a rule, suppressed, whilst in cases when they stop the menopause symptoms are far less severe than when the ovaries are entirely extirpated But certain authorities hold that other conditions are necessary besides leaving ovarian tissue, to ward off a severe menopause, whilst there may be distinct evil effects due to leaving ovaries behind On the strength of experience on which I shall shortly dwell at some length, I maintain that this conservative operation entails benefits, but that those benefits have been over estimated. There is no reliable homology between the removal of normal ovaries with a fibroid uterus and double ovariotomy for ovarian tumours We know nothing about the influence which ovarian new growths may exert on the menstrual phenomena before they are removed. As a rule the period is quite unaffected in double cystic disease, whilst some malignant tumours are associated with amenorrhœa which sets in long before cachexia I find that in a series of double dermoids in my own practice flushings, &c., were very rare, though the suppression of the period was rapid and complete after ovariotomy Yet in my first case (1882) when the patient was 32 years of age, and where there could be no doubt about the complete extirpation of both tumours, there were troublesome flushings for nearly 10 years No period occurred after the operation. Again, when enucleation is necessary it is very possible that a piece of healthy ovarian tissue may be left in the ovarian ligament, as in a case of my own where the patient bore a child two years after a second ovariotomy[3] Martin's tables of his double ovariotomies[4] are instructive but of no value for our present purpose for reasons just suggested He makes no note of severe menopause symptoms I must remark, however, that he registers one case where cancer of the cervix occurred in a patient from whom he had removed two ovarian tumours of an innocent type. We may bear this in mind when considering cancer of the stump after hysterectomy

If we cannot, in relation to our present purpose, dwell profitably on the effects of double ovariotomy for tumours on menstruation, still less need we pause to consider the results of oöphorectomy for inflammatory diseases of the appendages or for checking the growth of a fibroid. In hysterectomy for fibroid, as was explained in the first lecture, the extirpation of the ovaries is nearly always easy and thorough when so desired. After oöphorectomy for any purpose he is bold who can ever feel certain that no ovarian tissue has been left behind. So I will say no more concerning the loss of both ovaries save so far as it regards hysterectomy for fibroids. I shall have to make use of the term "cervical menstruation," by which a periodical flow of blood from the stump of the cervix after hysterectomy is understood. The term is clearly convenient, but the precise nature of cervical menstruation remains obscure Bleeding from the stump of the cervix may be due in some cases to a polypus or to an interstitial fibroid in its walls, but then the flow is not necessarily periodical and regular and not associated with molimen, this was the case in one instance which I shall mention when speaking of bleeding in relation to diagnosis of uterine fibroids. It is certain that true cervical menstruation is not caused by overlooked polypi and interstitial growths

There are four questions to be solved in respect to the treatment of the ovaries in hysterectomy for fibroid We must firstly find out if the period always ceases after hysterectomy with removal of both ovaries, secondly, if their removal really involves very bad menopause symptoms, thirdly, if, when more or less be left of the ovaries, the period will continue regular, and lastly, if this preservation of the ovaries be wholly beneficial In order to throw light on these four questions I have carefully scrutinised 44 cases in my own operative practice between March, 1897, and July, 1901, rejecting several more where the after history is too short or otherwise unreliable. The cases may be grouped under three classes Class I., both ovaries removed, includes 25 cases, Class II, one ovary or part of one ovary not removed, 17 cases, and Class III., neither ovary removed, two cases. As I have found that the worst features of fibroid prevail between 40 and 45 years of age I have operated most frequently on patients at about that age (24 out of the 44 cases), leaving 12 whom I may call "young" and eight "old" One case, 50 years old, is included as still menstruating, all older cases are rejected

In considering the first question let us see if removal of both ovaries necessarily results either in immediate or at least in speedy and absolute suppression of the menstrual function. In my 25 cases where both ovaries were entirely removed no show of blood, with more or less molimen, occurred after convalescence in any save in four distinct exceptions. In one of these it appeared once six months after operation, in one it reappeared and still occurred, though irregularly, 13 months after operation, in one it was maintained two years, and in the fourth for two years and seven months though clearly beginning to cease. I have sketches of the parts removed in two of these cases and they show that the ovaries came away entire whilst the infundibulo-pelvic ligament was tied and divided well outside each ovary I have already explained that it is almost as difficult not to take away the ovaries entire in a hysterectomy as it is hard to extirpate them entirely when the fibroid uterus is left behind Thus suppression of the menses is not always immediate and absolute, for cervical menstruation *whatever that may be*, continues in some cases It always tends to cease, but it may do so, as will be presently shown, when one or even both ovaries are saved.

The second question is closely associated with the first. Does removal of both ovaries necessarily cause very bad menopause symptoms? In 21 cases, those where the menopause was complete after the removal of both ovaries, there were no symptoms whatever in seven, mild and infrequent flushings in seven, and severe symptoms in seven. In six of the last seven there were simply the usual subjective evidences of the change of life severe enough to give discomfort The seventh developed symptoms of persecutory mania a few months after the operation, they soon subsided. Her relatives then informed me, for the first time, that she had already suffered from persecutory mania In another case, of which I lost sight within four months after the operation, so that she is not included in the series, the patient an eccentric single woman aged 42 years, left home with her nurse after convalescence and has refused ever since to communicate with her relatives but the operation was not followed by shock and there is no reason to believe that she became insane. I find that Dr Crewdson Thomas registers two cases of mental symptoms, both in patients of unstable mind before the operation. But post-operative insanity is well known in general surgery Most of us have seen the specimen in the Museum of the Royal College of Surgeons of England of two cysts removed from the breast of a woman aged 51 years, with its history "The patient became insane soon after the operation."[5] Again, coincidence must be taken into account as well as other considerations in any example of insanity associated not only with operations but also with an operable disease where nothing has been done. I had two instructive cases in my wards at the Samaritan Hospital a few years ago One was a hysterectomy for fibroid where I used the serre nœud. The patient was violently excited on the second and third days, but ultimately calmed down and got perfectly well At the same time there was a middle aged woman in another ward with an ovarian tumour, probably dermoid, and to all outward appearances a simple case. On the day before that which had been fixed for the ovariotomy this patient had a violent attack of acute mania. She was removed and died a few days later with no symptoms attributable to the tumour Had I operated on the day before the attack and had the same fatal complication followed the ovariotomy I certainly should have charged the operation with causing the mania and I must have registered the case as a death *after*—always understood as *from*—ovariotomy

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[1] Lecture I was published in THE LANCET of Feb 7th, 1903 p. 350

[2] The After histories of 100 Cases of Supravaginal Hysterectomy for Fibroids, THE LANCET Feb 1st 1902, p. 294

[3] Pregnancy after Removal of both Ovaries for Cystic Tumour Transactions of the Obstetrical Society vol. xliv (1902) p 231.

[4] Die Krankheiten der Eierstöcke und Nebeneierstöcke, 1899 p. 907

[5] Museum of the Royal College of Surgeons of England, Pathological Series No. 4760.

The above cases show that we must be careful about throwing the blame on the operation and not too ready to attribute mental complications to the manner in which the ovaries are treated I do not deny that removal of the fibroid uterus seems to have a specially bad influence on a patient liable to mental disease. I know of two cases of acute mania after hysterectomy with application of the serre nœud one was reported by Dr Herbert Spencer at the Manchester meeting of the British Medical Association. I suppose that psychologists would include my own case just mentioned. The serre nœud always gave great pain, a fact which should be taken into account

We must now return to other points of interest in association with my 21 cases of hysterectomy where the menopause was complete after the removal of both ovaries Marked *corpulence*, developing rapidly, was noted in two cases, in one the patient was 30 years of age and in the other 50 years of age, but still menstruating Yet sudden accession of stoutness was also observed in a patient aged 40 years where one ovary was saved In respect to *age*, Dr Crewdson Thomas lays stress on youth in relation to the severity of the artificial menopause According to his tables "the younger the patient who has her ovaries removed the more severe will be her artificial menopause." Out of my 25 cases where both ovaries were removed four were under 40 years of age and of these one had severe symptoms, two had mild, and one had no symptoms at all, but these numbers are too small to be trustworthy Lastly, as in seven out of 25 cases of removal of the ovaries with the uterus, or 28 per cent., there were marked menopause symptoms I think that it is best to leave one or both ovaries if healthy, the more so as this conservative practice involves a far smaller wound on each side of the cervix But at the same time my experience shows that retention of the ovaries is not a matter of supreme importance and I find, as will be shown, that it does not guarantee the patient against a severe menopause. Hence I never scruple to remove the ovaries when there is the least suspicion of ovarian tumour or when there is marked inflammatory disease of the appendages

The third question is whether the period remains regular after hysterectomy when more or less is left of the ovaries.[6] In two out of the 44 cases I removed neither ovary One patient was 24 years of age, her period continued regular over two years after the operation The other was 45 years of age, I removed a tumour over 12 pounds in weight The period occurred three times after the operation and then ceased altogether This may have been a natural menopause In 17 of the 44 cases I left one ovary or in one case only a piece of one ovary In only four did the period persist, strange to say, one of these patients is phthisical, yet she remains regular over two years after the operation. In four there was irregular "show" whilst in the remaining nine, or nearly 53 per cent of the 17 cases, the period did not appear after operation, and in five out of these nine the menopause was distinctly severe. One of the five was 36 years old, all the others were between 40 and 45 years of age.

There is another factor, however, to be considered besides the preservation of the ovaries—that is, the preservation of a portion of the tissue of the uterus above the cervix as well. Abel and Zweifel[7] declare that it must be saved, and, what is more, it is a bit of the uterine mucosa above the os internum that must be left, else a severe menopause will come on at least within three years Dr Crewdson Thomas kindly informs me that he "was unable to get any evidence to support this view" American authorities ignore Abel Zweifel principles, for Kelly directs that the uterus be divided "in its cervical portion at a point just above the vaginal junction",[8] and Noble[9] considers that in Europe too much cervix is left. The results of panhysterectomy where no cervix is left have not been accurately recorded My own experience, to a certain extent, supports the Abel Zweifel theory For in six of the cases where the period was completely suppressed though one ovary was not removed I had cut the stump short entirely below the os internum. Persistence of the period was noted in three cases where one ovary was left and uterine tissue above the cervix was included in the flaps. But it also persisted in a fourth case where the stump was entirely cervical, whilst, on the other hand it was suppressed entirely in three cases where the flaps included uterine tissue and at the same time one ovary was left behind We must beware of making uterine flaps to accommodate ourselves to a theory which is not thoroughly proved by experience, and which, if true, can only confer a benefit of not very high value The practice is not without danger Large fleshy flaps are liable to slough, especially when the patient is reduced by anæmia. I lost two cases in this manner, whilst in some included in this series I observed symptoms during convalescence which gave me anxiety and other operators have informed me that their experience is similar

We have now to consider the fourth question · Is the practice of leaving the ovaries or sparing one ovary wholly beneficial? has it any disadvantages? and may it not be dangerous in certain circumstances? How far removal or saving of the ovaries influences the possibility of cancer developing in the stump we cannot say, but this matter will be considered presently Cancer of the stump seems unknown in British practice There can be no doubt, however, that the appendages when retained occasionally inflame Both Fritsch and myself have observed perimetritis after hysterectomy I suspect that this complication is usually due, not to inflammation of an ovary, but to an unhealthy tube The tubal canal after ligature and division lies exposed at the point where the tube has been cut through. Not only immediate, but also distant, inflammation might follow Dr G G Bantock recently removed a pyosalpinx which had developed seven years after hysterectomy for fibroid I always sacrifice appendages which seem unhealthy in order to avoid these undesirable after results, and I will indicate the precautions necessary in dealing with diseased tubes at a hysterectomy

The most serious objection to leaving the ovaries is the possibility of their becoming the seat of tumour I will presently speak of Littauer's case of blood cysts in an ovary removed about nine months after panhysterectomy It is not clear that the tumour in this case was a true new growth, it was small and seemed to be made up of dropsical follicles full of blood and perhaps it would have atrophied if left alone But Dr Bantock removed in July, 1895, the uterus of a woman, aged 46 years, for cystic degeneration of the cervix, operating through the vagina. Both ovaries appeared to be perfectly healthy Six years later the same operator removed from the patient an ovarian tumour weighing five and three quarter pounds, it had strong pelvic adhesions Thus we must remember that ovaries left behind may become subject to tumour That this is not in itself sufficient reason for removing them with the uterus, I admit, for experience has shown that the development of an ovarian tumour after hysterectomy is very rare. In some cases where they have been detected after that operation they might have existed already and been overlooked by the surgeon. The specimen which I exhibit shows that a small cystic tumour of the ovary might be overlooked by a too speedy operator In this instance a fibroid blocked the pelvis. I tied off the broad ligaments close to the uterine cornua and pushed them down at the beginning of the operation The only portion of this ovary which was in sight seemed healthy At the end of the operation I carefully inspected the relations of the stump and then I detected this ovary converted as you see into a cyst of some size concealed behind a coil of adherent intestine. It is easy to understand how a small tumour of this kind might be overlooked, especially in a case where the operator thinks it advisable to close the abdomen speedily The answer to the fourth question is that leaving the ovaries may entail danger, but experience shows that the risk is not great.

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[6] Howard Kelly (Operative Gynæcology, vol ii. p 370) advises that both ovaries be left in a subject under 40 years of age although menstruation ceases He finds that a severe menopause is thus avoided

[7] Referate über die Behandlung der Myome Centralblatt für Gynäkologie 1899 p 616

[8] Operative Gynæcology vol ii p 370 Let it be noted that Kelly finds that menstruation ceases though both ovaries be left (vide supra)

[9] Personal Observations concerning the Present Status of Gynæcology in Europe American Medicine, Oct. 12th 1901

In respect to the effect of removing or leaving the ovaries the question of previous hæmorrhage ought to be taken into account. With our present knowledge, however, I cannot see how we can draw any correct conclusions. Some women tolerate very little hæmorrhage, others seem almost the better for free bleeding going on for years. The cause of the menorrhagia is certainly not identical in all cases. Sudden cessation of the free bleeding of necessity occurs directly after hysterectomy, then there may or may not be some constitutional disturbance, but whether that disturbance be chiefly due to the sudden cessation of hæmorrhage or to the treatment of the ovaries we cannot determine with precision As far as I can make out the patients reduced by long and severe hæmorrhages suffer nothing at all by their cessation whether the ovaries be left or removed. Dr Crewdson Thomas, I find does not tabulate "hæmorrhage" in his series I fear that this dissertation on the ovaries has been very tedious I have earnestly endeavoured to get at the truth and therefore I did not set to work at these researches with intent to prove that it is best to remove the ovaries, or that it is best to leave them or that it matters little how we treat them. My results seem somewhat indefinite, but the indefinite may be the truth especially where there are so many complex factors to be taken into consideration

FAMILY HISTORY OF FIBROIDS.

According to my own experience a family history of fibroids is more interesting than important I find, like others, that a strong history is to be detected on inquiry in some families. In one remarkable instance the mother underwent hysterectomy for fibroid, while three daughters are subject to fibroid disease, in two it has remained stationary for several years, while in the third the tumour suddenly increased and I recently removed it The mother's sister died from uterine cancer and so did a fourth daughter, whilst there remains a fifth from whom a fibroid polypus was removed , there is at present a small growth in the cervix. This solitary family history is of no value for general considerations about the relations of fibroid to carcinoma. I must note one family history which I mentioned in opening the discussion on the Natural History of Fibroids at the Ipswich meeting of the British Medical Association in 1900 There were three sisters, all single, and all between the ages of 30 and 40 years In all the fibroid was interstitial or partly subserous and there was but moderate menorrhagia In two the tumour suddenly increased in size and I operated, with good results. In the third the tumour was the largest of the three six years ago , it remained stationary for four years and recently seems to have grown smaller and harder Hence family history is not a sound guide to prognosis and treatment

BLEEDING IN RELATION TO DIAGNOSIS OF UTERINE FIBROIDS.

Clinical experience has taught and proved that menorrhagia and intermenstrual hæmorrhage associated with a uterine tumour are strong evidence should there be good reason to exclude cancer, that the new growth is a fibroid A fibroid wholly subperitoneal does not cause hæmorrhage, whilst in the submucous variety bleeding is rarely if ever absent, and a little polypus is as a rule, a source of relatively free hæmorrhage The presence of a polypus or of submucous growths often accounts for menorrhagia when a large subserous fibroid is present. For evident reasons it is easy to overlook a polypus in many cases of uterine fibroid. In the days when ovaries were freely removed with a view to check the growth and bleeding of fibroids an overlooked polypus sometimes maintained hæmorrhage The same after-history was not rare when the serre-nœud was applied in hysterectomy for the cervix could not then be thoroughly explored, as is the case when the body is amputated by newer methods In 1892 I had under my care a woman, aged 47 years suffering from a cystic uterine fibroid of large dimensions[10] I noted before operation "small pedunculated polypus of cervix." I removed the tumour with tubes and ovaries entire and applied the serre-nœud to the cervix without troubling about the polypus. For more than a year after the operation there was occasional discharge of blood from the os externum. Before the operation there had been no menstruation for six months

In association with polypus the diagnosis of another tumour may be obscured A polypus may be overlooked in a case of ovarian tumour closely connected with the uterus , then its bleeding may induce us to mistake the ovarian tumour for a cystic or solid fibroid of the uterus On the other hand, a uterine polypus does not always cause bleeding

One case in my experience where bleeding obscured diagnosis had a very instructive history In the autumn of 1886 a woman, aged 39 years, was referred to me by Sir Spencer Wells. She had noticed for eight years a tumour which had increased in size very slowly We were of opinion that it might be an ovarian growth, but that if uterine removal would be more dangerous than leaving it alone The period was moderate In September, 1886, I cautiously explored the tumour through a short incision. It had a dull red capsule and, as far as could be made out by digital exploration, was absolutely incorporated with the uterus. In those days hysterectomy for large burrowing fibroids was attended with high mortality and we had in our minds Keith's observations about his first hysterectomy where a cystic fibroid was taken for an ovarian cyst.[11] I thought it best not to attempt the removal of the tumour I kept the patient under close observation for many years as I was not quite certain about my own diagnosis The girth of the abdomen increased until 1890 and then slowly decreased till the menopause in 1900 Dr C H J Lockyer, who saw her in the out-patient department of the Samaritan Hospital, noted that the menopause was preceded by severe hæmorrhage which lasted for six months Then the tumour began to increase rapidly in size, so in November, 1901 I operated once more. The tumour was a burrowing multilocular cyst of the left ovary so closely associated with the back of the uterus that I removed that organ as well, leaving the right ovary Strange to say, though I did so and though the menopause had been passed the patient had fresh menopause symptoms after convalescence. Dr Lockyer carefully examined the parts removed and he found in the uterus a small polypus. This growth was in all probability the cause of the hæmorrhage , there had been no menorrhagia previously to the menopause though the tumour had existed for years but the bleeding naturally suggested that the earlier diagnosis of uterine fibroid was correct.

Quite recently I removed a large ovarian cyst from a woman aged 66 years , she had suffered from hæmorrhages suggesting cancer, but a polypus was detected and removed Diagnosis was easy in this case but would have been otherwise had the cyst burrowed and come into very close connexion with the uterus After all, we are all aware that a polypus causes bleeding and therefore, if overlooked when associated with a tumour which does not set up menorrhagia no wonder we are puzzled. Dilatation of the cervix of a fibroid uterus in order to search for polypi is a dangerous procedure. But it must be remembered, I repeat, that a polypus sometimes does not cause bleeding

I operated last year on a single woman aged 46 years, who was suffering from a rapidly growing fibroid. The period was regular and always moderate and there was never any intermenstrual hæmorrhage. The tumour was a spherical myoma in the anterior wall of the uterus, undergoing mucoid degeneration. Dr Lockyer, in examining the parts removed, found a pedunculated polypus one inch long in the uterine cavity, attached near the fundus There was also a submucous polypus bigger than a pea In short, there ought to have been hæmorrhage[12] if the fibroid had known how to conform to the most elementary text book

I have already referred to a case where a polypus in the stump of the cervix caused hæmorrhage. In a case reported by Doléris[13] the menorrhagia for which the fibroid had been removed only increased, until a year later when he operated once more and dissected a small interstitial fibroid out of the substance of the stump , the bleeding then ceased We all know what a bleeding fibroid is and we are all acquainted with fibroids that never bleed. I need not dwell on them as I have determined to limit my remarks to exceptional conditions in relation to hæmorrhage or its absence as a symptom

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[10] Large Cystic Myoma of Uterus with Notes on Cystic Fibroids, Transactions of the Royal Medical and Chirurgical Society vol. lxxvi. 1893 p. 325 (After history p 332)

[11] Contributions to the Surgical Treatment of Tumours of the Abdomen, Part I p 25 (Oliver and Boyd 1885)

[12] The endometrium was smooth pale and healthy Perhaps that condition partly accounted for the absence of hæmorrhage

[13] Fibrome du Moignon après une Hystérectomie Abdominale Subtotale Annales de Gynecologie et d Obstétrique vol lvii (1902) p. 154

ASCITES AND UTERINE FIBROID

For some reason by no means evident ascites is rarely found in association with any form of uterine fibroid. In Keith's case[14] the complication developed after a fall, when the tumour was struck against a low railing Butler Smythe s patient was knocked down by a cart and much bruised on the abdomen, thighs, legs, and arms[15] Symptoms of peritonitis followed, 18 pints of ascitic fluid were withdrawn three months after the accident After four more tappings the fibroid was successfully removed The tumour consisted of two subserous growths and there were numerous omental and intestinal adhesions Thus in both these cases the free fluid collected in the abdomen as the result of an injury to a patient suffering from fibroid and not as a direct result of the tumour Blows on the abdomen injuring a fibroid may set up other kinds of local mischief An elderly patient of mine subject to this kind of tumour fell down a flight of stone steps and struck her abdomen. A soft mass developed in the interior part of the tumour with symptoms of peritonitis An ugly swelling formed, the skin was glossy and injected, and I feared sarcomatous degeneration I incised the swelling, which proved to be a suppurating hæmatoma, and much clot, followed by pus, came away The swelling vanished, the tumour was small and gave no trouble

I removed a fibroid uterus a year or two ago in a case where ascites was marked In this instance there were about eight pints of free fluid in the abdomen, yet no history of any kind of injury The tumour was a bulky, œdematous fibroid which had grown rapidly within six months of the operation and weighed 4 pounds 6 ounces. The omentum adhered strongly and its vessels were much dilated, whilst there was old standing disease of the appendages. Recovery was rapid There was no reason to suppose that the mere presence of the fibroid caused ascites in this case. Nor was it set up as the result of injury, but there was pelvic serous inflammation which extended higher The ascites and the marked œdema of the tumour were probably two results of some common cause not easy to explain. There was inflammation of the appendages a condition which does not tend to cause serous effusion The relation of pelvic inflammation to fibroid tumours is another question which will presently be considered

Howard Kelly goes so far as to state that ascites is a complication by no means rare in fibroid disease, if we take into consideration lesser as well as larger quantities of fluid.[16] He relates a case where he found nearly 12 pints in the abdomen, no history of any injury is given Kelly states that "the cervix was jammed down on the pelvic floor by hard uterine tumours filling the pelvis." Perhaps œdema played a share in causing ascites The cause of ascites, says Kelly, is not known and I think that we must agree with him. There was evidence of lymphatic obstruction in my own case, but this in itself can hardly cause ascites. In fibroid disease where free fluid is conspicuous for its rarity, marked obstruction of the lymphatics of the broad ligament is perhaps plainer to the eye than in the case of any other tumour, whilst in ovarian growths free from œdema and from dilatation of lymphatics in the adjoining broad ligament ascites is not rare. Mechanical irritation cannot explain the rarity of the complication in question. Cannon-ball like ovarian tumours (the exogenous cysts of pathologists) are often associated with ascites, but cannon ball uterine fibroids (groups of subserous myomata) are often found in a perfectly dry peritoneal cavity Let us remember that ovarian dermoids, which certainly cause mechanical and yet worse forms of irritation, are rarely complicated by ascites, whilst free fluid is proportionately common in true fibroma of the ovaries even where its surface is smooth[17] Free papilloma is always associated with ascites.[18]

Infection cannot explain the rarity of ascites in fibroids, for septic changes in these tumours are not unknown, yet it is not recorded that they are complicated by ascites, whilst there was no evidence of infection of the tumour in any of the cases of ascites which I have just related. Septic changes are frequent in ovarian dermoids, yet, as in these uterine growths, it is rare to find them associated with dropsy In short, the rarity of ascites in fibroid disease of the uterus remains unexplained and its cause in exceptional cases is obscure. I admit that true ascites and pure passive hydroperitoneum have not been carefully distinguished in clinical records, though ascites as a symptom in visceral disease was manifestly absent in the cases which I have brought forward The subject deserves more attention from general pathologists and physicians.

ABSORPTION OF FIBROIDS.

In 1893 when preparing a monograph on this subject[19] I was able to discover about 50 relatively recent reports of which under 40 were worth consideration. Since that date we have heard little about "absorption" of fibroids until last summer when Professor Murdoch Cameron once more turned our attention to this subject[20] "I can remember," said he, "quite a number of cases which were sent to me as fibroid tumours of the uterus, but which with rest and potassium iodide eventually disappeared. *These cases very closely resembled fibroid growths*" This observation was the starting point of correspondence between Professor Cameron and myself[21] He replied to my inquiries about the clinical symptoms of these cases, saying that "on examination an extensive hard swelling was found in each case behind the uterus and extending backwards to the sacrum. Its outline could not be defined." Professor Cameron suspects them to be inflammatory or traumatic in origin,[22] but adds that as there was no operation he could not give their pathological characters He felt sure that they were not cases of impacted fibroid growths of the uterus and so he treated them with drugs and rest. The hard masses slowly disappeared Though sure that the swellings were not "impacted" fibroids, Professor Cameron implies by the use of that term that they were fixed. No doubt some of the alleged cases of absorption of fibroids were really instances of disappearance of parametric exudation fixing the uterus, still, in others the uterus was reported as moveable. For my own part, I was never a great believer in reported cases of rapid "absorption" of fibroids. Putting aside shrinkage after necrosis there seems to be no such thing as a 'quiet" and molecular disintegration of a fibroid, the molecules being carried away by the blood vessels and lymphatics and not discharged into the vagina.

Kleinwachter, Kidd, and John Phillips each report a case of disappearance of a fibroid after delivery I collected these three cases and reported them in my monograph Professor Cameron believes that it is the capsule, or rather the surrounding normal uterine tissue, that undergoes involution during the puerperium He further declared that he "has never observed the absorption of the original growth which simply returned to about its original size" Many of us will agree with Professor Cameron who at least indicates a source of fallacy Yet the three observers just mentioned are men of authority

There remains another source of fallacy in respect to the absorption of fibroids after delivery Might not the fibroid have been expelled in some instances during parturition and have been overlooked? Boissard[23] recently reported a case where the placenta came away spontaneously after a normal labour It was preserved and examined by a midwives' class as a matter of routine A fibroid polypus as big as a hen's egg was discovered about three inches from the edge, with its fundus firmly adherent to the chorion and its pedicle torn through Thus a tumour as big as a hen's egg may be delivered unobserved with the placenta. Let us remember that a submucous fibroid might be discharged in that manner, mistaken for part of the after birth by a careless nurse, and then thrown away A gynæcologist might have detected the tumour during or before the pregnancy Supposing that he did not attend the labour yet had the opportunity of examining the patient after convalescence he would be liable to come to a false conclusion about the vanished fibroid. The disappearance of a correctly diagnosed fibroid may be the result of necrotic changes and in association with that complication I shall presently refer to a case related recently by Stouffs of Brussels where a necrotic fibroid was removed three months after delivery Lastly, I believe, as I did in 1893, that destructive *inflammatory* processes account for the disappearance of fibroids in most cases where there was no pregnancy and that this was clearly the explanation in my own case [24] Mr Skene Keith and Dr. Gerald Garry[25] are active supporters of electricity in the treatment of fibroids. Mr Keith declares that he has seen more than 20 fibroids disappear after Apostoli's treatment. But Dr Garry admits that out of 70 cases of uterine fibroids under his treatment he can report "but two in which the shrinkage almost amounted to disappearance." In one of the two the disappearance followed "a violent inflammation which lasted over three weeks," not due, according to Dr Garry, to the treatment but to gross carelessness on the part of the patient.

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[14] Contributions to the Surgical Treatment of Tumours of the Abdomen part I case 40 p 96. The patient was tapped 44 times a total of about 250 gallons being removed The case was remarkable for many reasons and deserves study

[15] Notes on a Case of Profuse Hydroperitoneum complicating Uterine Fibroids Brit Med Jour vol. ii, 1900 p 1772.

[16] Operative Gynæcology vol ii p 901

[17] See cases of Fibroma of the Ovary and Ovarian Ligament removed by Operation Transactions of the Obstetrical Society of London, 1895, vol xxxviii p 187

[18] Even if not malignant, as in a case when the patient was alive and quite free from recurrence several years after I removed two enormous masses of papilloma springing from the broad ligaments Pleural as well as peritoneal effusion occurred in the case of papilloma of the tube reported in Allbutt and Playfair s System of Gynæcology p 606 the patient was well 16 years after the operation

[19] On the Absorption of Fibroid Tumours of the Uterus with a Report of a Suspected Case Transactions of the Obstetrical Society of London vol xxxv (1893) p 250

[20] The Past and Present Treatment of Uterine Fibroids Brit. Med Jour Oct. 11th 1902, p 1153

[21] Ibid Oct. 18th (p. 1291) and 25th (p. 1372) 1902.

[22] Dr J A. Shaw Mackenzie suggests that the tumours might have been inflammatory in Lancereaux and Legrain s cases, ibid Nov 8th, p 1564

[23] Delivrance et Fibrome Bulletins de la Societe d Obstetrique de Paris, March 20th 1902, p 169

Whilst rapid absorption is so doubtful there can be no doubt that many fibroids gradually vanish. The process which brings about this result is probably necrosis, or more strictly speaking, the aseptic necrobiosis not rare in fibroid tumours. The source of nutrition fails and the tumour softens and becomes infiltrated with fluid which disintegrates its fibres.[26] When extreme shrinking results the condition may be taken for absorption. The same change no doubt causes the disappearance of fibroids at the menopause, as is usual though not constant. Professor Cameron sees no reason why fibroids should not by some at present unknown means be made to disappear Perhaps in some of the cases cured by drugs the tumour was really a fibro-myoma and necrosis was induced by the action of the drug. The same may be said of treatment by electricity It is now advisable for us to consider this question of necrosis independent of diminution of the fibroid.

NECROTIC FIBROIDS

Necrosis of a uterine fibroid is a change of great clinical interest. It is usually accompanied by distinct impairment of health, whilst the advent of anæmia in a case where menorrhagia is absent is, I find very characteristic Dull pain is felt in the pelvic region and the tumour is often tender to the touch The temperature is usually, but not always above normal and the pulse is quick and weak. On examination the tumour is found enlarged and softer than before the symptoms just described set in. Obscure fluctuation is often to be detected, no sloughing structure presents at the os externum, and the fornices are free. There is tenderness in the pelvic and hypogastric regions. Pathologically this change consists in a quiet death of the tissues without the agency of germs, infiltration of red fluid full of septic organisms sometimes observed is no doubt secondary The tumour becomes infiltrated with fluid which softens and even breaks down its fibres, this infiltration is sometimes erroneously named 'œdema, it is ultimately followed by shrinkage of the mass. Thus, as I have remarked, many cases of rapid "absorption were instances of shrinking necrotic tumours The dead fibroid remains in its place, at least, for our present purpose I may be allowed to insist on that clinical limitation. For sloughing and expulsion into the vagina are not quite what we understand by necrosis. The same may be said of discharge of the growth through the abdominal walls after the development of abscess, as described by Olshausen, but I suspect that in some such cases there is first an injury [27] then a suppurating hæmatoma develops, as in a case of my own, to which I referred when speaking of ascites after injury to a fibroid. An adjacent fibroid growth might easily loosen until it lay in the abscess. Olshausen considers that it is the capsule, not the tumour, that sloughs in such cases. In necrosis of a fibroid as a rule the capsule remains healthy, but the tumour sometimes discharges its substance into the vagina, as in Schmauch's case.[28] Perhaps it is advisable for us to find out what kills fibroids Abuse of ergot has been given as a cause, and I think on reasonable grounds in some cases. In more than one instance under my observation electricity had been tried for the cure of the tumour, but I admit that it is difficult to determine cause and effect Necrosis it would appear, usually occurs when the patient's general health is impaired or when the tumour is badly placed for nutrition. General ill health may unfavourably influence a fibroid hitherto innocuous, whilst a bleeding tumour, by impairing the general health, may insure its own destruction. Pregnancy without doubt may cause necrosis of a fibroid. Stouffs of Brussels[29] has recently reported a case where a subserous myoma was found to be necrotic when removed three months after delivery [30] The patient complained that the tumour was tender, as was also observed in at least two instances of necrotic fibroid in my own practice, which I shall presently relate This tenderness is of importance, it is remarkable how rare it is to find a uterus tender to touch, so unlike the appendages which bear handling badly even when only a little inflamed. Adhesions of intestine, rare in fibroid disease, could not very well cause necrosis, but in one case under my observation they were beginning to set up true septic changes in a fibroid already necrotic

I have operated on several cases of necrotic fibroids, some of which deserve consideration In two general malnutrition seemed to be the direct cause of the complication.

The first patient was a sickly neurotic single woman, aged 45 years. When 19 years of age she suffered severe shock in a railway accident and was laid up for 20 years. She never regained perfect power over the bladder For two years the patient had menstruated freely, clots and membranes had been expelled about eight times during that space of time, but there were no exhausting hæmorrhages. The uterus rose to a few inches above the pubes and came down into the pelvis, it was tender to touch, especially below The temperature was about 99° F at night I operated in November, 1901, sparing both ovaries. The tumour was a necrotic submucous fibroid in the posterior wall of the uterus, it weighed only 14 ounces but was very bulky A year after the operation the patient was in good health, the period was represented by a little dark "show" every fortnight.

The second patient was a neurotic spinster, aged 29 years, subject to phthisis which had abated under suitable treatment a year previously when a fibroid was diagnosed. The tumour rose to about four inches above the pelvis. It became tender with rise of temperature. Then attacks of retention of urine set it. The period grew a little more copious than before for a reason detected after the operation. I operated in February, 1899, sparing the left ovary The uterus contained a characteristic fibroid as big as a cocoanut yet weighing only one pound one ounce, it was very soft and contained much semi fluid yellowish material. A hard fibroid as big as a cob-nut projected under the mucous membrane immediately above the os internum and was doubtless the cause of the menorrhagia. The patient's general health was greatly improved a year later

General malnutrition seemed to account for the necrosis of the tumour in these cases. The cause may in other instances be local, the tumour being placed so as to interfere with its own nutrition. I will relate a case of the kind when I come to speak of the "cup-and ball" fibroid which fits closely into the pelvic cavity The commonest cause of necrosis seems to be a combination and reaction of general and local influences—above all, hæmorrhage with its consequence, anæmia.

In 1897 I operated on a woman, aged 42 years, who had suffered for two years from severe menorrhagia and inter menstrual hæmorrhages and was extremely anæmic. There was rise of temperature at night, which may mean clot retained in the uterine cavities, inflammation of the appendages, or, as in this case, necrosis. Both ovaries were removed as they showed signs of cystic degeneration There was a big necrotic fibroid in the posterior wall of the uterus The patient rapidly regained her health.

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[24] Loc. cit. The patient had a fall and the abdomen was struck over the tumour See also Schmauch's case of spontaneous *morcellement* (Mortifikation und Spontan-elimination eines grossen Myoms) Central blatt für Gynäkologie, No 45 1902. p 1217

[25] Brit. Med. Jour Nov 8th, pp. 1564 1565.

[26] Schmauch, loc. cit.

[27] Die Abdominalen Myom-Operationen. Veit, Handbuch de Gynäkologie, vol. ii. p. 748.

[28] Loc. cit. Note that in Schmauch's case there was anæmia without hæmorrhage and that the fragments of the necrotic fibroid were not septic they recalled the aseptic intra uterine maceration of a retained fœtus.

[29] Fibrome Utérin en voie de dégénérescence nécrobiotique post partum, Bulletin de la Societé Belge de Gynécologie et d'Obstétrique, vol. xiii. 1902-03 p. 71.

[30] Some cases of alleged "absorption" of a fibroid after delivery may be explained this way The necrotic tumour becomes softer and ceases to enlarge.

In several cases of multiple fibroids which I have removed where the patient was much reduced by menorrhagia some of the growths were necrotic.

Adhesion of intestine could not very well cause necrosis but might set up septic changes in a fibroid already necrotic This was the case in a remarkable instance which I spoke about in association with the relations of the round ligament to fibroids The growth in this case was so placed that its vascular supply was inadequate for its support and thus necrosis occurred Adhesion of intestine caused more prejudicial changes In no case could I trace necrosis of the fibroid to inflammatory disease of the ovaries and tubes That complication did not exist in any of the cases above mentioned, whilst in none of the instances of inflammatory disease of the appendages presently to be related was there any necrosis of the fibroid. As long as the necrotic fibroid is removed so that the knife passes below it and none of its substance touches the peritoneum there is no special danger in operating upon it, nor are its semi fluid contents always septic, so that if spilt during removal bad results do not always follow But sometimes it is otherwise, and in the days when I used the serre-nœud I lost a case where some turbid fluid escaped into the peritoneal cavity during hysterectomy Necrosis seemed due to general ill health in this instance The fluid was certainly septic In any case where general infection of the uterus is evident (as in removal of a fibroid uterus in the puerperium) panhysterectomy is indicated In conclusion, it is clear that small necrotic fibroids cause more constitutional disturbance than a trifling amount of menorrhagia can account for Such cases often justify hysterectomy when the fibroid is small, as it is a source of general ill health The surgeon however must not urge the removal of a small fibroid on the plea that it may become necrotic.

CUP AND-BALL FIBROID

The term "cup-and ball myoma" has been applied by Howard Kelly[31] to a globular fibroid tumour which fits more or less firmly into the pelvis It is mainly of interest on account of the difficulty experienced by the operator in drawing it up, whilst the securing of the broad ligaments and uterine arteries is never easy when the fibroid is spherical and developed chiefly in the lower part of the uterus The necessary manœuvring cannot be satisfactorily described in a lecture nor can it be performed by any fixed rule, as Kelly implies The most accessible broad ligament must be tied and divided, then by traction towards the opposite side aided by more or less rotation the uterine artery is reached and ligatured at this stage, in many cases the tumour is free enough to be drawn up, so that the opposite broad ligament and after it the corresponding uterine artery may be secured, the cervix being divided last. Sometimes a corkscrew must be used to draw up the tumour In most cases, however, Kelly's method of cutting through the cervix after the first uterine artery has been ligatured and divided, securing the other uterine artery, dividing it and ending this stage of the operation by tying and cutting through the remaining broad ligament, is easier than the more usual plan of working through both broad ligaments to the cervix The latter is the better plan where there is a bulky vascular tumour in the fundus with a narrow cervix and wide broad ligaments easily reached below the morbid growth.

The cup-and ball fibroid is, as the above remarks show, chiefly known for the difficulties which it offers to its removal. The most important question as it directly concerns the patient s interest, is, Why should it be removed at all? The truth is that many fibroids of the body of the uterus pass through this cup-and ball stage before they are detected by the patient or by the medical attendant. If the tumour be light and if it does not invade and therefore shorten the broad ligaments so as to impair its own mobility it will cause no inconvenience. Ultimately, when the patient is lying on one side or stooping, it will roll upwards above the pelvic brim and settle for good in the abdominal cavity These cases are often seen in out-patient departments and in private, they largely make up the series of fibroids which can be pushed up with a clinical history of subsequent comfort or which can be kept up more or less by a pessary Whether they grow larger *after their ascension* or give trouble through menorrhagia is not to the point. Not rarely, on the other hand, does the cup-and ball fibroid give rise to special troubles in its vicinity, and it is one of the forms of uterine myoma that tends to arrest its own development by changes prejudicial to the patient's general health. A good example of necrotic changes in a cup-and ball fibroid occurred this year in my own practice

The patient was a single woman 41 years of age She was thin and anæmic, but hardly through loss of blood, as, though the "show" at period had increased during the past six months, it was *not more* profuse than is often seen in association with perfect health, and no bleeding ever occurred between the periods Dr F J McCann detected a tumour when she consulted him for fever and mucous vomiting which had continued for three weeks, there was also sharp pain in the hypogastrium and left iliac fossa sometimes set up by micturition The upper part of the mass lay half way between the pubes and the umbilicus. The cervix lay completely to the left of the lower part of the tumour which seemed to occupy the right fornix I operated on March 13th There were no adhesions and no evidence of inflammation external to the tumour, which was quite spherical. Its lower hemisphere fitted firmly into the pelvic cavity, whence it was extracted with difficulty I succeeded in reaching the broad ligaments and saved the ovaries, the right was plump and bore a large corpus luteum, the left was flattened out by pressure and atrophied. After turning down an anterior peritoneal flap I managed to ligature the uterine vessels which lay in an awkward position between the prominent under surface of the tumour and the short cervix. The rest of the operation was easy The tumour which I now exhibit (weight two pounds, two ounces) consists of the *greater part of the body* of the uterus with a spherical necrotic fibroid in its posterior wall. The degeneration was probably due to the position of the tumour, which prejudiced its nutrition, its lower part pressing against the broad ligament, the squeezing of the left ovary against the pelvic brim in part accounted for the pain, whilst the necrotic changes impaired the patient's health She declared that she had felt very ill for some months before the tumour was removed, whilst seven months after the operation her general health was excellent. The majority of cases of small spherical fibroids lying in the pelvis neither get impacted nor necrotic, therefore the subject need not further detain us.

FIBROID UTERUS AND DISEASE OF APPENDAGES.

Oöphoritis, salpingitis, hydrosalpinx, pyosalpinx, as well as simple perimetric adhesions, may exist in association with uterine fibro-myoma. Inflammation of the tubes and ovaries cannot cause a fibroid to develop or if it can be shown to do so in some cases it is no essential cause. We often see appendages, perfectly healthy and innocent of any "pinx" or 'itis," associated with every type of fibroid. On the other hand, inflammation of the appendages, puerperal, gonorrhœal, &c., may occur in a patient subject *to this* common form of uterine disease Dr C J Cullingworth[32] believes that the complication is always a coincidence. In 100 cases in his own practice salpingitis was not once met with, an experience which seems exceptional. He fails to see how a fibroid, except *in the* comparatively rare instance of its having become septic, can be directly responsible for a condition like salpingitis which so far as we know at present is always the result of infection We must all of us agree with the latter part of Dr Cullingworth's argument—the statement that salpingitis is due to infection Necrotic fibroids are often not septic, but on the other hand they not rarely contain germs Still, in none of the cases of necrotic fibroids of which I have been speaking was there salpingitis, whilst in none of the cases of salpingitis (of which more will be said presently) was there necrosis of the fibroids.

Necrotic fibroids, then, as we learn from experience, do not necessarily infect appendages, whether they themselves be originally septic or free from germs. But Dr Cullingworth implies that only a septic uterus can infect the tubes and ovaries previously healthy I think that in some cases where there is disease of the appendages they have been infected, not by a septic uterus, but by septic germs pent up in the uterus We often find in the uterine cavity an accumulation of sanious fluid and broken down endometrium which cannot freely escape owing to obstruction near the os internum, but though these products of disease cannot get out germs may get in, perhaps introduced by the sound, as in a large class of cases which Matthews Duncan grouped under the common heading "chronic gynæcology" It is easy to understand how the tube might thus become infected by the contents of the uterine cavity This probably occurred in a case of bilateral pyosalpinx which will presently be described In some cases of pyosalpinx (which is often a primary disease as far as the tube is concerned) it is possible that a hydrosalpinx first developed and that its contents afterwards became purulent owing to infection from adherent intestine This cannot always be the explanation—as, for instance, in three cases in my own operative practice where there was pyosalpinx without any adhesions. These cases and others induce me to believe that infection is often derived from the contents of the uterine cavity I repeat that the tubes and ovaries remain quite healthy in a majority of cases, and so far my experience is more like that of Dr Cullingworth than that of Twambly (Boston) and Lawson Tait who imply that this complication exists in 50 per cent of all cases of fibroid.[31]

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[31] Loc. cit., vol. ii. p 389

[32] An Analysis of 100 Cases of Uterine Fibro-Myoma, Journal of Obstetrics and Gynæcology of the British Empire, vol. i p. 28 last paragraph

I need not dwell on numerous cases in my own experience where the ovaries were imbedded in soft perimetric adhesions and the tubes congested, if not inflamed. This condition does not demand their sacrifice. In six cases of uterine fibroid I encountered disease of the appendages sufficiently severe to increase appreciably the difficulties and dangers of an operation. Fortunately, no ill results followed in any case. In one the inflammatory disease was bilateral and severe, the fibroid was small, so that the appendages were removed and the uterus was left behind. In five hysterectomy was performed, and it is important to note that in three out of the five the inflammatory disease was unilateral and I was able to save one ovary

The first patient was 47 years of age, subject for several years to menorrhagia and some hypogastric pain. There was a history of perimetritis after delivery when the patient was 22 years of age, since then she had never been pregnant and suffered from no pelvic symptoms. Dr W B Addison of Thornton Heath detected fibroid enlargement of the uterus. I discovered a tender tense, irregular mass behind an enlarged uterus and operated in November, 1897 I found bilateral hydrosalpinx with ovaries the seat of old inflammation There were multiple adhesions of omentum to the bladder, uterus, and appendages. The fibroid growth was distinct but hardly rose above the pelvic brim. I removed the diseased tubes and ovaries without any trouble In May 1902, four and half years after the operation, Dr Addison informed me that the patient was in perfect health and had never menstruated since her recovery The fibroid seems to have remained stationary

In one patient where I removed a bleeding fibroid over four pounds in weight there was a large pyosalpinx on the right side. I ligatured the right ovarian vessels and took away the dilated tube unemptied and attached with the ovary to the uterus. This is the right manœuvre whenever practicable. The left appendages perfectly healthy, were saved. There was no feverish reaction during convalescence and the patient was quite well two years later

In a *second* case I also discovered a pyosalpinx on one side (the left) and saved the opposite appendages, but owing to the shape of the uterine tumour I saw that it would be safer to take away the pyosalpinx separately, which I did without spilling any pus Two years later the patient was in very good health.

The third case where I saved the appendages on one side was curious, the patient was a very anæmic woman, aged 41 years. She was delivered of her only child 24 years before the operation, necrosis of the tarsal bones of the right foot occurred during the puerperium and the foot was amputated. For six years she had been troubled with severe hæmorrhages and occasional attacks of pain and tenderness. When I examined her there were much pain and all the symptoms of pelvic peritonitis There was pyosalpinx on the left side. I found that it was safer and easier to remove the diseased tube and ovary first and then the uterus was amputated, the right appendages being saved. Three years later the patient was in good health.

In the three cases just related there was pyosalpinx but there were no adhesions The source of infection could hardly have been on the peritoneal side, as when an adherent hydrosalpinx suppurates I suspect that in the third the infection might have arisen from decomposing material in the uterine cavity

In two cases the disease was bilateral and both appendages had to be removed with the fibroid uterus

The first patient was 38 years of age, she aborted about the *fourth* month four years before operation. For five months she had been laid up with severe abdominal pains when I operated and removed a bulky fibroid 4 pounds 12 ounces in weight. The tubes were diseased and the right ovary showed signs of early cystic degeneration The cause of the inflammatory disease of the appendages was not clear There were no adhesions, as in the three previous cases Infection might well have arisen from the uterine cavity

The second case has already been noted when I spoke of ascites associated with fibroid. The patient was 43 years of age and single, and I could not find out any cause for the chronic diseases of the appendages which, on the other hand, may have played a share in producing the ascites. In this case there were free omental adhesions to the right appendages and to the tumour The patient remains in good health nearly two years after the operation.

The operator should never leave a suspicious tube behind, its cut surface is a source of germs and favours adhesions The aspirator is advisable to empty an adherent pyosalpinx which cannot be detached and drawn up without fear of rupture. But when the dilated tube is free it is best to wrap it in sterilised gauze after separating it from the ligatured ovarian vessels and either to take it away unopened with the uterus or else to tie it in two places close to the uterine cornu and to cut between the ligatures and remove it separately with the ovary Forceps should not be used for this purpose, as they will be contaminated by the pus, whilst as both uterus and tube have to come away the ligatures will do no harm. I think that I have said enough to show that inflammatory disease of the appendages is of sufficient frequency in cases of uterine fibroid to be taken into account both as regards the medical and surgical treatment of that complaint.

Having spoken of inflammatory disease of the ovaries a word or two on tumours in relation to uterine fibroids will not be out of place. A considerable number of cases of ovarian cyst coexistent with fibro-myoma of the uterus have been recorded.[34] But in the great majority of cases each of those forms of tumour exists by itself and it would be frivolous, in the face of clinical and pathological evidence, to attempt to make out that uterine fibroids are caused by ovarian cysts or that the cysts are the cause of the fibroids. Fibroma of the ovary is not a very rare disease and is independent of uterine fibroid, it is significant that in the few recorded cases of pure myoma of the ovary, including one where I was the operator and where the ovary was cystic, there was no new growth in the uterus, contrary to what might be expected. Malignant ovarian tumours also have no associations, save coincidence, with uterine fibroids. Lastly, no uniform change has been discovered in ovaries associated with uterine fibroids which could imply that it played any part in causing the development of the fibro-myoma Several foreign authorities as well as Mr A Corrie Keep and myself have examined numerous ovaries associated with uterine fibroids. We have all come to the conclusion that any marked change seemed to be due to the pressure of the uterine tumour which may reduce the ovary to a flat ribbon, or to obstruction to the circulation in the ovary, which sometimes causes blood cysts to develop I have found hæmatoliths[35] in ovaries associated with uterine fibroids and fibroid disease of the uterus existed in the case recorded by Hector Mackenzie,[36] the discoverer of ovarian hæmatoliths. Blood cysts it may here be observed, have been detected by

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[31] See Stanmore Bishop Uterine Fibro-myomata," p. 49 Twambly was speaking specially of interstitial fibroids.

[34] Mrs. Scharlieb (An Analysis of 100 Cases of Fibro-myomata Uteri Journal of Obstetrics and Gynæcology of the British Empire October 1902, p 330) detected cysts of one or both ovaries in 23 per cent. of these cases The cysts must however have been in most of these cases dropsical follicles or as the authoress herself states "changes due to interference with the pelvic circulation and with the nutrition of the ovaries by the fibroids." Experience shows that out of all cases of fibroid far less than a quarter have coincident cystic tumour properly so called

[35] Blood Concretions in the Ovary Transactions of the Obstetrical Society vol. xl 1893 p 214 The specimen is in the Museum of the Royal College of Surgeons of England, Pathological Series 4482, C

[36] Blood Concretions in the Ovaries Transactions of the Pathological Society of London vol. xl., 1889 p 215

Olshausen and Littauer[37] in ovaries left behind after removal of the uterus, they seem to be a result of disturbance of circulation due to tying the uterine branch of the ovarian artery close to the cornu. They concern not the pathogenesis of fibroids but rather the treatment of the ovaries in hysterectomy which we have already considered The changes seen in the ovaries in some instances may play a part in aggravating hæmorrhage or otherwise, but this question remains obscure.

LARGE VESSELS IN FIBROIDS THE SOUFFLE.

The vessels in a large fibroid of old standing are often extremely dilated. Therefore a souffle may be heard on auscultation, which, of course, must not be confounded with the pulsations of the abdominal aorta audible through any solid tumour In two quite recent cases the souffle was loud, transmitting in one a thrill to the palm of the hand placed on the surface of the tumour In the other the sound as heard through the stethoscope simulated the souffle of pregnancy perfectly The patient was a married woman, aged 30 years, but she had not been pregnant for ten years She was extremely anæmic and much reduced in health from profuse floodings The cervix was small and firm and for other reasons pregnancy was improbable, but I could well understand when I auscultated this case how in slightly different circumstances pregnancy might reasonably have been diagnosed Thus the cervix might have been soft and a spherical outgrowth in the lower part of the tumour might have simulated a fœtal head The tumour weighed over four pounds and the veins were enormous One ovary was left, but the case is too recent for drawing any conclusions about the effects of the preservation of ovarian tissue. There have been no troublesome after effects up to the present

I have dwelt on the souffle, but not solely as a curiosity It means that there are big vessels and their existence implies increased risk of the hysterectomy A big vein should be carefully tied on its proximal side Clamping, invaluable as a temporary resource in the course of the operation, inflicts much damage on the tissues immediately surrounding the vein. Hence it is better to avoid clamping a big engorged vein on its proximal side, or if that be actually necessary the vein should be ligatured below the clamp and the tissue bruised by the instrument carefully trimmed away The ligature should never be stout No 2 silk will answer well for a vein Careless clamping, needless handling of structures on the proximal side of the line of incision, and stout ligatures not only increase the chance of inflammatory exudation, parametric abscess, and intestinal adhesion, but when vessels are large these practices naturally promote thrombosis and embolism.

An Address

ON

CERTAIN PRINCIPLES AND METHODS IN THE SURGERY OF THE PARALYSES OF CHILDREN

Delivered before the Huddersfield Medical Society on Nov 6th, 1902,

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MR. PRESIDENT AND GENTLEMEN,—The subject upon which I venture to address you is one which has interested me for many years and is well worthy of careful study In these days, strange to say, when so much is written on every branch of medicine the surgery of the paralyses of children has received but scant attention and that only in odd places and at odd times. There are many reasons suggestive of the explanation. To the general surgeon the subject presents many difficulties It abounds in detail and demands a patience that only enthusiasm can supply Operations, if they are performed, only attain their purpose when followed by prolonged, intelligent, and carefully thought-out after treatment, and this involves not only a practical knowledge of the sequence of events but a very real faith in certain fundamental principles Short of this faith the surgeon is half hearted in his measures and the patient and friends lose that confidence which inspires hope. The surgeon therefore, should know the theory of his subject and be able definitely to direct practically the mechanical details which are the accompaniment of all operative aid What would we think of a physician who, having made a diagnosis, leaves his unfortunate patient in the hands of a chemist who is asked to administer what he thinks to be an appropriate drug? And yet this is not a travesty but the grim experience of hundreds of paralytic cripples in this country They pay their consultation fees and are then despatched to the instrument maker who is merely desired in the most general terms to fit on a suitable "appliance" Is it any wonder, therefore, that quackery abounds and that the unfortunate patient is, so long as money lasts, relegated to suits of armour bristling with screws and ratchets? The treatment of paralytic deformities is both mechanical and operative. The one is inseparable from the other and the surgeon who is not a mechanic is little better than the old orthopædic surgeon who, without any operative education, looked upon a complicated splint as the universal panacea To the late Mr H O Thomas belongs the credit of having preached the gospel of simplicity as applied to splints In paralytic affections his only implement was a tenotome and yet so skilful was he in mechanical resource that he rarely failed to rectify the most obstinate deformity From him I learned the value of rest in restoring power to over strained muscular fibre and the immense importance of postural prophylaxis in relation to deformity Since his death many important advances have been made on the operative side but the mechanical principles he enunciated are in advance of much of the teaching of the present day

ACUTE INFANTILE PARALYSIS

I will deal first with certain aspects of acute infantile paralysis viewed chiefly from its clinical side We all recognise the great importance of this subject, if only from the fact that next to rachitis it is the most prolific source of deformity, a deformity which never disappears spontaneously Whenever we meet with a paralytic deformity with shortened muscle or diminished joint movement it can be safely assumed that, either from lack of knowledge or from neglect, a condition has arisen which could quite well have been avoided Joint malposition due to muscle shortening or contracture arises from insufficiently opposed muscular action or from faulty posture due generally to the influence of gravity Either condition the surgeon's art should easily enable him to prevent Provided we know in any given case the etiology of its deformity we must not be content to meet it half way but should endeavour to prevent it from ever making its appearance. In a completely paralysed arm the deformity to prevent is one of extension of the wrist and elbow and partial flexion of the fingers At the ankle it is extension and inversion or eversion, at the knee flexion, at the hip flexion, often with external rotation. The causation of these deformities has been often discussed, but of one thing we may rest assured and that is that the action of antagonistic groups is neither the sole cause nor even the most important etiological factor This is evident when we note that deformities occur when paralysis of all the muscular groups is complete, and, furthermore, that when paralysis is incomplete the shortened or contractured muscles are sometimes found to be the paralysed ones We must, indeed look upon several factors as instrumental in the production of paralytic deformities, such as gravity, body weight, the shape of articular facets, and, to a lesser degree, unbalanced muscular action To take an example if all the muscles governing the foot are paralysed and walking is not attempted the deformity will be precisely that which any foot assumes when left unconsciously hanging during anæsthesia—that is an equino varus, the fixation and muscle-shortening being quite secondary If, however, walking has been the habit there will be an equino valgus or calcaneus in response to superincumbent body weight applied in the one case to the inner side of the foot or in the other to the back of the heel. Similarly if crutches have been used and the knee has been allowed to swing flexion is the result, which is the position naturally assumed by a limb whether paralysed or not which is left a mere pendant to the pelvis If, however, the limb be used for walking other deformities may occur—hyper-extension or genu recurvatum if the body weight falls on the heel and genu valgum when the body weight is brought to bear upon an everted foot. And so every deformity is produced in a manner which can be easily ascertained when we examine the patient and his habits, and I emphasise the matter because of its prophylactic bearings. In the limb not completely paralysed contractions of the more powerful groups of muscles act very harmfully on their opponents, and it is the recognition of this fact which constitutes the keynote to both the mechanical and operative treatment.

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[37] Note on a Specimen of an Ovarian Growth removed after Vaginal Panhysterectomy Centralblatt für Gynäkologie No 39 1902, p 1025.

In the past we have all been too much governed by the pathology of the affection to do justice to its clinical aspect Because certain groups of muscles have barely responded to stimuli and have remained inactive it is too often assumed that this is due to cell destruction in the motor area. This assumption, if correct, would render useless any effort on the part of surgery What we have to recollect, however is that the cell destruction is not so extensive as would appear and that the affection, so far as the majority of the cells are concerned, is a transient and a recoverable one. We have no time to consider the many interesting points in connexion with pathology, more especially its infective origin, but we must not be led astray by any reports made on the cords of children dead months and years after the onset of the affection. At this stage many secondary changes have occurred and we have yet much to learn concerning the changes and degenerations of cells secondary to muscular desuetude. Careful and extensive investigation of the cords of subjects months and years after the loss of limbs, and similar experiments on growing animals, would throw an interesting sidelight upon the cell changes found in poliomyelitis of long standing Let me take as an example paralytic wrist-drop This deformity is of slow growth and when untreated is never recovered from. The principles governing its treatment are so little understood that at the present moment there are thousands with crippled useless hands who have received neither hope nor help from whomsoever they have consulted And yet the majority of such deformities are most amenable to treatment and do not even require the knowledge which the practice of a speciality involves Let me for a moment allude to cases in order to add clinical weight to my remarks.

CASE 1.—Some 15 years ago a youth, 19 years of age, came to me with loss of power in his arm and a typical wrist-drop. He gave the history of what he called a "tooth" stroke when he was two years old. He had no power of voluntarily extending his hand and the wrist could only be extended by the surgeon when he exercised considerable force , as the wrist became extended the fingers flexed He had but slight movement of the fingers, just enough to enable him to hold a stick while the wrist was acutely flexed. For reasons which I will explain later I was able to tell him that even at this period, 17 years after the onset of the affection, his hand could be made quite useful. In less than two years he was able to flex and to extend his wrist and to perform movements of considerable nicety with his fingers.

CASE 2.—A young woman 23 years of age, who had been the subject of poliomyelitis 20 years previously, presented herself with a contracted hand which could only be extended by moderate force. When forcible extension was adopted the wrist could only be extended by permitting flexion of the fingers. Advice had been sought from several neurologists and massage and the battery had been unanimously recommended For some years all treatment had been discarded and the only attention paid to the hand by the patient was in endeavouring to keep it out of sight. After carefully examining the muscles I assured her that treatment would ultimately prove very satisfactory Again in less than 18 months she was enabled slowly but with considerable precision to flex and to extend her wrist and to move her fingers separately

It is needless to multiply cases but to many of us such results would seem incredible until the explanation in all its simplicity were vouchsafed. These two cases had remained untreated because muscles powerless from desuetude were mistaken for muscles paralysed from cell destruction. To begin with perhaps the whole arm was paralysed , then the strong group of flexors recovered , later the extensors. The flexors, however, having first got well, overpowered the extensors and, aided by gravity, became shortened or contractured while the extensors were stretched out and lengthened. This, then, is the secret of the prolonged disability—a group of muscles placed at mechanical disadvantage had become impotent from desuetude. Well, then, how is the surgeon to know the case where he can assuredly, as I did, give a confident prognosis? The test is simple. He asks the patient to move his fingers in the direction of extension The patient says he cannot The surgeon then grasps his wrist and still further forcibly flexes it. The patient is then asked to extend his fingers from their new position. If he succeed ever so little a favourable prognosis may be given. Should he fail then treatment is of no avail. The treatment is based upon Thomas's theory of muscle shortening and consists in a recognition of the mechanical principles governing the production of contractures. In the paralytic wrist one group of muscles is lengthened and another is shortened by posture and treatment must be directed to the reversal of these conditions. In other words, we must slowly stretch and lengthen the flexors and place the extensors in such a position that their structural shortening will ensue. There is no opportunity at present to enter fully into methods, but when I state that the wrist and fingers must be placed in hyper extension for very many months the principles of treatment will be sufficiently appreciated The test of recovery consists in the power of the patient voluntarily to extend his fingers from the splint upon which his hand rests. I have dwelt at some length on this aspect of the question because the principle underlying it has received but scant allegiance and furthermore because it influences our every effort whatever joint or limb be affected We must not attempt to treat a weakened set of muscles without first rescuing them from being overstretched and we must carefully note that we can but restore to action elongated muscles by maintaining them in a slackened posture There are many analogies in confirmation to which I could draw your attention, but I will confine myself to the consideration of only one or two We all know that congenital club-foot is not a paralytic affection , we are also conscious that apparently after treatment has resulted in rectification a so-called recurrence is frequently chronicled. Why should that be? I am quite sure that I can give you the explanation. It is due entirely to the fact that the extensor muscles have not sufficiently recovered to resist the action of gravity—in other words, the patient is unable to hold the foot at right angles. A recurrence therefore, merely means the formation of a paralytic deformity exactly as it occurs in poliomyelitis where the extensors of the toe are affected. It can be prevented by keeping the foot over corrected until the extensor muscles have, as the nautical expression goes, "taken in their slack." When a talipedic foot can be voluntarily raised to above a right angle a recurrence cannot possibly occur Here, then, is an admirable confirmation in a non paralytic case of impotence from desuetude. You will note, therefore, that we have clinical data which will enable us to say whether or not a paralytic drop wrist is recoverable, and we know that the severity of the contractions and the duration of the disease do not contra indicate a favourable prognosis. As an aid to prognosis we may note that the structural shortening of the flexors is a more serious impediment to recovery than the long duration of the disability

In illustration of the value of preventing a pull upon paralysed muscle, you may be interested in an experiment which I made some months ago A relative in whom I was much interested was attacked by paralysis of the facial nerve, probably due to effusion into its sheath. For several weeks only a slight improvement was manifest. I therefore fixed on his face an apparatus so designed as to draw the angle of his mouth on the paralysed side well up towards the ear In less than a fortnight he had so far recovered as to be able to dispense with it, feeling very grateful for its manifest help A similar instrument tried upon a second case when the paralysis had lasted four months with but little abatement, acted almost as a charm and was worn for a month—only because the patient feared a recurrence from too prematurely discarding it.

An interesting confirmation of this principle occurred in two cases of paralysis of the shoulder girdle when all the muscles above those governing the hand were affected. The arm lay helplessly by the side and even the hand responded but imperfectly to the will. The elbow was flail like and quite uncontrolled by any group of muscles. Such an arm is obviously of but little use to a patient, having to be lifted by the opposite arm It struck me that it would be advisable if possible permanently to fix the arm at an angle so calculated that the hand might be brought into contact with the face and neck Arthrodesis of the elbow I knew to be an unsatisfactory operation and I decided, therefore, to make the fixation by means of skin incisions The arm was first brought to an angle of 45 degrees, and I judged by the relative position of the arm to the forearm how large a piece of skin it was necessary to remove. The elbow was next extended and a diamond shaped incision was mapped out and the skin removed The upper angle of the wound was next attached to the lower and the bare surface of the lower triangle lay in juxtaposition to that of the upper triangle. A scar was thus formed sufficiently firm to hold the elbow flexed In two out of seven cases which I operated upon interesting phenomena followed. Paralysis was thought to be complete in the biceps and brachialis anticus, but some months after the arm was flexed flexion power was restored to the elbow This power was brought about by the postural release from strain cast upon the muscles and still further elucidates the question we are discussing

I trust that I have been able to impress upon you the importance of not confusing muscles which for years have been useless with muscles which are positively paralysed It is this confusion which has hindered both physician and surgeon from accurately gauging in these cases the potentialities of recovery Treatment must be obviously conducted with a view of preventing, or of correcting, structural shortening of muscular groups This in the hand generally means hyper extension of the wrist, in the elbow flexion, and in the knee extension and a rectangular fixation of the ankle

TENDON TRANSPLANTATION

Considerable assistance has been afforded to paralytic children by the recent introduction of tendon transplantation and the revival of arthrodesis Tendon grafting consists in attaching a healthy tendon either to a paralysed one or to the periosteum and, so to speak, changing the sphere of its action. It is quite a mystery how an amicable arrangement between mind and muscle is brought about, for a muscle hitherto directed to evert the foot is now asked to invert it and by the intervention of some law of adaptation it obeys. What interesting possibilities in connexion with the nervous system this suggests. Already I have operated upon over 50 cases and without entering into any details it may be interesting to chronicle my experiences.

The operation in my hands has been most successful where one muscles or one group of muscles has been paralysed. This is exemplified in paralysis of the peronei or of the tibiales In one case reinforcement comes from the extensor proprius pollicis and tendo Achillis, in the other from part of the tibialis anticus and again the tendo Achillis Transplanting the peroneus longus into the tibialis posticus or the converse is sometimes disappointing because of adhesions by the way and the angular direction which the healthy muscle is forced to take The operation should not be performed with the object of strengthening partially paralysed muscles or muscles weakened by elongation. In such cases our opportunity comes for testing the value of what I have stated regarding the mechanism of shortened muscles If any operation be called for, lengthening of the shortened tendons and shortening of the lengthened ones are clearly indicated. Again, in flail like joints tendon splicing is of no avail, because superincumbent body weight is too fatal an antagonist. Another most important point is to employ the nearest available tendon, if it be sufficiently strong rather than one from a distance, and, where it is possible, the selection should be made of a reinforcing muscle the line of which is parallel to the reinforced Take, for instance, a talipes calcaneus where we would by preference strengthen it by the aid of the peronei, or in paralytic valgus where we can with advantage command the services of the extensor proprius pollicis. In analysing my failures I ascribe perhaps the principal share to a want of success in preventing the reinforcing tendon from taking a tortuous route Another cause of failure may be avoided if the operator makes a point of completely correcting—or, better, even over correcting—a deformity before transplantation is performed. For instance, a girl walks with paralytic valgus and has done so for years The foot cannot be placed in inversion without the application of great force. If transplantation of a slip of the Achilles tendon is to be effective the foot must first of all be kept inverted by mechanism until all strain on the inner aspect of the foot has been removed. I would further urge that if tendon is to be spliced by tendon let it be done as near its insertion as practicable so as to avoid as much as possible a yielding of the paralysed section which we know is apt to occur Whenever the tendon can be transplanted into periosteum I am convinced it should be done, care being taken to secure a really firm hold of the tissue When attached to tendon a neat splice should be done, many failures are due to clumsy bulky excrescences which encourage adhesions and otherwise obstruct the easy gliding of the tendon. Finally, the proximal part of the reinforcing tendon should be fixed into the paralysed tendon, so that it be maintained as tense as possible, otherwise we have to face the problem of a slack tendon which cannot do its work.

If these practical points be remembered by surgeons and a watchful eye kept upon the first attempts at walking in order that body weight be correctly exercised on the tarsus, tendon transplantation cannot fail of a good and lasting reputation

ARTHRODESIS

There is another class of case which has interested me greatly—I allude to those paralytic patients with joints either hopelessly flail like or sufficiently so as to demand unceasing mechanical attention The difficulty and expense connected with the purely mechanical treatment of these cases, extending as it does over the whole of a lifetime, are an effective barrier to the poor of our cities The recognition of this fact induced me to urge at the meeting of the British Medical Association of 1894 a revival and extension of operative procedures which for years had remained in abeyance. I allude to the operation of arthrodesis which aims at transforming a flail limb into a member as rigid as the splint which it is desired to discard In a large majority of the so-called paralyses of the lower limb the psoas and iliacus muscles are unaffected and all mechanical means are therefore based, if they are to be of real use, upon the integrity of the muscles The knee and ankle are kept fixed and the psoas muscle is destined to carry the leg splint and all In consequence these weakly paralytic patients easily tire of the weight of their supports and therefore lose the opportunity which presents to strengthen their only pair of muscles of progression.

The operation consists in opening the joint with a sharp gouge peeling the cartilage off the whole articulation in the case of the ankle, and gouging the bone in the case of the knee, keeping the joint completely at rest for some weeks subsequently and for a long period fitting the limb with a simple apparatus which will enable the patient to walk without throwing a strain upon the newly fixed joints An excision is more than the case requires and involves a greater sacrifice of tissue than an already shortened limb can spare. To expose the knee I make an incision across the front of the joint, covering fully half its circumference, and curved so as to pass below the lower end of the patella. The flap is turned up and all the vessels are ligatured I next remove the semilunar cartilages and with a sharp short-bladed knife or gouge peel away the cartilages and the underlying layer of bone, so as to leave a raw surface over the whole of their extent. The crucial ligaments I generally leave intact. The structures are then carefully reunited by deep and superficial sutures, no drainage-tube of course is employed, and the wound is well covered with sterilised absorbent wadding

The operation may be carried out in the ankle joint in one of two ways, according to the circumstances of the case In old cases where the foot is deformed and assumes the equino-varus variety the astragalus is well to the front. In such I force the foot into a position of extreme equino-varus and make an incision in front of the external malleolus following the line of the ankle joint and dividing all structures down to the astragalus, generally only severing the peroneus tertius tendon The other tendons are held aside and the articulating surface of the astragalus is exposed With a gouge or knife several grooved portions of the articulating cartilage are removed If complete bony ankylosis of the ankle be desired it will be necessary to gouge bone. If a fibrous ankylosis be wished it will be sufficient to peel off parts of the cartilage. The ankle is kept extended while some pieces of the articulating surfaces of the tibia and fibula are removed. A few vessels are tied, the foot is placed in its normal relation to the leg, and a suture or two close the wound A pad of wood wool tissue is applied over all and this being firmly bandaged the procedure is complete. In other cases the astragalus is more easily approached from behind and in such the foot is firmly flexed on the leg and an incision down to the bone is made along the external border of the tendo Achillis. The posterior ligament is now freely divided and the gouging takes place as in the former operation. No serious mishap has occurred in any of my series of over 100 cases. Every wound but three has healed by first intention , and, contrary to expectation, those cases where trophic changes were most marked healed as readily as those whose nutritive conditions were nearer normal

In talipes calcaneus where the paralysis is not complete, a deformity often accompanied by pes cavus and for which Willett's operation of shortening the tendo Achillis is performed, I recommend a modified arthrodesis It gives distinctly satisfactory results. Willett's operation is rarely successful, for the moment we try to put a weakened tendo Achillis shortened by operation against body weight exercised during locomotion it can only have one result and that is a fresh and speedy yielding of the tendon. If, however Willett's operation, *plus* exsection of cartilage, be performed we shall obtain considerably better results, for on opening the joint from behind we can shorten the tendo Achillis and remove sufficient cartilage to limit the action of the ankle to about 20 degrees The same procedure may with benefit be applied where in addition to an elongated heel tendon the tibiales have been completely paralysed, producing a deformity of calcaneo-valgus with difficulty rectified manually

I may mention in connexion with arthrodesis of the ankle that one sometimes fails in young children to secure sufficient fixation, and for some months I have removed the upper half of the astragalus and the inner malleolus of the tibia so that the tibia may fall with greater stability on a good square surface The result is very satisfactory and in a completely flail like ankle is, I think, more suitable than the recent operation described by Whitman of New York of complete removal of the astragalus, an operation I have performed on four occasions

Before leaving the subject of poliomyelitis I would desire to draw attention to another class of paralytic patients who are the subject of fixed deformities. The hips are flexed and so are the knees, while the ankle is generally extended If the little patient be made to lie down marked lordosis of the spine occurs. There has never been any attempt at walking, save perhaps a swinging, crutch supported gait. Power may be found in one sartorius and in one psoas muscle. Can such a case be made to walk and, if so how? If we determine to try we will first divide each tendo Achillis and place the ankles in rectangular splints We will next exsect a V shaped wedge from each flexed knee, the wedge being sufficiency large to allow of the easy extension of the limbs. For a few weeks the limbs are retained in this position and a splint similar to a double Thomas's hip is prepared. The correction of the hip deformities must next be commenced This must be prosecuted very vigorously Of all flexion deformities paralytic flexion of the hip is most intractable and generally the shortened structures are on the outer side of the thighs. A bold incision must be made and the fascia and every constricting band divided freely until several degrees of flexion are overcome The patient is then kept upon his double Thomas's splint and for weeks if necessary until the lordosis disappears. This is not assisted by recourse to femoral osteotomy, an operation of very little use in paralytic hip. As soon as the back is straight we place a pair of calliper splints on the little patient and crutch aided let him learn to walk. I know of no sensation more delightful to myself as a surgeon than that I experience when I see one of these crawling little cripples standing erect before me.

Time will not allow me to delay longer over spinal paralysis and I have therefore given you but a brief practical *résumé* of surgical methods as they appeal to me, endeavouring to enunciate principles in regard to the behaviour of muscles which must always influence, and sometimes govern, us in the line of treatment we adopt

ON CEREBRAL PARALYSIS OF THE SPASTIC TYPE

From spinal to cerebral paralysis is not a long step and yet what a different field it is to explore. The patient in a spinal case is generally bright and happy entering into the spirit of our treatment often with intelligent appreciation while in a cerebral case he is uninviting irritable, and almost always dull perhaps the most neglected object within the radius of our art. In the short period still at our disposal I desire to point out certain lines of treatment which offer us great encouragement to persevere in our efforts on the behalf of such patients. This year I have already written on the spastic type of palsy and I must beg your kind indulgence while I repeat the conclusions forced upon me in the consideration of a large number cases. Although it is quite impossible to discuss fully so complex a subject as cerebral paralysis I should like to indicate certain types of the affection where surgery may with advantage be employed. For descriptive purposes cases may be grouped under three headings (1) infantile hemiplegia, (2) cerebral diplegia, and (3) spastic paraplegia. My own experience would lead me to the conclusion that cerebral diplegia is the commonest group, but of 859 cases which I have collected from various sources 510 were hemiplegic, 30 were monoplegic, 142 were paraplegic, and 157 were diplegic The diplegic and paraplegic groups are congenital affections whilst infantile hemiplegia is usually acquired Infantile hemiplegia generally appears before the fourth year and is most commonly preceded by convulsions and by acute febrile symptoms, markedly in contrast to the advent of adult hemiplegia The deformities are of very rapid growth The arm and leg are powerless and the reflexes are exaggerated The foot is arched and adducted, the knee is bent, the hip is rotated inwards, and the femur is flexed. The arm clings to the body, the elbow is flexed to a right angle, the wrist is dropped, the hand being pronated and deviating to the ulnar side, while the fingers tightly grasp an adducted thumb Rigidity comes on nearly always and is increased on passive movement or when the child attempts to move. The aphasia is motor and accompanies either right or left hemiplegia. Inequality of growth is the rule, but while the leg hardly ever shortens more than an inch it is not uncommon to note three inches of difference in the arms. From the point of view of treatment the following facts may prove useful if remembered (1) The arm is more permanently and severely affected than the leg, (2) movements are performed spasmodically, slowly, and without precision, and (3) the power of dorsiflexion of the hand with simultaneous extension of the fingers is lost and usually the hand has no adduction power In the lower limb general rigidity is accompanied by extension of the foot, contraction of the knee, and flexion and adduction of the hip

The cerebral diplegic group is far and away the most serious condition to treat We have here, of course, to deal with both arms and feet. Unless the hands can be used the surgeon is deprived of his chief allies in the treatment of the limbs. Where the spasm is confined to the limbs alone we give the name of "spastic paraplegia," or 'Little's disease" The vast majority even of these cases present mental deficiencies of varying extent and in a considerable minority athetotic movements are also noted.

A severe case of spastic paraplegia brought to the surgeon at the age, say, of 12 months is characteristic. Usually contractions have occurred at the hip or knee, the child's legs are rigid the toes point down, there is usually no internal rotation, and adduction is not sufficiently severe to cause a crossing of the limbs. The reflexes are exaggerated, the patellar reflex not usually causing a knee jerk but a leg-jerk. If the little patient is held by his arms there is no endeavour to separate the limbs, and should the toes be brought to the ground and an effort made by the child to walk both limbs move synchronously and in parallel lines When passive separation of the limbs is made, although it is easily effected, one can see and feel the antagonistic efforts of the powerful adductors If at a later stage the patient is able to walk several changes will be noted. The adduction will be more marked, the scissors walk will have developed, and a characteristic dragging of one knee round the other will be noted, which becomes more pronounced when any attempt at running is made. The body pressure is mainly transmitted to the ball of the toe. These contractures, however, at this stage are generally spasmodic and there is no appreciable shortening in muscle length This shortening occurs at a still later stage and is known as contracture. In quite a number of cases the patients are in a hopeless position as far as walking is concerned. Any effort they make to move only serves to throw the muscles into violent contractions and the legs into extreme adduction The most severe type of contractions in the legs may be associated with but very slight mental defects and unaccompanied by diplegia.

Before discussing treatment I will briefly touch upon the pathology of spasmodic paralysis, if only to suggest how futile are operative procedures directed to the primary lesion. The pathological conditions in hemiplegia, paraplegia, and diplegia are the same in kind. The symptoms are due to the retardation of growth resulting generally from embolism or thrombosis, together with changes in the spinal cord. In later cases one finds wasting and sclerosis of the motor tracts with often a loss of substance in the form of cavities or cysts known as porencephalus. These cysts occur on the surface of the brain and sometimes dip fairly deep into it. They seem to be a late result in a growing brain and to have produced an extensive scar substitute for cerebral tissue Should the porencephalus or sclerosis be unilateral hemiplegia results. If the scar is bilateral diplegia or spastic paralysis results. The lesions therefore are a late product of a hæmorrhage an embolism or localised encephalitis. In the cord degenerations of the pyramidal tract or of the lateral columns are to be found

The treatment of spastic paralysis has been too solely in the hands of the physician for much real progress to have been made. Indeed, from medicine in this affection we have but little to expect apart from very indirect results, and we have only to scan the text-books on neurology to realise the note of pessimism which is sounded. I would argue that a large proportion of children suffering from severe spastic paralysis may be transformed into useful members of the community, improved both in body and mind by surgical efforts, enabled to walk with comparatively little deformity, and generally only requiring the aid to be derived from one or two sticks

We must place in a group outside remedial art the idiot, the microcephalic, and that violent irritable type of diplegic, so often seen, subject to fits and active athetotic moments who has generally lost all control over his secretions The treatment of any condition short of this may be undertaken with varying success subject to conditions which obtain in any surgical case requiring prolonged attention. For instance, active treatment may be required for two years It would therefore be unwise to admit a case into hospital for two months and then to send it to a miserable home where neglect would be sure to follow Such a case, however after hospital treatment, happy in the care of anxious, intelligent parents, no matter how poor would prove a credit to all concerned Another class which gives the greatest anxiety and trouble is that where the affection of the hands is of such a kind as to promise but slight hope of their assistance to the limbs during walking Before despairing, however, I think it is well to give such hands the opportunity of a careful trial, both as a mental discipline and because success sometimes exceeds expectation. I would divide the treatment of all cases of spastic paralysis into operative and post-operative, for although mechanism is involved in nearly every case there is only an insignificant minority which we are called upon to treat without invoking operative aid.

The treatment of the hand and arm in infantile hemiplegia is distinctly less promising than in the diplegic case, but there are clinical signs to which I would draw your attention which help us to predict either success or failure If the paralysis is complete, or in other words, if the little patient is never known to relax his spasm treatment is futile If he only moves the fingers of his affected hand in conjunction with the fingers of the opposite side the results will in all probability be discouraging In all cases where the parents are able to say in the spirit of true observers that the patient is able to do more with the hand now than a little while ago the success of treatment is assured. Similarly, where any degree of voluntary relaxation of spasm exists apart from an associated movement on the opposite side treatment is emphatically indicated.

Noting that the dominant deformities in both hand and elbow are pronation and carpal flexion, treatment should consist in fixing the elbow supine and hyper extending the wrist. The hyper extension of the wrist should be combined with that of the fingers and a special arrangement should be adapted to keep the thumb at right angles to the palm. The spasm in these cases is often so pronounced that the extension of the wrist and fingers must be brought about very gradually If the elbow is affected by contraction of the biceps and brachialis anticus, supination may be combined with extension If this be not the case the flexed position of the elbow will suffice. If, instead of being firmly pronated, the elbow lies semi prone it is not necessary to treat it and all one's energies should be directed to the hands. If the hemiplegic hand spasm is mild this treatment may be discarded in about 12 months, provided that during the whole of this period the extension has been kept up without intermission. The test for relaxation must be the power of voluntary movement, however slow it may be. It will be noted that generally at this stage the patient in endeavouring to extend his wrist will first of all close his fingers and will only open them on completion of extension. The process is reversed when the wrist is flexed. In order to meet this difficulty the splint employed to extend both wrist and fingers is modified so as to extend the wrist alone and to allow freedom to the fingers.

It is difficult to give a reason as to how improvement comes about, but it may be taken as an axiom that prolonged fixation of spastic muscles in a position opposed to their contraction lessens the severity of their spasm. This is true wherever spasm may be found and its influence may be tested even in spasmodic torticollis, intractable as we know that affection to be It would appear as if the group of muscles at last got tired of trying to pull. At this stage or earlier the surgeon may decide whether in a given case success may be predicated, and, if he is in doubt, operation should unhesitatingly be performed Operation will consist of tenotomy or tendon transplantation. An incision is made over the tendon of the flexor carpi ulnaris just above the annular ligament, another is made over the flexor carpi radialis, and both tendons are divided low down and are taken—(1) the flexor ulnaris to be inserted into the extensor ulnaris and (2) the radial flexor into the radial extensor I performed this operation some time ago upon two spastic children, whom I showed to the members of the Society for the Study of Disease in Children, and in both instances voluntary movements were steadily performed, and one a girl, seven years of age, was able to write quite a respectable hand. My friend Mr A H. Tubby, in order to overcome the spasmodic pronation of the forearm, has changed the point of insertion from the front to the back of the radius of the pronator radii teres and has succeeded in transforming the muscle into a supinator

Tenotomy alone has proved somewhat disappointing though one has had an occasional successful case. The operation should be confined to the division of the flexor carpi radialis and ulnaris. It is, in my opinion, better to elongate the other flexors of the hand by a long median incision such as one would employ in lengthening the tendo Achillis. Tendon transplantation, however, is a better operation, less complicated and more reliable The surgeon's art does not end with the operation and hyper-extension of the wrist, leaving the fingers free, should be practised for a further few weeks In order to prevent adhesions after the operation the wrist should be freely but very gently withal moved in about a fortnight's time Whether an operation has been performed or not the final stages of treatment are identical They should consist in getting both guardian and patient to strive every nerve to urge and to practise movements from simple to complex. The nature of the movements to be practised must be left to the ingenuity of the surgeon. The principle which should govern him may however be here indicated. (1) The movements should be practised slowly and without excitement, (2) they should be made interesting to the child, (3) those opposed to the direction of the deformity should predominate, and (4) those presenting the greatest difficulty should be chiefly practised.

Just a word, before we deal with paraplegia, regarding tenotomy of the spastic muscle Empiricism has taught us that for some reason or other tenotomy lessens both in frequency and intensity the spasmodic element in paraplegia. I do not merely mean to say that division of the tendo Achillis controls spasm in the calf muscles, although of course it does, but rather that spasm in which those muscles are not directly concerned is also influenced This is beyond all question and must have been noted by everybody who has had the opportunity of observing, and the fact has now reached the robust stage when physiological explanations are vouchsafed. Whitman urges that by elongation of the tendon the response to the exaggerated motor impulses is lessened and an opportunity for more effective control is afforded. Discussing the question with Mr Tubby he propounded the theory that once the immediate pathological effect of the central nervous lesion had subsided the spinal cord remains in a state of undue reflex excitability A tightly contracted muscle and tendon tend to augment this condition and so induce in themselves further contractions In other words there is a vicious circle of reflex action which can be interrupted by section of the tendon and diminution of the tension of of the affected muscle and tendon. Lorenz attributes the effect to the shortening of the muscular portion of the tenotomised muscles so that their range of action is diminished. Both these theories of course, refer to spasm in which the divided muscle is concerned and do not explain the diminution in spasm experienced elsewhere We must, further remember that the opponents of contracted muscles are always elongated and weak and that the rest afforded them by tenotomies by relieving them of strain helps to restore muscular equilibrium

The practical deduction from these observations is that no opportunity should be lost of performing a tenotomy Even in mild cases where a spastic tendon is to be felt we need have no hesitation in dividing it. If the surgeon has decided that a case of spastic paralysis is suitable for treatment a splint should be prepared so designed as to keep the limbs in pronounced abduction. The area over the hamstrings, the adductors at the groin, and the tendo Achillis should be suitably prepared for operation The adductors should be first attacked An incision an inch or two long should be made to the inside of the adductor longus This muscle should be seized by a forceps and about three-quarters of an inch of it removed. The limb is then abducted and portions of the adductor brevis and gracilis are exsected in similar fashion. The horizontal portion of the adductor magnus and if necessary the pectineus, is divided and also any tissue, muscular or fibrous, obstructive to an absolutely free abduction of the femur Experience has shown me that although the chief offenders are the adductors longus and brevis nevertheless the deeper muscles often require division. To anyone who has practised the operation the futility of attempts to divide the muscles effectively subcutaneously will be apparent Division is followed with but little hæmorrhage and the wounds are closed without drainage Having exsected the pieces of the adductors each tendo Achillis is divided, or, better still, elongated, for we often note that after division of the tendon outright there is a tendency to walk too much on the heel. Rectangular splints are then applied to the foot. The limbs are then well abducted and the surgeon notes whether there is any obstacle to easy extension of the knees. If there should be (it is not often the case) an open incision must be made on each side of the popliteal space and the tense hamstrings are in turn divided. If these incisions are long enough the fascial contraction can be attacked on either side for it is here that opposition is found. I would discourage the use of a transverse incision as when adopted it often seriously hampers the surgeon s efforts to extend fully the knee by reason of the strain cast upon the sutures. Simple division, however, with fasciotomy usually suffices to allow of easy extension and excision of tendons could do no more. In 1885 when I was at the Liverpool Stanley Hospital there used to be an adult diplegic man always at the gates in a perambulator and on two or three occasions I took him in to try to straighten his contracted limbs On one occasion I removed about an inch from each of the hamstrings but he was mentally so deranged that we did not do each other any credit. I mention the fact, however because Lorenz of Vienna has quite recently written on the advantage of exsecting portions of the hamstrings.

We have now presumably got our patient stretched comfortably upon an abduction frame and we must keep him there for three months The wounds heal very rapidly and suppuration has occurred in the adductor cavity on three occasions only despite the position of the wounds and the number of operations performed , for instance, in 1890 I operated on 27 patients and this may be taken as a fair index of my yearly return At the end of three months the splint is taken off during the day and movements are sedulously practised. For some weeks stiffness exists and often the movements are at first painful, but after a time (always shortened by vigorous exercise) the pain disappears and the effort must be made to walk. The splints are of a simple kind designed to keep the knee from bending The boots should be made of felt with substantial soles. The nurse should be instructed to keep both boots and splints upon the patient day and night, and for the first two weeks frequently during the day abduction, adduction flexion, and extension of the hips should be practised This should be done with and without resistance At night-time the feet should be attached to the side of the bed in order to maintain abduction After the first few days of this later stage of treatment the splints should be removed twice a day and the muscles well massaged and both active and passive movements of ankles, toes, knees, and hips encouraged. Any movement executed in a jerky style should be practised until perfected.

The little patient may now try to walk. It will be noted that one of the difficulties of an untreated spastic child when he tries to walk is the narrowing of the pedestal upon which the trunk rests by reason of adducted limbs Operation has now overcome this and with abducted limbs the body is poised upon a pedestal that is widened. During early training the nurse must see that while walking the limbs are not approximate and that from the first swinging aided by crutches must be prevented. Crutches should not be allowed until the patient has been taught to stand unsupported I need not enter into any more detail regarding this most important stage of treatment, but would add that it affords an inexhaustible field for ingenuity and that upon the intelligence and industry of the nurse very much depends.

I cannot now deal with individual cases, but I may say that I have operated upon patients from 12 months to 20 years of age A large number of these were so bad that they had never attempted to place one foot before the other Some were structurally flexed (contractured) at ankle, knee, and hip A most helpless youth, aged 20 years, with one limb across the other, was able in six months to stand erect and to walk with sticks, and 12 months later he was able to move his limbs north, south, east, and west with hardly an appreciable jerk. Success in an ancient case where so much has to be unlearnt, and where the mechanical stage offers so much difficulty, proves the soundness of the principles I have endeavoured to expound. It is logical to infer that if old neglected cases are amenable to surgical education our prognosis should be very hopeful in the young

With regard to the degree of benefit to be derived from treatment, the parents should be given to understand that under favourable conditions of nursing and tuition the child, aided by the hand or sticks, will be able to walk distances in from 12 months to two years and that with perfectly straight limbs and heels on *terra firma* A large proportion of cases will later manage aided by one stick. Even in the least successful cases parents, mostly having despaired, are full of gratitude. The mental condition of the children obviously improves when their physical defects are remedied and they are enabled to mix with their little friends. Complete recovery in spastic paraplegia is, of course, impossible.

It will be gathered from my remarks that the treatment of spastic paralysis should resolve itself into a system. That system involves operative, mechanical and educational stages The treatment cannot be separated into parts. If the surgeon is not satisfied that the case is to be under his control for 12 months he will consult his reputation best by leaving it alone. Operations not followed up by careful and prolonged after-care give rise to disappointment and discredit. Merely dividing tendons and trusting to massage and electricity is futile and dispiriting

In conclusion gentlemen, I would say that infantile paralysis offers an immense field for surgical enterprise and if I have succeeded in even suggesting to you some of the possibilities your time will not have been altogether wasted.

LUNACY AND LAW THE CARE AND TREATMENT OF PERSONS OF UNSOUND MIND IN PRIVATE HOUSES AND NURSING HOMES[1]

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MY paper to-day is the natural outcome of the address by Sir William Gowers upon Lunacy and the Law,[2] the views of a London hospital physician, particularly in regard to private patients, given at our last general meeting in London. The discussion which followed was hardly worthy of the subject. Most of the earlier speakers, although eminent general physicians, had had little or no experience in the care and treatment of the insane, therefore when the turn came for those practically acquainted with mental diseases to speak the hour was advanced the audience was weary, and an all too-exacting brevity resulted To day the alienist's side of the question can be fairly stated. My wish is to deal with it as briefly and appositely as possible in order that the discussion may be as thorough as we can make it I hope that all who have had practical experience of single care and of the treatment of mental cases in nursing homes will assist us in our search after truth, that the best results may accrue to those who suffer from this the saddest form of human ailments I propose to treat the subject by a series of questions and answers, with illustrative cases here and there

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[1] A paper read at the general meeting of the Medico-Psychological Association held at the County Asylum, Mickleover near Derby on Feb 12th, 1903.

[2] THE LANCET Nov 22nd 1902, p. 1369

What is certified single care?—It is the care and treatment of a duly certified person of unsound mind in a private house The forms for admission are identical with those for the admission of a private patient to a public or private asylum or registered hospital There is a like order made by a judicial authority The medical attendant takes the place of the medical officer in institutions, and must visit at stated intervals and make the customary reports to the Commissioners and Visitors in Lunacy A registered practitioner with whom a single patient resides cannot act as medical attendant The residence is approved by the Commissioners in Lunacy and the patient is visited periodically by them and the medical and other visitors for the county or borough. Chancery patients are visited by the Lord Chancellor's Visitors in Lunacy Facilities of access are given to friends by statute. Thus abuses are guarded against and there is efficient official supervision.

What are the advantages of certified single care?—They seem to be (1) privacy, (2) domesticity, (3) secret visits of friends, and (4) the avoidance of the stigma of treatment in a lunatic asylum.

1. *Privacy* —The rich and well to-do try their utmost to keep secret the mental breakdown of any member of the family for well known reasons, hence single care at a distance from home is the desideratum.

2. *Domesticity* —The upper classes often dread the contact of their relatives with other insane patients and complain of the lack of the comforts of home life in public and private institutions These objections are now removed by the villa residences attached to public and private asylums and hospitals for the insane

3 *Secret visits of friends* —In single care the relatives, if so disposed, can visit unobserved and much more frequently than they can in an asylum or hospital

4 *Avoidance of stigma of insanity* —The sting of certification is in the magisterial inquiry Young and inexperienced justices often investigate the cases more fully than is necessary They place too little reliance upon the facts contained in the medical certificates. The terrors of certification are thereby increased The form of the medical certificate needs revision. The term "alleged lunatic" should be removed The word "asylum" should be applied only to an institution for "the chronic and incurable insane." "Hospital for mental diseases" should be used for an "institution for acute and curable cases" The terms "lunatic" and "lunacy" should be removed from the statutes, "person of unsound mind" and "insanity" taking their places For years past the terms 'lunatic," 'lunacy,' and "pauper" have been forbidden at the City of London Asylum and the word 'asylum" has only been used for statutory purposes

What are the disadvantages of certified single care?—(1) The absence of skilled medical treatment, (2) unskilled nursing, (3) monotony, (4) insufficient moral control, (5) interference of friends, (6) limited supervision, and (7) want of tact and business capacity on the part of the custodian

1 *The absence of skilled medical treatment* —The general practitioner as a rule, knows but little of the treatment of mental disease. Psychological medicine has only recently become compulsory in the medical curriculum. Moreover, I am sure that you will all agree with me when I state that the knowledge of the proper treatment of mental diseases is not to be acquired in the rounds of general practice or in the consulting room, or even, at present within the wards of a general hospital.

2. *Unskilled nursing* —The nurses (male and female) having charge of single patients have had no special training, as a rule, in the management of mental cases and, although, perhaps, hospital trained, are quite unqualified for the work No nurse is qualified to undertake a mental case in single care unless possessed of the nursing certificate of the Medico-Psychological Association, which is a recognised guarantee of efficiency The responsibility with single patients is the greater because the nurse from want of skilled supervision is so frequently thrown upon her own resources.

3. *Monotony* —We all know of the many associated amusements and means of recreation provided in institutions for the insane. How dull must be the life of the patient in single care in this respect.

4 *Insufficient moral control* —The moral decadence of the upper and upper middle classes when insane is far greater than of the agricultural and industrial populations Sedentary life, luxury, and high living tend to bad habits. Self abuse is far more common amongst private patients than amongst the rate-paid The moral control—I would rather term it "school discipline"—of our institutions is one of the most potent means we possess for successful treatment. The day is apportioned out to meals, employment, recreation, and amusements. The will is made subordinate to others, bad habits are corrected, and in many instances our patient is thereby conducted back to rational health. [Here Dr White gave details of an illustrative case]

5 *Interference of friends* —With single patients the friends either get them removed as far from home as possible, satisfy themselves that they are well housed, well clothed, well fed, and kindly treated, and visit them only when obliged, for sympathy for the insane relative generally quickly dies, or the patient may be visited much too often, the treatment of the medical attendant and management by the nurse being interfered with to the great detriment of the chances of recovery

6 *Limited supervision.*—Certified single patients are taken for profit by needy practitioners, decayed ladies and others The official supervision of these custodians is limited How can we guarantee in all cases humane treatment by nurses, also proper food and environment at all times? We must remember that the best mental trained nurses remain in the asylum service or become attached to the better class nursing institutes of the metropolis Therefore we have not always the most trustworthy people in charge of the patients under consideration On the contrary, it is an absolute fact that in a great number of cases the nurses in charge have not had any mental training whatever, frequently they are hospital trained nurses who are sent out by institutions to whatever case may turn up I have heard also of asylum laundry maids posing as mental nurses on the books of such institutions.

7 *Want of tact and business capacity in the caretaker* —Decayed ladies and retired nurses are not possessed of much business capacity tact, or energy in the duties of the house

What is uncertified single care?—It is the taking charge of a person of unsound mind (not under certificates) in a private house or nursing home. I believe that hundreds of insane patients of the upper and upper middle classes are at the present time under care and treatment without being certified in the various counties of England and Wales not to say the Channel Isles and the near continent. What happens is this A member of a family, probably with neurotic inheritance, develops mental symptoms. The parents dread certification and because of the so-called "stigma of insanity" avoid as long as possible the alienist physician being called in but consent to a "nerve specialist" being consulted To the neurologist the patient is taken, he duly prescribes and advises After a short time the symptoms become more pronounced and home treatment is impossible, the patient must go away Then the assistance of the decayed gentlewoman is sought, that she may undertake the remunerative care of the insane person or a nursing home is selected with which some practitioner in a suburban or rural district is connected The neurologist sees the case from time to time in consultation. He considers himself to be well qualified to treat this form of disease and in the interests of humanity (as Sir William Gowers tells us) is accessory to an evasion of the law Ultimately in many instances, owing to an exacerbation of the symptoms (some attempt at suicide or homicide, &c.), certification becomes imperative and the patient is sent to a recognised institution for mental diseases It is from these cases many of us have to glean our recoveries and a difficult task it is at so late an hour in the day of disease. Let us consider two or three cases to illustrate uncertified single care. [Dr. White here gave a detailed account of some illustrative cases]

What are the advantages of uncertified single care?—(1) The avoidance of the so-called "stigma of insanity", (2) secrecy, (3) the so-called continuity of medical treatment (doubtful if unskilled), (4) freedom from contact with other persons of unsound mind, and (5) domesticity

What are the disadvantages of uncertified single care?—(1) Insufficient general and moral control of the patient (there is no legal power of detention, for the patient is in full possession of civil rights), (2) the patient's property is not safeguarded from unworthy relatives, solicitors, medical men, caretakers, and nurses, (3) frequently there is unskilled medical treatment, or none at all, (4) unskilled nursing as a rule, (5) monotony in some out-of the-world place, (6) interference of friends, (7) want of official supervision, and (8) incapacity of caretaker

The want of official supervision is, perhaps, the most serious of these disadvantages, for I have heard of inhumane and cruel forms of personal restraint which have been used upon these unfortunate patients even since the passing of the Lunacy Acts 1890–91, and is not this what we should expect with no official supervision?

[Here Dr White gave an account of cruel treatment which had come under his notice]

What is the suggested notification of mental cases?—It is that in all cases of mental unsoundness in which certification and compulsory detention seem needless, and in borderline cases, there shall be a system of notification to the Commissioners in Lunacy by anyone receiving payment to the effect that "A. B is a person of unsound mind and is not a proper person to be detained." It has been also suggested that this notification shall be to the local authority It is presumed in the first instance it will be followed by the visit of a Commissioner in Lunacy or some one deputed by the Commissioners, and in the second by a medical officer appointed by the local authority

What would be the advantages of such notification?—They would be the same as those given under the heading uncertified single care (*vide* above)

What would be the disadvantages?—These again would be identical with those given under uncertified single care (*vide* above) with in addition increased official expenditure from the necessary appointment of deputy or district commissioners to inquire into the numerous class of cases which would rapidly crop up In an article on Lunacy Law Reform in THE LANCET of Dec. 27th, 1884, I suggested the appointment of deputy commissioners in the following terms

"District experts as medical officers of insanity, occupying analogous posts with that of coroner or medical officer of health, with fixed salaries, these officers to be elected from their experience in the speciality, and to be allowed to practise as pure physicians. Their duties would be to examine all supposed lunatics in consultation with the medical man in attendance, to sign all necessary certificates, to visit all single patients and patients in private asylums in their districts, to report thereon from time to time to the Commissioners in Lunacy, and so act as district agents for the Commissioners or Deputy Commissioners. They would have power to order the discharge of any single patient, or any patient from any private asylum in the district, should such a course be desirable on account of recovery or otherwise They would also have authority to prevent the removal of any patient by his or her friends when such removal was calculated to be fraught with danger to the patient or others." Many of the suggested reforms in that article were adopted in the Lunacy Acts 1890-91. This one was not, for the obvious reason—expense.

I am afraid that notification, unless under the most efficient official supervision, would encourage a continuance of the evasion of the law, or at least would delay proper remedial treatment in consequence of the patient not being under proper moral control

What cases are suitable for cure and treatment as certified single patients?—(1) Quiet and harmless tractable imbeciles, (2) quiet and harmless chronic dements, (3) certain general paralytics in the last stage and (4) hypersensitive patients convalescing from melancholia.

What cases are unsuitable?—All others.

What cases are suitable for care and treatment uncertified?—(1) Transient cases of mania and melancholia dependent upon drink and abuse of drugs, (2) certain borderland cases where the symptoms are undeveloped, and (3) other cases in which the symptoms are not severe and which have a definite exciting cause not likely to be long operative.

How should they be protected against abuses?—By proper and complete official supervision. I have been for years past, and am still, in favour of the appointment of deputy commissioners for districts as defined above, such appointments to be made from those skilled in the treatment of mental diseases.

What is the suggested temporary care and treatment of the incipient insane?—In 1899 the joint committee of the British Medical and Medico-Psychological Associations, of which I have been a member by your courtesy since its formation, waited upon the Lord Chancellor at the House of Lords. The committee urged the necessity of early legislation for the incipient insane. It told the Lord Chancellor how numberless borderland cases were smuggled away in the country, the Channel Isles, and on the continent, to avoid legal certification, how their chances of recovery were imperilled thereby, and how the possibilities of inhumane care existed. As a consequence he introduced into the Lunacy Bill of 1900 the following clause, adapted from the existing clause in Scottish Lunacy Law —

1 If a medical practitioner certifies that a person is suffering from mental disease but that the disease is not confirmed, and that it is expedient with a view to his recovery that he be placed under the care of a person whose name and address are stated in the certificate, for a period therein stated not exceeding six months, then during that period the provisions of Section 315 of the principal Act shall not apply

2. The certificate must not be signed by the person under whose care the patient is placed

3. Where a medical practitioner signs any such certificate he shall within one clear day after signing it, send a copy of it to the Commissioners and the Commissioners may visit the patient to whom the certificate refers.

I believe that this clause with its three sections will meet all the requirements of the case for the insane of the upper and upper middle classes provided that the deputy commissioners above named be appointed.

As several of the county and borough asylums are at the present time admitting private patients in large numbers would it not be well that the voluntary boarder system appertaining to the registered hospitals and private asylums should be extended to public asylums? There are many patients—incipient and border line melancholic cases—who lack self confidence and who, if they can place themselves under the sheltering wing of an institution giving them medical and general supervision will rapidly regain their mental balance and thus escape certification. Those who have had ample experience of the voluntary boarder consider the legislation regarding him has been productive of much benefit.

Having surveyed the subject in detail we must now consider the various points, not already discussed, to which allusion was made by Sir William Gowers. The contemplation from the train of the wall of Hanwell Asylum, we are told prompted him to lead a crusade against the existing Lunacy Laws. He thought of those the wall excluded and those it included Now the wall of Hanwell (the oldest of our London county asylums) is an anachronism. The asylums of to-day have no walls and while the buildings include those committed to the humane and skilled care of the medical officers for treatment, they do not exclude those who desire to gain knowledge regarding mental diseases. The lovelorn Kentish cavalier when he wrote in his prison in Westminster the lines the first of which Sir William Gowers quotes little thought they would be applied to an asylum for the insane some 250 years later Let us contemplate these lines —

'Stone walls do not a prison make
  Nor iron bars a cage;
Minds innocent and quiet take
  That for an hermitage;
If I have freedom in my love
  And in my soul am free
Angels alone that soar above
  Enjoy such liberty"

We do not acknowledge the walls as part of our treatment to-day, nor are iron bars necessary in institutions for the insane, they appear (as we have seen) to be only required for uncertified patients in single care. Our cavalier although imprisoned, was happy withal in the freedom of his thoughts.

Sir William Gowers tells us that in many cases certification is harmful and unnecessary Many of us differ from him upon this point. We recognise in certification th means of placing the patient under proper control for treatment, and we are satisfied that the chances of recovery are in many instances greatly increased thereby The cases quoted by him as suitable for treatment without being duly certified were peculiarly unfortunate They all had delusions of persecution, and these patients, as we alienists know, may at any time become actively homicidal or suicidal by impulse. They should certainly all have been under certificates, both in the interest of the public and of themselves. Sir William Gowers states that every patient received for payment and uncertified is a free agent, can leave or be removed at any time Such is not my experience with uncertified insane patients in single care. Furthermore, I do not admit that certification is in any way disastrous to the patient or the painful distress to friends it is stated to be.

Sir William Gowers speaks of the "divorce of psychological medicine from general medicine." There is no divorce They have always been separate and distinct and must remain so from the very nature of mental disease and the treatment demanded. The moral side of this treatment is all important, the medicinal only accessory and that in quite a minor degree. The days of chemical restraint and of the exhibition of medicinal *nostrums* for insanity are past and gone. We have too many proofs of the value of our more enlightened system to wish to revert to them. Let the general body of our profession make themselves thoroughly acquainted with *this system*, *they will then recognise the* vital importance of the daily contact of the mental physician with his patient to control the management and moral treatment of the case, the necessities of which are ever varying

We are told that the "master of method" is necessary for the full and proper development of the normal mind of youth, that a scholar who has not had training as a schoolmaster is unequal to perfecting a student's education in classics, mathematics, or the higher sciences, how much more then must the "physician of method," trained by long experience and daily contact with the insane, be essential for the re-education of the abnormal mind, for the replacing of the unhinged mind upon its hinges, for the dispelling of the hypochondriacal delusions of the melancholiac, and for the calling back to mental life again of the quasi demented patient in mental stupor? Speaking after 30 years' experience as a public asylum physician, and 13 as a lecturer on mental diseases, I would state unhesitatingly that to comprehend the vagaries of the mind diseased, to lead that errant mind back to health, and to recognise the means by which this end can be attained, are problems only to be solved by those who have made the insane their intimate and lifelong study

Note appended Feb 7th.—Sir William Gowers has just published in pamphlet form his address of Nov 20th, 1902, with a Note. I observe that the title is altered It now reads, "An Address on the Prevention of Insanity" Would not "on the Evasion of Insanity" be more appropriate? In the note he draws attention approvingly to Sir William S Church's suggestion that notification should be to the local authority, the facts of each case to be subsequently investigated by the medical officer of health or some other official appointed by the local authority What does the medical officer of health know of mental diseases? Is he qualified to decide such a case? and who is the other official suggested? Who but one skilled in the treatment of insanity is qualified to decide whether the conditions under which the patient is placed are such as are likely to promote recovery or whether certification is necessary in his or her own interest? Sir William Gowers is in error when he states that provision is already made for the reception of border line patients as voluntary inmates of public asylums. At present voluntary boarders cannot be taken in county or borough asylums, but only in registered hospitals and private asylums. He tells us, moreover, that it is a sarcasm to suggest that patients on the verge of mental derangement would place themselves in lunatic asylums. Is he not conversant with that large class of cases of incipient melancholia in which the patient lacks self confidence and self reliance, is imbued with a sense of impending trouble, and consequently eagerly seeks admission within the walls of a private asylum as a voluntary boarder and expresses a feeling of relief when under the sheltering wing of the institution? The limitation which Sir William Gowers takes objection to in connexion with the clause for the treatment of incipient insanity "that no person under this section shall receive more than one patient at the same time," is in accordance with the principle of the Lunacy Acts, 1890–1891, that private asylums are to die out by gradual extinction for no new licence can be granted. To receive more than one patient would constitute a private asylum. Sir William Gowers objects also to the sanction of the justice of the peace being necessary and adds that "such a sanction could only be a useless formality" He forgets that it is right that the liberty of the subject should be taken away only by some mode of judicial procedure

NOTES UPON A CASE WHERE SYMPTOMS OF EARLY GENERAL PARALYSIS OF THE INSANE FOLLOWED A HEAD INJURY,

TREPHINING, REMOVAL OF DEPRESSED BONE, DISAPPEARANCE OF THE SYMPTOMS

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ON Dec. 16th, 1902, was seen for the second time a patient, aged 30 years, who exhibited a remarkable group of symptoms. About three months previously he had been thrown out of a dogcart and had sustained a scalp wound in the left frontal region, below the frontal eminence He was also somewhat "concussed," but his symptoms were not considered bad enough to confine him to bed except for a short time. The bone was carefully examined and found to be uninjured. All went well for some weeks, but in about a month's time the patient commenced to suffer from pains in the head, loss of memory, and a vague feeling of "not knowing what he was about" His wife and friends noticed an alteration in his manner and temper He exhibited sudden and violent outbursts of passion and was unfit to carry on the ordinary business and duties of life. I was at that time anxious for him to remain in London, but he returned to the country, and under medical advice rested in bed for some weeks and took the iodides. At the same time all alcohol was interdicted. He got much better, but on resuming a more active life all his old symptoms returned with increased violence Getting alarmed his friends again brought him to London. His mental condition being very peculiar Dr T Claye Shaw saw him on Dec. 18th, and the following is a summary of his remarks —

The patient wore a confused and demented facial expression and had a considerable amount of both facial and general tremor He complained of pressure-feeling over the scalp and declared his inability to perform any sustained mental work There was no disease of the fundus oculi but the pupils were slightly non symmetrical the left being the smaller they reacted to light and accommodation. He could not stand firmly when his feet were placed together nor could he walk along a line when told to plant one foot directly in advance of the other The knee-jerks were present but weak. There was some tremor of speech but the tongue was fairly steady and there was no prominent complementary spasm of the muscles *around* the orbit. When asked to read the paper he misplaced and mispronounced words and altered the spacing The handwriting was to be deciphered with difficulty owing to the crowding of the letters and shakiness of the upstrokes

The prominent mental condition was one of dementia, an apathy and slowness of comprehension in answering ordinary questions. There was an unwarranted sense of bien-être but no illusions could be elicited The friends said that he had become subject to impulsive outbursts and was considerably changed in general disposition He suffered from insomnia and spoke of loss of sexual appetite.

As to diagnosis there was no history of alcoholic excess or of syphilis and the symptoms appeared to be directly traceable to the injury to the head. It was probable that they were due to pressure and the only remedy seemed to be to resort to trephining *as soon as possible* The temperature under the tongue was 100° F

The operation was done on Dec. 19th. On reflecting a semilunar flap including the area of the old injury, and examining the bone critically, a faint crack was distinctly seen. Upwards of three months having elapsed since the injury union had occurred, and without a close inspection the lesion would have been undetected A trephine with the diameter of a shilling was here applied, the bone was very thick and hard On removal of the disc a fracture of the inner table of the skull was evident and two small pieces of bone were depressed deeply upon the dura mater, which was uninjured. No pulsation could be detected. Another portion of bone was removed and then the membranes rose up and pulsated freely There was very troublesome hæmorrhage from a large anterior branch of the meningeal artery This was allowed to bleed, a drainage-tube being introduced beneath the flap Recovery was rapid and uneventful.

Within a day or two of the operation the most marked and gratifying change occurred in the patient's mental condition. He became intelligent and lively and his face assumed a bright expression, quite different from the heavy apathetic, and somewhat morose expression which he had previously shown. He got up in a fortnight, and left for the country in three weeks. He could walk straight, confidently, and well He could sign his name "as well as ever," and despite my remonstrance he conducted some business rationally and well. The knee-jerks were still weak His wife and other relations regarded him as quite restored to his natural mental state. The return of his power of writing was very remarkable, for whereas before the operation he could merely make a series of barely decipherable up and down strokes after it he could write clearly and well. Dr. Shaw again saw him two weeks after the operation when the improvement was very striking The face had regained an intelligent expression, the pupils were equal, and the walking power, as far as it could be tested, was as usual. The improvement in the handwriting was most marked and we possess specimens of his signature made just before and soon after the operation.

Fits of an epileptiform nature, severe pains in the head, and mental disturbances are all found in these curious and interesting cases. In some cases mere thickening of the bone is found and in others a depressed fracture previously quite unsuspected. In others, again, the membranes have been found thickened, and cystic formations, the remains of old blood extravasations, have been detected. The bone should be freely removed, but unless there be a very definite reason it is better not to incise the dura mater in these cases. Should any suspicion of cerebral abscess be present in the mind of the operator the brain beneath should always be explored in the usual manner "The case,' writes Dr Shaw, "shows the good results of early operation before the pressure which undoubtedly existed was able to effect wasting changes The reappearance of pulsation in the brain after the removal of the bone was very striking "

Cavendish place W

A METHOD OF EXAMINING THE PULMONARY APEX

By A. G AULD, M.D Glasg , M R C P Lond ,
PHYSICIAN WESTMINSTER GENERAL DISPENSARY LATE ASSISTANT PHYSICIAN ROYAL INFIRMARY GLASGOW

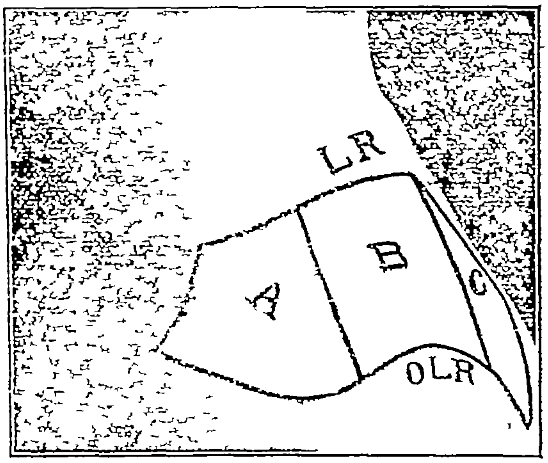
In a former communication[1] I described certain methods of physical diagnosis chiefly applicable to the bases of the lungs and it is now proposed to describe a method of examining the pulmonary apices designed to yield trustworthy indications of the very earliest stage of phthisis. It is commonly recognised that certain general symptoms—e.g , anæmia, indigestion, and evening temperature—may be the only evidences of the commencement of tuberculous deposit in the lung no really trustworthy data being afforded by the conventional methods of examination. The procedure about to be described may materially assist in the detection of such cases

In addition to a large number of clinical examinations I have made a number of observations on the cadaver by sections and otherwise, with a view to determine the relationship of parts and the exact positions of intervening structures. In this part of the work I am much indebted to Braune's Atlas and to some remarkably constructed myographical plates by E. W Tuson of the Middlesex Hospital, published in 1825.

The height to which the apices of the lungs rise varies somewhat. Lying above and between the insertions of the sterno-mastoid, in the curve of the subclavian artery, they reach on an average from one inch to one and a half inches above the clavicles. In some cases they reach two inches. The extreme apex is free and unsupported by bone, but below this the pulmonary tissue is bound down by the rigid first rib Trustworthy observations show that the right apex is a shade higher than the left, but this makes little appreciable difference in practical work. The area now to be considered is situated entirely above the clavicles, extending from these bones to the level of the second dorsal spine, and so includes the entire posterior apical region of the upper lobe.

The method is as follows first, all the resonant area above the clavicles is "percussed out " Percussion is begun at the clavicular attachment of the outer head of the sterno-mastoid and continued upwards, just outside the border of the muscle. Finger to-finger percussion may be employed, but I generally use a vulcanite rod pleximeter, the contact or chest-piece of which is about half an inch in diameter The stroke must be very gentle and its direction vertical, or even rather away from the muscle It will be found that at a certain point above the clavicle the note changes from resonant to dull. This point is marked off with a dermograph. It may be mentioned, that although the apex of the lung lies farther forward than the outer edge of the muscle, percussion over the muscle itself is useless owing to the proximity of the larynx It is essential that the patient hold his head erect without any deviation or rotation to either side Next, percussion is similarly made along the inner border of the trapezius (which is sufficiently evident in most persons) and the point at the side of the neck where resonance ceases is similarly marked off. So, proceeding backwards, percussion is made in an upward direction until the upper limit of resonance is determined all round and the line L R (Fig 1) is brought out. In percussing the parts outside the inner border of the trapezius firm pressure should be made with the finger or pleximeter and the stroke should be fairly forcible owing to the thickness of the tissues (chiefly fat, trapezius, and levator anguli scapulæ). If a pleximeter be used, its contact extremity should be long and narrow

FIG. 1.



The upper line or limit of resonance being obtained, the outermost or lower limit of resonance is next mapped out. Percussion is begun over the inner third of the clavicle and continued outwards along the bone. About its outer third the note will change. It may be observed that to elicit this change of note mediate percussion (finger to-finger) is better than direct. By successively percussing in the same direction the outer limit of resonance is brought out (O L R in Fig 1) It will now be observed that the upper line of resonance passes obliquely upwards, crosses the interval between the sterno-mastoid and trapezius, still taking an upward direction until its highest point is reached. It then continues almost on the same level for some little distance and takes a course downwards to end at the first dorsal spine The outer line of resonance forms nearly the arc of a circle whose convexity is inwards. In this way the upper and outer limits of the apical area are determined , the anterior limit is the clavicle and the posterior limit is a line drawn outwards from the second dorsal spine to meet the posterior end of the outer line of resonance. Such a line passes beneath the superior angle of the scapula. We have thus the apical region as a somewhat quadrilateral area, mapped out by these different lines.

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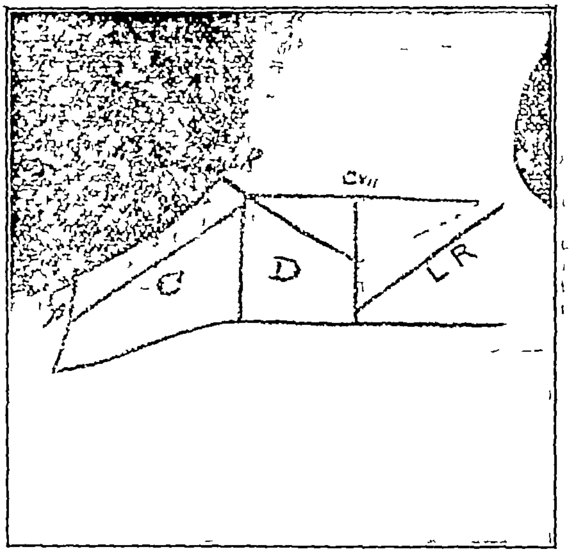
[1] THE LANCET May 31st, 1902, p. 1526

This area falls to be divided into certain segments The first or anterior segment (A, Fig 1) is bounded behind by the inner edge of the trapezius and is thus entirely included in the posterior triangle of the neck. The disposition of the other segments will be best appreciated by a reference to Fig 2 Here it will be observed that a square is formed on the line which joins the seventh cervical and second dorsal spines. It will be found that normally the upper line of resonance runs from the first dorsal spine to the upper and outer angle of the square From this angle a line is drawn parallel to that along the inner border of the trapezius. These lines include the middle segment (B) The posterior segment (C) lies behind and below this, while the vertebral segment (D) is formed by the lower part of the square.

FIG 2.



The key to the detection of incipient disease in one or other apex is familiarity with the physical signs yielded in health. There are certain phenomena which are common to both apices but the signs elicited from the individual segments differ on the two sides Not only is this so, but each segment on either side yields certain modifications in the physical signs which are distinctive of itself, and these are uniform over the entire segment.

In health the upper and lower limits of resonance practically correspond in position on the two sides, provided there be no flaw in the bodily conformation. A slight deviation may be present in the respective positions of the two upper lines owing to the slightly greater height of the right apex Allowance should be made for this in conducting examinations, but it rarely occurs as a disturbing element The distances between the upper and outer lines of resonance should be measured from fixed points on either side and compared This is an important *consideration in* the investigation of disease.

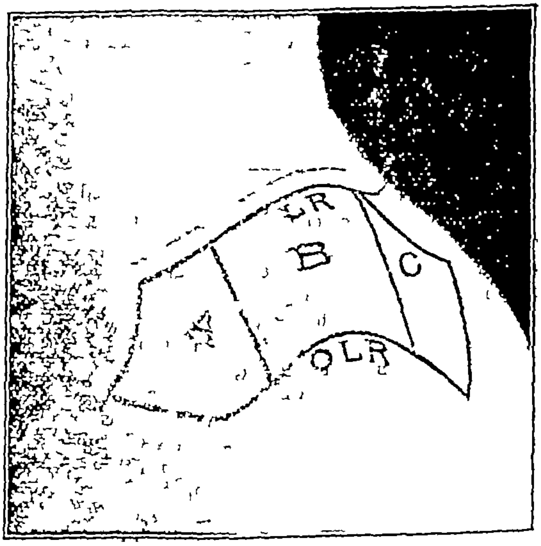
If the pleximeter be placed immediately above the upper line of resonance and percussion be made during quiet breathing or after a forcible expiration, it will generally be found that if a deep inspiration be taken and the breath held, the percussion tone will change from dull to resonant—that is to say there is an *extension* of resonance upwards due to inflation of the apex. A quarter of an inch is about the limit of this excursion, which is represented by the dotted line in Fig 3 Sometimes considerable delicacy of technique is requisite to elicit the phenomenon, and in stout flabby persons it may not be obtainable. In thin muscular subjects with strong lungs it is very evident Its importance lies in this that it be equally produced on both sides Owing to the fixity of the first rib no such extension of resonance is produced at the outer line

In determining the physical signs over the individual segments it is important to note the condition of the patient. Very lean subjects yield signs which might mean disease in stout ones. It is useful to begin by palpating the various segments and comparing the two sides Then the characters of the breath sounds, vocal resonance, and whispering resonance are noted and compared The whispering resonance is of high importance and should never be omitted in any examination.

It is generally *recognised that normally the expiration* sound (which is always "bronchial" in character) is commonly heard over the right apex, at least on deep breathing, and that the vocal resonance is considerably louder than over the left apex This is true both as regards males and females. But such general terms of expression are inadequate and misleading It is necessary to consider each individual case separately from the results obtained in the individual segments.

It cannot be too strongly insisted on that it is only by adopting a standard of comparison that any accuracy can be obtained Such a standard may be defined as follows. Over the anterior segments the auscultatory signs (breath sounds, vocal resonance, and whispering resonance) are most intense, those over the right segment being more *marked than those over the left.* Over the middle and posterior segments on the left side the whispered voice should be inaudible and on deep breathing the expiration should likewise be inaudible, or at least very faint and of short duration. Exceptions to this only occur in the case of very lean or very young individuals, in whom both phenomena may be present It is to be premised, however, that the patient is instructed not to blow his breath out forcibly, but rather to "let it go" On this side also the vocal resonance is more pronounced over the middle than over the posterior segment. On the right side both the whispered voice resonance and the expiration sound—at least in deep breathing—are normally present over the middle and posterior segments, while the vocal resonance is nearly equal over both segments and considerably louder than over the corresponding segments *on the left side.* The vertebral segments have characters peculiar to themselves. Variations are common, which are, however, devoid of any important significance. Commonly they present bronchial breathing, bronchophonous voice, and whispering bronchophony (*not whispering pectoriloquy*) *The sounds are sharp* and "empty" (Skoda) and are due to direct conduction from the larynx through the solid tissues. They are most pronounced on the right side

FIG 3.



Now, if the pulmonary apices be examined in this fractional and comparative manner any deviation from the normal standard, *any evident disproportion* either in *respect* of characters common to both sides or to the *individual segments*, may be justly regarded as a ground for suspicion As early indications of abnormality the *following* points are to *be noted* 1 Failure of the upper line of resonance on one or other side to ascend during a deep inspiration. 2. A lowering of the upper line of resonance in whole or in part as compared with that on the opposite side. Posteriorly for instance, the line may occupy the position shown in Fig 2 (right side), or the fall may be evident only at the anterior extremity, or it may be general all along the line. In estimating this a slight allowance is to be made in favour of the left side but only in that portion of it anterior to the vertebral segment. It should also be ascertained that the line on one side is not abnormally high from emphysema. 3. Indistinct definition of the upper or outer lines of resonance—the resonant and dull areas merging more or less into each other 4 Inward displacement of the outer line of resonance. Should one or more of these signs be present it may be possible to detect some deficiency in the excursion of the diaphragm on the same side.

The results obtained by percussion are next compared with those of palpation and auscultation. The points for consideration are chiefly these 1. The breath sounds disproportionately feeble in one or other of the anterior segments (especially if the right side approximates to the left). 2. Any approximation in intensity in the vocal resonance on the left side to that on the right, either generally or in one or other segment. 3 The presence of whispering resonance and expiratory breath sound over the middle or posterior segment on the left side, noting specially the pitch and duration of expiration, if present on quiet breathing and comparing with the same segment on the opposite side. 4 A discrepancy in the characters of the physical signs over different parts of the same segment, as already mentioned, the signs over each segment should be uniform throughout. 5. Encroachment of the signs pertaining to one segment or another—applying more particularly to the left side, as, for instance, bronchial breathing and bronchophony extending beyond the margin of the vertebral segment

It is most usual when examining the apices in this way to find any abnormality with regard to the lines of resonance existing alongside some change in the normal character of a segment or segments thus immobility of the upper line of resonance may coexist with weak breath sounds in the anterior segment, or a fall in the highest part of the line on the left side with the presence of expiration sound and whispering resonance in the middle segment. On the right side the results of percussion are more especially valuable, as the auscultatory signs by themselves are less definite there. We note that the delimitation of the percussion areas may be verified by (1) the vocal and whispering resonances, and (2) "transsonance. A stethoscope with a small chest-piece (three-quarters of an inch in diameter) should be used[3] It is moved along the segments in such a manner that each successive application partially overlaps the last. At the limits of resonance, the sounds will change. "Transsonance" is a form of auscultatory percussion which is recommended by Abrams. A bone, such as a vertebra or the manubrium sterni, is directly struck with the finger or a hammer while the stethoscope is moved along the parts to be demarcated, the same point being struck all the while. A change of tone occurs in passing to a part of different density By transsonance" we may also compare one apex with another.

It has been pointed out that the auscultatory phenomena over the right apex are less trustworthy, but in addition to the aids just described there is another not to be lost sight of. It is, that in cases of disease the difference in the expiration sound in quiet and deep breathing respectively is much less marked than in health. In disease the bronchial type may be equally well marked in both forms of breathing This is a feature which is of general application.

Occasionally in healthy lungs one hears a few crepitations over the apex (usually in the anterior segment) which are atelectatic in character They only occur in the end of the first deep inspirations taken, and disappear completely after, it may be, one or two inspirations. They differ in character from those due to tubercle, being also more numerous. Tuberculous crepitation, on the other hand, is always persistent

It sometimes happens that a tuberculous apex becomes hyper resonant, either from local emphysema or relaxation of the pulmonary tissue. A difference in the position or in the capability of movement of the line of resonance may then be found on that side, and other differences may be detected in the normal relationships of the auscultatory signs over the segments It is very easy to diagnose a healed tuberculous focus in the apex by this method.

Although little else has been attempted in this communication than to outline the technique employed, its successful application in individual cases is entirely a matter of practice and it may be added, of patience

Henrietta street W

A RARE FORM OF PURPURA

BY H. LAING GORDON M.D., C.M. EDIN

THE case described below offers, in the present state of knowledge, little more than a pretty subject for academic discussion, but an account of this unusual variety of an uncommon form of disease may supply useful facts or hints to investigators of the nature of purpura.

It does not appear that so far the clinical appearances of the disease or pathological investigation have demonstrated its origin, although they have stimulated ingenuity in grouping and classification. There will be no small difficulty in fitting this case into one particular group The term "purpura," indeed, describes it inadequately, while to call it "Henoch's purpura ' is like putting a fat *cache pot* on a narrow shelf. The bestowal of Henoch s name on a rare group of cases gives them a fictitious importance, the symptoms he described as "added to purpura and articular swellings"—viz, vomiting, intestinal hæmorrhage, and colic —are probably due to internal extravasations of blood, and if this be so "Henoch s purpura" is revealed as a severe form of ordinary purpura. The necropsy on Silbermann's patient referred to in the article "Purpura" in Allbutt s System of Medicine"[1] tends to confirm this view Henoch himself wrote only of "Eine eigenthümliche Form von Purpura," using an adjective which might qualify every case of purpura described since he wrote. The case to be narrated exhibited the symptoms described by Henoch, added to purpura and articular swelling, but had other severe symptoms superadded which did not appear to be attributable to extravasation. An opinion on the origin of a group of symptoms must be, failing definite evidence, a mere individual impression. Dogmatism is a snare but deprecation is craven, and so, in the absence of any specific organism to spare us the use of vague terms, my impression would ticket this case as either "nervous" or ' rheumatic."

The patient, a boy, aged 14 years, known to me as being nervous and abnormally sensitive, persevering at work and plucky in games, was taken ill on Feb 27th, 1901, complaining of pain and stiffness in the limbs and a rash on the legs These symptoms disappeared in the morning but returned the next evening with increased severity, so that on March 1st the head master of the boarding school in which the boy was a pupil asked me to see him. There was no history of previous rheumatism or of any recent illness except slight sickness and transient earache on Feb. 23rd. I found the patient complaining of pain and tenderness in the knees, ankles, elbows and wrists without heat or swelling The temperature was normal and the pulse was 78, a slight fur was present on the tongue. The extensor surfaces of both legs, the inner surface of the thighs and the outer aspect of the elbows were dotted thickly with a purpuric rash, some spots being red, unraised, and recent, others having begun already to fade, while all were indifferent to pressure. The diagnosis of "purpura rheumatica" seemed to be clear but the same evening (March 1st) the onset of colic and hæmorrhage from the bowels proved it to be premature. In 24 hours over a pint of blood was lost, happily this symptom did not recur On the 2nd and 3rd there was no more purpura, but on the 3rd the anterior aspect of each ankle was a mass of urticaria, while the pain was moving from joint to joint. The dorsum of each foot was tender and enormously swollen on the 2nd, but on the 3rd this had disappeared completely giving place to similar conditions of the elbows and wrists. On the 3rd the colic also returned with repeated nausea and vomiting of bile, the abdomen was tender all over The patient s helplessness on the same day was increased by sudden tenderness passes beneath the superior angle of the scapula. We have thus the apical region as a somewhat quadrilateral area, mapped out by these different lines.

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[3] Obtainable by unscrewing the ivory chest-piece of the flexible binaural stethoscope.

[1] Allbutt s System of Medicine, vol. v., p. 582.

This area falls to be divided into certain segments The first or anterior segment (A, Fig 1) is bounded behind by the inner edge of the trapezius and is thus entirely included in the posterior triangle of the neck. The disposition of the other segments will be best appreciated by a reference to Fig 2 Here it will be observed that a square is formed on the line which joins the seventh cervical and second dorsal spines. It will be found that normally the upper line of resonance runs from the first dorsal spine to the upper and outer angle of the square From this angle a line is drawn parallel to that along the inner border of the trapezius. These lines include the middle segment (B) The posterior segment (C) lies behind and below this, while the vertebral segment (D) is formed by the lower part of the square.

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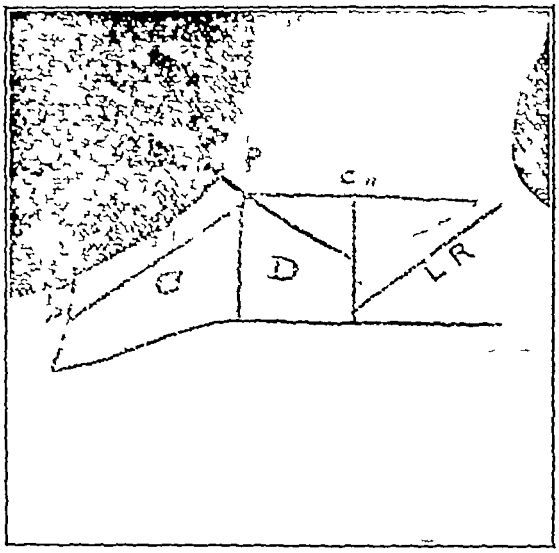

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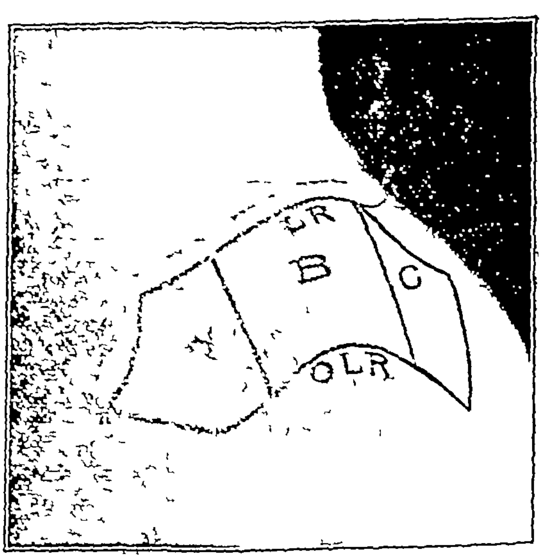

Now, if the pulmonary apices be examined in this fractional and comparative manner any deviation from the normal standard, *any evident disproportion* either in respect of characters common to both sides or to the individual segments, may be justly regarded as a ground for suspicion As early indications of abnormality the following points are to be noted 1 Failure of the upper line of resonance on one or right ileo-cæcal region persisted, she therefore took a large dose of castor oil on the afternoon of the 28th with the result that the bowels acted freely but the pains returned with greatly increased severity and there were several attacks of vomiting The girl, of course, was sent to bed again and Dr A Warwick Brown was called in late at night. He at once recognised the case as one of severe appendicitis and arranged for her removal to the Margate Cottage Hospital next day He saw her next morning and finding that the area of tenderness had greatly increased and that the girl was distinctly worse caused her to be taken to the hospital with great care on an ambulance. She was seen by me an hour after admission. There were then well marked signs of general peritonitis, the pulse was over 180, the temperature was 101° F, the abdomen was rigid all over, and no movements were visible with respiration, which were shallow and over 40 to the minute There were occasional ineffectual attempts at vomiting The girl was too bad to elicit where the area of greatest tenderness was to be found, and in view of her collapsed condition we considered the outlook to be distinctly unfavourable.

An operation was decided on and carried out as rapidly as possible, Dr Brown administering chloroform and Dr R. Thomson assisting me. The usual oblique incision over the region of the appendix was made and on opening the peritoneum a quantity of thin pus escaped, this was not offensive and there were no adhesions The cæcum and appendix which was behind it and directed inwards were exposed, and round the base of the cæcum there was some thick white lymph, evidently of some days' standing, and a piece of swollen, inflamed, and œdematous omentum of the size of a visiting card was adherent to the appendix, which was itself swollen, intensely injected, and perforated at its tip It was thus quite clear what had happened the attack had started five days before and the inflamed area was being shut off in the usual manner, but the morbid products had been let into the general peritoneal cavity as the result of the purgative and the consequent violent peristalsis. The appendix and damaged omentum were rapidly removed and an incision two inches long was made in the middle line, through this a large glass irrigator nozzle was passed and a quantity of thin odourless pus welled up from the bottom of Douglas's pouch. A stream of hot saline solution was then directed through the tube and made to flow out through the lateral opening until the solution returned quite clear, when a large rubber drainage-tube was passed through the median incision reaching to the bottom of the pelvis and a similar tube was passed upwards through the lateral incision by the side of the cæcum. Both incisions were then lightly plugged with sterile gauze and left wide open, no sutures being inserted The usual sterile dressings were applied and the patient was got back to bed as rapidly as possible. She stood the operation well, it having taken 40 minutes. On the next morning there was a marked improvement in the condition of the patient, the temperature had fallen to 99° and the pulse to 110 and there had been no more attempts at vomiting There was a fair amount of discharge from each tube and during the night of the operation and the following day the dressings were frequently changed, the gauze plugging was changed at the end of 24 hours. On the 31st, two days after the operation the improvement continued, the temperature was 99° and the pulse was 100 The rigidity had entirely and the tenderness nearly, disappeared, the abdominal walls moved freely with respiration, and the discharge from the tubes having practically ceased they were removed 48 hours from the time of operation. The wounds were after this lightly plugged twice daily until no longer necessary, and from then to the time she left the hospital, four weeks later, with both wounds practically healed, her return to convalescence was uneventful and uninterrupted.

I regret that a bacteriological examination of the pus was not made, but both symptoms and appearances pointed to one of the worst forms of septic peritonitis and I hardly dared to hope for a recovery Possibly it was due to the fact that the intestines, with the exception of the washing out, were disturbed as little as possible. There is no doubt that their removal for cleaning and consequent handling must add greatly to the shock and so places the patient's tissues at a disadvantage in dealing with the organisms that are certain to be left behind in spite of the most careful "toilet." Leaving the wounds open in these acute cases not only facilitates drainage but has another great advantage—the patient is sooner off the table and the period of convalescence if the wounds are carefully dressed, is very slightly prolonged. The other factor in the girl's recovery was the promptitude of my friend Dr Brown in advising surgical interference, as even with all the publicity afforded to the disease in the last few years the aid of active surgery is too often invoked too late.

Margate

HÆMORRHAGE IN PREGNANCY A CASE OF CENTRAL PLACENTA PRÆVIA

BY H. T M WHITLING, M.B, B S DURH., M.R.C S. ENG, L R C P LOND

ON Nov 15th, 1902, the nurse in attendance on a married woman sent for me at 7 A.M., stating that labour pains had commenced about three hours previously and that they had been attended before and during her (the nurse's) presence with alarming "flooding" The patient, aged 40 years, was a multipara, with five children, whom I had twice previously attended at confinements (once for twins) and whom I knew to be generally quick in labour and the possessor of a large pelvis and an unrepaired ruptured perineum dating from her first confinement, which gave plenty of vaginal room as it extended rather far back towards the rectum. When I arrived there were numerous signs—such as clots, &c.—on the bed of a severe hæmorrhage and a utensil was nearly half filled with fresh blood which had just been passed while micturating

On examination per vaginam the os was found to be slightly larger than a five-shilling piece and was apparently soft and easily dilatable. Blood was flowing freely and my finger perceived the almost unmistakeable "boggy" soft sensation caused by a presenting placenta. The membranes were intact and bimanually I made out the back of the fœtus to the right and the limbs to the left of the uterus, the vertex was right occipito-anterior Having swept two joints of my examining finger round inside the os uteri and thereby separated the placenta as far as possible, I found that without passing my whole hand into the vagina and through the os I should not be able to reach the edge of the placenta to rupture the membranes, so I determined to tear straight through the placenta itself, seize a leg or foot, and to turn quickly, or, if the head was found low down, as I thought to be the case, to apply forceps and to deliver rapidly, for celerity in the latter procedure I knew that the pelvis and vagina afforded plenty of space and no obstruction and forceps had been used by me before.

Withdrawing my hand I prepared a douche of izal and water at a temperature of 115° F, injected five grains of "ergotin aseptic" hypodermically into the gluteal muscles, and got my forceps ready Pains were now fairly severe and bleeding was free, but the general condition was still not very bad and as my whole attention was necessary for other matters chloroform was not used, the patient remaining quiet and obedient. Re inserting my hand into the vagina I placed the first and second fingers on the presenting surface of the placenta and, fixing the body of the fœtus externally with my left hand, with very slight resistance I tore through the placenta and, passing all my fingers through and widely enlarging the tear to give room, I felt the head presenting and strongly forced down by uterine action *a tergo* Changing hands, and dismissing all ideas of attempting podalic version, I rapidly applied my forceps and delivered the fœtus exactly three and a half minutes from taking up the first blade bleeding ceasing for the first time when traction commenced. Passing up my hand without any delay as the child's legs escaped I removed the placenta, firmly compressing the uterus with my left hand. The placenta came away in the hollow formed by my fingers and the membranes dragged after Then two hot intra-uterine douches of solution of izal were given and with the uterus contracting well no further hæmorrhage occurred.

The child was as was fully expected, dead and of apparently quite full weight and size The placenta was very large, thick, and soft, with the aperture made by me for the passage of the hand and fœtus almost exactly in the centre, judging by the fairly equal thickness of its substance forming now the circumference of the aperture. Its and pain in both temporal regions rapidly followed by œdematous swellings of the size of an orange, the next day there was no trace of these swellings beyond soreness at their site

From this date (the 3rd) there followed a rich abundance and variety of symptoms. From hour to hour, not merely from day to day, the clinical picture would change in a manner which defies description but which soon reduced the boy's attendants to a state of stolid but sympathetic expectancy and the patient himself to complete indifference. He seldom spoke throughout his long illness and even his monosyllabic utterances were accompanied by tears. In the course of 24 hours ugly swellings would appear and disappear, a dozen joints would be racked with pain in rapid succession, and the surface of the body would exhibit a whole atlas of skin diseases Simple erythema and purpura, urticaria, and erythema exudativum in all its varieties, cropped out and disappeared for week after week in disheartening fashion, blushes and spots, stony nodes and nodules, and enormous papules presenting themselves and vanishing one after another or in groups, but always irregularly in order and seat.

On the 4th there was occasional colic, on the 5th the most prominent features were œdema of the right upper eyelid of the size of a hen's egg, and in the evening return of the colic and vomiting, and severe pain in the elbows, wrists, and ankles, while both cheeks swelled suddenly, and erythema nodosum and purpura contended for supremacy in the limbs Purpura was triumphant on the morning of the 6th and the œdema was transferred from the cheeks to the forehead as though a variety of grotesque distortions of the features were the object, in the afternoon the buttocks were covered thickly with erythema papulatum. But the colic remained the most anxious symptom up to March 8th when it subsided in favour of pain all over the back, and this gave place in turn to pain, œdema, and tenderness of the left side of the trunk, the left thigh, knee and hand, and both legs, causing inability to move The patient was able to move comfortably once more by 9 30 P M on the 9th and he had no swelling save over one knee and one shoulder, and he was able to sleep well. At 1 A.M on the 10th he awoke with great abdominal pain and vomiting resulting in an alarming collapse which caused several anxious hours and required active measures By midday the colic had gone, but a copious purpuric rash had appeared on the face and elbows. From the 12th to the 15th the colic decreased, the flying pains and swellings continued until the 13th, and the only fresh rash was purpuric on both cheeks, the left knee, arm, and hand. The 14th was the first day that could be called satisfactory, the patient felt better, there were no pains or swellings, and the skin affection was limited to small crops of purpura. At 8 A.M on the 15th he was desquamating "all over," but by 1 P M his arms were thickly covered with purpura from shoulder to wrist. From this date until the 19th no new features arose, although the old symptoms of pain, swelling, and rash rang the changes on the joints and the different areas of the body, but with less vigour On the 19th for a brief period there were no pain, no colic, no new rash, a clean tongue, and a normal temperature in the patient, and in his attendants some hope of permanent improvement, when suddenly his flushed face drew attention to the pulse and temperature. Without apparent cause the pulse had risen to 104 and the temperature to 99 4° F, there were no abnormal cardiac signs. Up to this time the pulse had been the one cheerful feature, steady at 80 and rarely up to 90, and of good character, while the temperature had never exceeded 99° In the next few days the temperature rose slowly to 100 4° of an evening and 100° in the morning, while the pulse rate varied day and night between 120 and 130 On the 22nd the old symptoms took a new lease, colic and purpura, urticaria, œdema, and erythema, sudden and vanishing pains and swellings, once more perplexing us. On the 27th it was noted that the pains had left the region of the great joints and were affecting only the hands and feet, the axillæ and popliteal spaces, and the muscles of all the limbs. On the 28th there was actually no pain, swelling, or rash, only vigorous desquamation once more, but the increased pulse-rate and temperature warned us not to draw encouragement again from the suspension of the original symptoms The patient had a restless night, at 11 A M. on the 29th the pulse was 136 and the temperature was 99 4° and for the first time a loud systolic murmur was detected in the mitral area without any increase of cardiac dulness The cardiac condition now became the chief anxiety, there was, from this time, no return of the original symptoms except that the skin eruptions, especially the purpura, recurred every night for several weeks. It was interesting to observe that an erythematous blush could be produced at any time on any portion of the chest and abdomen simply by letting the patient know that one's attention was directed to that portion. The pulse rate fell slowly to about 106 by April 26th, on which day the temperature reached normal. The cardiac dulness remained unaffected. By May 4th the pulse was under 100 and on the 27th he was able to watch the school sports from his window, although he paid for the pleasure by a large crop of purpura on his legs and a slightly raised temperature—90 days after the onset of his illness, but small crops of purpura were not uncommon five months after the date of onset of his illness. The convalescence was marked by a gradual lessening in intensity of the cardiac murmur, encouraging a hope that it would ultimately disappear, but once more a new development retarded recovery Scarcely had he begun to use his legs when distinct, but happily not severe, chorea set in, the head, neck, and upper extremities, as well as the face, being affected mostly This condition persisted for several months but did not become serious, indeed, the boy was able to make a voyage to South Africa during the winter I have been unable to obtain a report as to his present condition, but he is said to be well although "nervous" as before

During the illness examination of the blood gave no information Frequent examinations of the urine detected no renal mischief During the first three weeks of the illness the total daily flow of urine was diminished more than there appeared reason for, it averaged, during that period, 18 ounces and ranged from nil to 29 ounces per diem. No benefit was obtained from the use of salicylates or any of the numerous drugs selected out of recommended remedies. Henoch's recommendation of icebags to the abdomen for the colic was of no avail. Careful nursing and feeding, together with palliative treatment of symptoms as they arose—a proceeding which often recalled the carpenter's estimate of the prospects of the seven maids with seven mops—was the method of treatment employed in this case.

No doubt the case presented a curious jumbling up of the symptoms of "Henoch's purpura" and "purpura rheumatica" with additions. The transient earache on Feb 23rd has been suggested as a possible source of septic infection The suggestion is incapable of proof or disproof. Whatever the poison it appeared to act upon the nervous system.

The case differed from those described by Henoch as follows (1) In its more continuous nature, there were no "intervals of several days or weeks or even of a year" (Henoch), (2) in the prominence of skin eruptions other than purpura, and of what can only be called "flying œdema"; (3) in the cardiac complication[2], (4) in the chorea, and (5) in the diminished daily flow of urine.

I had the advantage of meeting Dr H. P Hawkins in consultation over this case.

Florence.

A CASE OF APPENDICITIS WITH GENERAL PERITONITIS

By W GREENWOOD SUTCLIFFE, F R.C S. ENG,
HONORARY SURGEON TO MARGATE COTTAGE HOSPITAL AND THE ROYAL SEA BATHING HOSPITAL, MARGATE.

RECOVERY of cases of this gravity being sufficiently rare as compared with the small mortality attending operations where the damaged part is only slightly shut off, the details of this case may be worth putting on record.

The case appears to have begun on Oct. 24th, 1902, the patient, a girl, aged 20 years, being seized on that night with violent abdominal pain which was treated in the usual domestic manner without medical advice by the application of hot fomentations, with the result that the pain subsided next day, and a similar attack having occurred 12 months before which had cleared up satisfactorily it was thought that the trouble was practically at an end. The patient was able partially to go on with her housework, she, however, remained constipated and slight pains in the

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[2] Compare a case of purpura described by Dr C W Buckley, THE LANCET July 20th, 1901 p 132.

the apex beat was diffused. There were no increase in the superficial cardiac dulness and no bruits The liver dulness commenced at the upper border of the sixth rib in the nipple line On inspection the abdomen was found to be deeply jaundiced Distension was noticed to the right of the umbilicus. On palpation to the right of, and extending for two or three inches below the level of, the umbilicus was a tender, elastic, tense resistance, roughly triangular in shape, merging above and on either side of its base with a more solid resistance, presumably the liver On percussion the above regions were both dull. The physical signs thus pointing to some obstruction of the common bile duct exploratory laparotomy was advised.

On Dec. 6th Dr Hatton made an incision in the linea semilunaris on the right side over the swelling and on opening the peritoneal cavity he discovered a much distended gall bladder, bearing signs of an acute local inflammatory condition and adherent above to a portion of great omentum. Cellular blanket cloth swabs having been packed around the lower and outer aspects of the gall bladder, an incision was made into it and a quantity of bile, at first purulent but later almost normal in character was evacuated. The cavity of the gall bladder was then found to be full of smooth small faceted calculi, averaging about the size of a large pea, of which 449 were removed. The gall-bladder was then sutured to the abdominal parietes and a drainage-tube and iodoform gauze-plug were inserted, the upper portion of the wound was closed with silkworm gut sutures. Owing to the length of the operation it was not deemed advisable to explore the gall-ducts at this time.

The patient bore the operation well and was anæsthetized with ether The after progress was very satisfactory, the jaundice lessened and disappeared. The tube was removed on Dec. 8th and the stitches on the 16th. Two more calculi of small size were passed, one on the 12th and the other on the 27th, bringing the total up to 451. The biliary fistula slowly closed normal bile being passed but lessening gradually and on the patient's leaving the infirmary on Jan. 12th, 1903, all that remained was a button of granulations with slight exudation of bile.

Stoke-on Trent.

A CASE OF COMPOUND COMMINUTED FRACTURE OF THE SKULL WITH HERNIA CEREBRI, OPERATION, RECOVERY

BY LLEWELYN LEWIS, M.R.C.S ENG, L.R.C P LOND

A BOY, aged 11 years was seen at his home at 11 30 A.M. on April 3rd, 1902. The mother stated that he had been kicked by a horse one and a half hours previously and that he had lost a tremendous quantity of blood. Previously the boy had been healthy and strong The father of the boy was a miner living in a small cottage of two rooms. The family history was good. When first seen the boy was lying on a settle. His face was blanched and blood was running from the right side of the head above the ear. He was in a collapsed condition and unconscious The pulse was very small.

On examination a lacerated wound was found, one inch in length, situated two and a half inches from the root of the zygoma, four inches from the middle of the bregma, four and a half inches from the middle line of the forehead, three and a half inches from the upper edge of the mastoid process, running horizontally, the centre of the wound being in a line one-eighth of an inch in front of the external auditory meatus Brain substance was oozing out Palpation revealed a compound fracture of the skull, the lower part of the bone being driven in and the upper edge of the bone projecting

The hair was shaved around the wound and the scalp was thoroughly cleansed with a 1 in 2000 solution of biniode of mercury and dressed with antiseptic wool. His parents were advised to remove him to the hospital and the seriousness of the case was pointed out to them. Up to this time the history is as given to me by Dr W Evans who was then assisting me in my practice On the following morning a message was received by me asking that something might be done for the boy as the mother would not allow him to be taken from home. At 1 P.M. (27 hours after the accident) the boy was seen and he was then in the same position and condition as on the previous day At 5 P.M. (31 hours after the accident) Dr Evans and I saw him and there was no difficulty in concluding that the case was one of compound fracture of the skull with protrusion of brain matter The boy was at this time in bed in the one living room of the house. He had to some extent recovered consciousness but was very dazed and looked ill He was at once put under an anæsthetic and the right half of the scalp was shaved and made as aseptic as possible. A semicircular incision was made through the scalp covering the area of injury On reflecting this flap more brain matter was seen to be oozing out of the cranial cavity and it was seen that the fracture was comminuted and that the posterior half was forced down and its edge deeply driven into the brain. The anterior part of the fractured portion was also broken up into several pieces some being forced into the brain. Being unable to remove the fragments of bone a trephine was applied to the sound portion of the skull on the upper edge of the fracture and an almost complete circle of bone was removed. A lever was then inserted under the depressed fragment, but as this did not enable me to remove it, a strong polypus forceps was used and the bone at the posterior of the fracture was wrenched out and raised above the level of the skull. In endeavouring to replace this it was found that the portion was now too broad to fit into its original place, by the loosening of the suture between the parietal and squamous portion of the temporal bone, the fragment was therefore entirely removed and this, with the other fragments, was placed in a normal saline solution at a temperature of about 100° F On further examination of the parts portions of brain matter were discovered to be so injured that it was deemed necessary to remove them and this was done by the aid of scissors. The brain and surrounding parts were then thoroughly cleansed with a 1 in 60 solution or phenic acid, the dura mater was brought together and the pieces of the skull were then sawn into smaller ones and filled into the space like tessellated pavement. A drainage-tube was passed down to the fracture, the scalp was brought together with fishing gut sutures, and the whole was dressed with perchloride wool

By the time we had washed ourselves and the instruments the boy had recovered consciousness and from that hour his intellect has been perfectly clear His temperature did not once rise above normal and with the exception of a little swelling over the left eye, the recovery was uninterrupted. The drainage-tube was removed on the fourth day and the whole wound quickly healed by first intention. The skull is now solid and all the pieces of bone have united to each other There was on no occasion any symptom of paresis in any organ or muscle and the pupils remained normal throughout and responded to light and accommodation His hearing was not in any way impaired. There has not been any symptom of brain trouble since and the boy is as formerly

The following three points are worthy of consideration – (1) the recovery in a most insanitary environment, the room in which the lad was lying being the only living room of a family of nine, the work of the household being carried on all the time, (2) the absence of any symptom of impairment, either mentally or physically, and (3) the excellent union of the sawn particles of bone which were immersed in saline solution for a period of not less than one and a half hours. From measurements taken it is assumed that the region injured was part of the temporo-sphenoidal lobe.

Neath.

LONDON TUBERCULOSIS SANATORIUMS — At a meeting of the Metropolitan Asylums Board on Feb. 7th letters were read from the Shoreditch, St. Marylebone, Paddington, and Stoke Newington borough councils stating that they agreed with the suggestion of the Kensington borough council that the Orchard and Joyce Green small-pox hospitals should be set apart for the treatment of tuberculous persons Some months ago the Bermondsey borough council, after circularising the other councils of London on the same subject, found that ten were in favour of sanatoriums being provided by the Metropolitan Asylums Board five approved of the principle of the need for the open air treatment of tuberculous patients but were not agreed as to the authority which should make the provision, and 11 remained indifferent On that occasion the Board decided to wait until the borough councils came into line and a year was allowed for that purpose. At the meeting on Feb. 7th, however, the letters gave rise to some discussion and notice of motion was given that the whole subject be reconsidered at the next meeting of the Board.

apparently largely spread-out attachment to the uterine surface doubtless accounted for the edge not being felt by the passage through the os of two phalanges of my finger The woman was not blanched or exhausted to the extent which might have been expected and had borne the whole of the most trying operation bravely, which was much more quickly performed than might appear from its description in writing

In this case a departure was made by me from the instructions of text-books—to rupture the membranes at the edge of the placenta and to perform version by grasping the first foot met with. But the placenta was one of the very largest I have ever seen and there was my previous experience of her confinements to guide me—namely, that there was no pelvic deformity or flattening, the os was usually quickly dilated, an unrepaired perineum existed, and that the patient possessed great courage and self control—hence I preferred to perforate the placenta and, finding the head low down in the pelvis with firm uterine contractions, extracting rapidly with forceps to attempting podalic version.

Recovery was uneventful, the temperature and lochia were normal, and all symptoms of anæmia quickly disappeared with good food and nursing

Husbands Bosworth, Rugby

NOTE ON "RELAPSES" IN SCARLET FEVER

By A. BANKIER SLOAN, M D GLASG,

ASSISTANT MEDICAL OFFICER METROPOLITAN ASYLUMS BOARD FEVER HOSPITALS, AND LATE ASSISTANT MEDICAL OFFICER TO THE RUCHILL FEVER HOSPITAL, GLASGOW

MY attention was attracted by a note in THE LANCET of Nov 29th, 1902, p 1458, on a Case of Scarlet Fever followed by an interesting Relapse, by Dr Henry Fraser On looking up the annual report of the Metropolitan Asylums Board for 1901 I find that "relapses" occurred in 154 out of 14 143 cases of scarlet fever, or in 1 09 per cent. That "relapses" do occur, I think, is admitted by practically all competent authorities, and I scarcely think that Dr Fraser will find "many" men who have seen much hospital work deny the fact Personally, from my own limited experience I have no doubt that they do occur As it happens I have at the present time two typical cases under my care.

CASE 1.—A girl, aged five years, was admitted into the Western Fever Hospital on Oct 7th, 1902. She had sickened on the 6th and the rash had appeared on the following day When admitted the tongue was moist, clean, and red and showing prominent papillæ, the mucous membrane of the palate and fauces was injected and the tonsils showed pultaceous exudate, there was a typical, general, punctate erythema, the temperature was 99° F On the 10th right otorrhœa began and on the 20th it was noted that she was desquamating typically On Nov 7th, after having been out of bed for some days, she developed a general, bright, punctate erythema, her temperature was 99 6°, her throat was distinctly injected and her tongue was red. On Dec. 4th (being the sixtieth day of the disease) I specially examined her and found that she was going through a second typical general desquamation.

CASE 2.—A boy, aged four years, was admitted into the Western Fever Hospital on Nov 4th, 1902. The history was that four weeks previously to admission he had suffered from vomiting and diarrhœa, and that from that date up to the time of admission he had had rhinorrhœa On admission he was desquamating freely on the hands, he had excoriated nostrils and a profuse rhinorrhœa; the throat was slightly congested He was well and had been out of bed for some days when on Dec. 2nd his temperature rose, he developed a bright, general, punctate erythema, the throat became swollen and injected, and the glands at the angle of the jaw were tender and enlarged The maximum temperature was 102 4° F The purulent rhinorrhœa had recurred and his throat was now rather "dirty"

Both these cases I consider undoubted relapses I have also under my care another case which I look upon as a "relapse," but as the original desquamation was not profuse I do not detail it I do not care for the term "relapse" in these cases as I have the feeling, although it may be entirely erroneous, that the majority of these cases occur through re infection from without and not from auto-infection. On this account I prefer the term "second attack." Doubtless, however, true relapses (cases due to auto-infection) do occur I should like very much to know if "relapses" are often seen in general practice, as I think that their absence would go a long way to prove that the majority of the cases under discussion are "second attacks" and not relapses in the true sense.

In connexion with this subject I should like very briefly to refer to another class of cases seen occasionally in hospital which differ from the cases above discussed in that they do not desquamate after the first attack. They are what one might call "mild scarlatinal infections" as against scarlet fever Such cases are admitted with a history of slight sore throat, transient rash, and slight malaise. On admission to hospital they usually show a normal temperature They do not desquamate. However, if put in a scarlet fever ward they develop scarlet fever, not immediately after admission, but about three weeks later The following is a case in point

CASE 3—A boy, aged five years, was admitted to the Western Fever Hospital on Sept. 1st, 1902. He had a slight shivering on August 31st and slight sore-throat. On Sept 1st, the day of admission, a rash was said to have been seen On admission there was no rash, the temperature was 99° F, the mucous membrane of the fauces was congested, and the tongue was coated and had prominent papillæ He did not desquamate at all although watched carefully On the 27th he developed a typical attack of scarlet fever, having a bright rash with a temperature of 103° He subsequently desquamated freely In connexion with this case I would specially point out that a sister of this patient was admitted on the same day as he was and that she desquamated typically in the ordinary course The facts that the boy's sister had scarlet fever and that he did not develop scarlet fever in the ward till three weeks after admission point to his having acquired a certain immunity through the first transient illness and if so it must have been of the nature of scarlet fever

Fulham S W

A CASE OF AN UNUSUAL NUMBER OF GALL-STONES, CHOLECYSTOTOMY, RECOVERY

By C A S RIDOUT, M B, B S LOND, L.R.C P LOND, M R.C S ENG,

HOUSE SURGEON TO THE NORTH STAFFORDSHIRE INFIRMARY STOKE ON TRENT

THE following case is one of considerable interest owing to the great number of gall stones removed at one operation from the gall bladder I can find no record of a greater number having been similarly removed and therefore I venture to report the case.

A married woman, aged 43 years, was admitted into the North Staffordshire Infirmary on Dec. 3rd, 1902, under the care of Dr G Stokes Hatton, senior surgeon to the infirmary, suffering from abdominal pain and jaundice, As history it was stated that the patient was quite well until five weeks previously when she was seized with a severe attack of pain at the bottom of the back and in the right hypochondrium, accompanied by faintness, sweating, and sickness The attack lasted acutely for three days but she had had pain off and on ever since and from Nov 29th she had been jaundiced—i.e., the jaundice was first noticed four days previous to admission. She stated that she had had many previous attacks of pain of a similar nature and that she had been losing flesh for the past six months The patient was the mother of two children and she had had no miscarriages and she menstruated regularly

On admission, the patient was a thin faced woman, deeply jaundiced, both skin and conjunctivæ being markedly affected, the tongue was furred and dry and the skin was dry The pulse was 120 and feeble, the respirations were 28 and quiet, and the temperature was 102° F and tending to remit The urine was acid, with a specific gravity of 1014 and a faint trace of albumin, it contained no sugar and was deeply stained with bile The bowels were opened by aperients, the fæces were clay coloured. The lungs were natural, the heart's action was feeble, and

Semon's paper in 1895. He considered that the bacteriological examination in these cases was of special importance. This class of case was severe and unless promptly dealt with often proved fatal. The meaning attached to the word 'pathological identity' was of great importance. In Mr de Santi's cases examination had shown that the same micro-organism was present in each case, but he considered that similar clinical conditions might be produced by various micro-organisms. The late Professor Kanthack had shown that ulcerative endocarditis might be due to a variety of organisms; clinically these cases were identical; pathologically they were not identical. He referred to three cases of acute infection of the throat in children which clinically had the aspect of diphtheria, but bacteriological examination showed that they were due to staphylococcic infection and not to the diphtheria bacillus.

Sir DYCE DUCKWORTH said that he had always considered that there could be all degrees of inflammation, from a slight inflammation to the severest forms of Ludwig's angina, produced by the various forms of streptococcic infection. He advocated the use of mixed sera in the treatment of these cases since it was always uncertain what variety of streptococcus was being dealt with. He had never seen any harm come from the injection of such sera.

Mr E. B. WAGGETT pointed out that all of the cases recorded by Mr. de Santi were men in the prime of life. His own experience led him to believe that the disease usually attacked young men in good health. He related the case of a young man who during the first three days of illness had sore-throat but no symptoms of severity; on the fourth day, however, he had acute swelling of the fauces and uvula with swelling of the neck. Pus was evacuated by an incision in front of the sterno mastoid and the patient made a good recovery. He advocated immediate operation in all such cases. The condition he believed, depended on the virulence of the organism.

Dr J. DUNDAS GRANT said that the symptoms of this affection were constitutional as well as local and that in some cases the local throat symptoms might be slight when the constitutional symptoms were most severe. The aspect and the voice of these patients often suggested the presence of a peri tonsillar abscess, but on examination no such swelling could be detected and he considered that that symptom was of great diagnostic value. He related a case of rapid death from laryngeal obstruction in such a condition. He asked Mr de Santi if he had any evidence showing that there was any danger in the use of anti streptococcic serum. He thought that great relief was often obtained from the use of ice and he had never seen any harm result from its use.

Dr F. J. POYNTON said that to distinguish between the varieties of streptococcus pyogenes it was necessary to employ other methods than cultivation and the consideration of morphological characters as, for example, experimental injections and such bio-chemical tests as Marmorek's filtration test investigations on hæmolysis bacteriolysis, agglutination, and specific immunity. If the unity of the streptococcus was accepted in the present state of knowledge he thought that the result would be to attempt to explain clinical difficulties by referring them to an insecure bacteriology. He would accept for argument's sake this unity and turn to the explanation that was then given of the differing clinical results. They were explained by (1) the number of organisms that gained access, (2) the intensity of the virulence, and (3) the resistance of the individual. But were these sufficient? He thought not, and detailed a recent investigation he made on this subject with Dr A. Paine. A student pricked his finger at a post-mortem examination on a case of suppurative peritonitis; he developed alarming symptoms and was threatened with acute septicæmia. Fortunately his resistance proved successful though an abscess developed in the axilla; from the pus they obtained an organism which might be justly called the streptococcus pyogenes. At the same time they isolated a streptococcus from a case of malignant endocarditis. Both these they placed in the same medium, a slightly acid one (not the most favourable for maintaining the virulence). Thence they transferred them to blood agar. Two rabbits living under the same conditions and from the same litter were inoculated intravenously with these results. A small dose from the septic case produced death in 24 hours with septicæmia; a large dose from the case of endocarditis produced death in five days from malignant endocarditis of the mitral valve, the specimen of which he showed. Wherein lay the explanation of the different results? Not in (1) the number of organisms injected, for the fewer organisms produced the most fatal result; probably not in (3) the nature of the resistance, since the two rabbits were much alike; but very plausibly in (2) the difference of virulence. They carried on the original cultures in the acid medium for three weeks and repeated the investigation. One rabbit was injected intravenously from the septic micro-organism and one subcutaneously and two more in the same way with the organism from the case of endocarditis with these results. The two rabbits injected with the septic micro-organism died on the second and tenth day respectively from septicæmia; the rabbit injected intravenously with the other microbe died on the fourteenth day from malignant endocarditis of the aortic and mitral valves; that injected subcutaneously developed a firm nodule at the point of inoculation which disappeared and the animal recovered. They waited another three weeks and again repeated the investigation and this time all the animals recovered. He thought then that factor (2)—the intensity of virulence—had been altered in each case to practically a zero. He believed there was a fourth factor—viz., a tendency inherent in micro-organisms to produce special poisons, a specific toxicity which had to be reckoned with in all investigations on the unity of the streptococcal group.

Sir FELIX SEMON said that when he brought forward his paper in 1895 it had met with considerable opposition and he believed that arose, firstly, because the diseases which he had classed together had always been considered so entirely different clinically; secondly, because he had used the words "pathological identity," meaning thereby the same morbid process and not the identity of the micro organism; and, thirdly, because of the uncertain state of bacteriology at that time. He believed that any organism of the pyogenic group could produce this affection. He considered these cases of the greatest practical importance and since 1895 he had seen five cases. He agreed with Mr Waggett in believing that the disease usually attacked individuals in good health, but they often had had sugar in the urine either at the time or at some time previously. He described the five cases in three of which death occurred, while in the other two recovery took place. The prognosis in the severer cases was very grave. He was in favour of using anti streptococcic serum, but as he believed there was a specificity in the sera and that the disease might be caused by any one of the pyogenic groups the sera would not be equally beneficial in all cases.

Mr DE SANTI replied.

MEDICAL SOCIETY OF LONDON.

Discussion on the Treatment of Epilepsy

A MEETING of this society was held on Feb 9th, Mr A. PEARCE GOULD, the President, being in the chair.

A discussion on the Treatment of Epilepsy was opened by Sir VICTOR HORSLEY and Dr J. S. RISIEN RUSSELL.

Dr RUSSELL commenced by remarking that he would confine his attention to idiopathic epilepsy—i.e., that which arose without apparent cause. The ideal to be secured was a plan of treatment which was based on a knowledge of the etiology and pathology of the affection and which aimed at removing or antagonising the cause. He would first consider whether any researches had supplied evidence that could be regarded as positive or reasonable proof of the etiology and pathology of idiopathic epilepsy. The brains of epileptics showed degenerative changes, but there was as yet no unanimity of opinion as to how far these morbid changes were responsible for the clinical manifestations of epilepsy and how far they were merely evidences of the destructive effects of the storms. Of the various theories advanced to explain the occurrence of epilepsy, that which supposed that epilepsy resulted from an auto intoxication had received most acceptance, though it could not be said to be proved. Some considered that the affection was due to the incursions of micro-organisms, but this view was equally without satisfactory proof. Indeed, in spite of all the researches that had been made they were still in ignorance of the essential cause of epilepsy. Nevertheless, treatment had been initiated which presupposed that epilepsy was due to the action of some poison which reached the nerve elements by way of the blood stream. In the hope of establishing immunity serum obtained from a patient with severe epilepsy had been injected into another

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY

Four Cases of Acute Septic Inflammation of the Throat, with Bacteriological Report

A MEETING of this society was held on Feb 10th, Mr ALFRED WILLETT, the President, being in the chair

Mr P R. W DE SANTI read a paper on Four Cases of Acute Septic Inflammation of the Throat, with Bacteriological Report. He said that the present paper was a sequel to a contribution by Sir Felix Semon to the Fellows of the Royal Medical and Chirurgical Society on April 23rd, 1895, and entitled ' On the Probable Pathological Identity of the Various Forms of Acute Septic Inflammations of the Throat hitherto described as Acute Œdema of the Larynx, Œdematous Laryngitis Erysipelas of the Pharynx and Larynx, Plegmon of the Pharynx and Larynx, and Angina Ludovici." Since the publication of that paper he had determined to keep careful records of any cases of acute septic inflammations of the throat that might present themselves to his notice, particularly as to their bacteriology Since 1895 he had been able to observe four such cases and the notes of these cases were given in their order of ascending severity Case 1 was that of a man, aged 48 years, who came under the care of Mr de Santi at Westminster Hospital in 1899 with a deep-seated and extensive abscess of the right cervical region and a discharge of pus from the right external auditory meatus Pressure on the abscess caused pus to well out of the external auditory meatus, a perforation of the deep digastric aspect of the right mastoid was diagnosed and the mastoid abscess in the neck was opened up and the diagnosis was verified The patient went on well for nearly three weeks when he suddenly developed cutaneous erysipelas of the left cheek, this rapidly spread to the rest of the face and neck on the left side and then across the midline to the right face and neck, he also had extensive patches over the back down to the lumbar region Soreness of the throat was complained of and examination revealed a bright red swelling of the posterior pharyngeal wall, soft palate, and uvula Cultures from the throat showed streptococcus pyogenes and a few staphylococci 10 cubic centimetre doses of anti streptococcic serum were given three times during the ensuing 22 hours when the rash had almost entirely disappeared, the throat condition cleared up, and the temperature had fallen to 99 2° F The patient made an excellent recovery Case 2 was that of a man who complained of sore-throat and swollen cervical glands Examination revealed intense redness and swelling of the right tonsil, the whole of the soft palate and uvula, and dark red swelling of the posterior pharyngeal wall, there was also slight œdema of the epiglottis The temperature was 104 6° F and his general condition was bad There was no history of anything likely to cause the throat trouble The urine, heart, and the lungs were normal. The patient refused admission to the hospital Swab cultures from the throat showed streptococcus infection The further history of the case was unknown Case 3 was that of a man who complained of sore throat, loss of voice, and dysphagia of from two to three days' duration Examination revealed acute gangrenous inflammation of the lower half of the uvula and acute œdematous inflammation of the soft palate and to a less degree of the tonsils. There was also extensive œdema of the left ary-epiglottic fold. The patient's general condition was bad, the temperature was 101 2° F He was admitted to hospital Swab cultures showed the presence of the streptococcus pyogenes. A dose of 20 cubic centimetres of anti streptococcic serum was at once injected and pure carbolic acid was rubbed into the uvula, five hours after the injection the patient, who could not swallow before, was able to do so and felt much better in himself No further injections were necessary and the patient made an uneventful recovery Case 4 was that of a man aged 21 years who was admitted to the hospital with sore throat followed by a swelling in the neck. When first seen the patient was partly unconscious, had great pain and difficulty in swallowing, and great pain over the heart. The temperature was 101 4° F, having been 103° during the night. His general condition was very bad Examination showed acute septic pharyngitis, deep glandular inflammation, and pericarditis. The mucus from the throat and the fluid evacuated from the glands showed on examination both in cover glass specimens and upon cultivation, mainly streptococcus pyogenes. 10 cubic centimetres of anti streptococcic serum were injected three times during the first 24 hours and once during the next 24 hours The effect was remarkable, the patient beginning to rally at once He made an excellent recovery Of the above four cases the first would be called by some "cutaneous erysipelas of the pharynx,' the second "œdematous" or possibly 'plegmonous pharyngitis," the third "gangrenous uvulitis," and the fourth "phlegmonous pharyngitis" Yet they were all of the same nature—namely acute septic inflammations of the throat—in all the streptococcus pyogenes was present, and in three out of the four treatment by injections of anti streptococcic serum was successful. In Sir Felix Semon's paper four objections were advanced by him as likely to arise with regard to his views on acute septic inflammations of the throat and neck. Firstly, ' that he had given no proof that the milder cases in his series were really of septic origin and that they might well have been simple catarrhal inflammations." As no bacteriological examination was made of his cases it was open to anyone to deny the certainty of their septic origin Of the four cases here recorded No 1 was certainly of a mild, local character and No 2 fairly so—at all events, it was analogous to No 4 in Sir Felix Semon's series—yet in both these cases streptococcus pyogenes was present and the clinical symptoms were far greater than in simple catarrhal inflammation The bacteriological examination of these cases tended to prove, therefore, that these milder cases were of a septic nature and this was strengthened by their clinical character and course. Secondly, "that the different localisation in Sir Felix Simon's cases—namely, whether originating in the pharynx, larynx, or cellular tissue of the neck—spoke against their being identical." This objection did not hold good The different localisation of these septic inflammations of the throat depended on the resisting powers of the parts attacked, an accidental breach of surface or a pre-existing condition of catarrh rendering the parts more susceptible to infection Thirdly "that the variations in the fever curve in Sir Felix Semon's individual cases also seemed to point in the direction that this fever was caused by different and not identical processes" Mr de Santi considered that the temperature in these cases was bound to vary as in other diseases according to the resulting inflammation, whether œdematous suppurative, or gangrenous, and according to the amount of poison absorbed He did not, therefore consider that objection No. 3 was valid Fourthly, "that the fact that the exudation sometimes being of a serous and sometimes of a purulent character most powerfully combated the view that these inflammations were identical in nature' This, perhaps the most important objection, had to be combated mainly from a bacteriological point of view The present-day opinions were (1) that the streptococcus pyogenes and other pyogenic cocci could produce apart from purulent inflammations all other forms of inflammation such as serous, fibrinous, hæmorrhagic, and gangrenous inflammation, and (2) that the variety of inflammations resulting depended on (*a*) the quantity, (*b*) the virulence of the organism introduced into the system, and (*c*) the resisting powers of the subject inoculated. It seemed, therefore, that the conclusions were amply sufficient to account for the differences in not only the fever curve of these acute septic inflammations of the throat, but also for the differences in the kind of inflammation resulting—namely, œdematous, purulent or gangrenous He therefore entirely agreed with Sir Felix Semon's conclusions as regards the probable pathological identity of these acute septic inflammations of the throat and thought that the four objections referred to could be refuted in the light of the four cases brought forward by himself He had adduced evidence of the presence of the streptococcus pyogenes in all his cases and of the identity clinically of his series with that of Sir Felix Semon, and had stated the excellent results that had occurred from the injection of anti streptococcic serum As regards the treatment of acute septic inflammations of the throat with anti streptococcic serum he wished to point out that unless the streptococcus pyogenes was found it would be worse than useless—indeed, dangerous—to give these injections.

Dr DE HAVILLAND HALL said that he had the pleasure of opening the discussion which took place on Sir Felix anatomy of the condition was discussed and various allied conditions were demonstrated. It was shown that *Drüsen* were not ordinary colloid bodies such as are found upon the choroid, though these too might occur near the disc. Exudates similar to the hyaline nodules might become metamorphosed into true bone as was frequently seen in the choroid in shrunken globes. The fate of exudates in the disc and in other parts of the eye and its dependence upon environment were discussed.

Mr J H. PARSONS read a paper on Primary Extradural Tumours of the Optic Nerve, with clinical and pathological notes of a case illustrated by lantern slides. There were 18 cases on record as compared with 102 primary intradural cases. The disease usually commenced before the age of 10 years and the prominent symptom was exophthalmos, the protrusion being most marked in the axis of the orbit. The failure of vision was slow, slower than with intradural tumours, and was accompanied by optic neuritis of the 'choked disc" variety, to be followed by post-neuritic atrophy Later changes in the eye resulted from lagophthalmos. In no case was the globe invaded by the growth Eight of the growths were undoubtedly endotheliomata, several having the characteristics of psammomata The fibromatosis present in most cases was a feature of importance. The growths were slow and of relatively low malignancy, giving rise neither to glandular dissemination nor to metastasis Considering this fact and that the point of danger was at the apex of the orbit Krönlein s operation, with retention of the globe, was indicated wherever possible.

Mr L. WERNER reported two cases of Tumour of the Optic Nerve operated upon by Krönlein's method, and referred to another under the care of Mr H. R. Swanzy The first case was that of a woman, aged 45 years, who had noticed swelling of the inner canthus for one year before coming under observation. When seen the left eye was two centimetres in advance of the right and directed downwards, there was no pulsation or bruit, and though the eye was blind the patient was unaware of it. The eye was anæsthetic, tension was normal, and there was marked optic atrophy seen through the clear media Tumour of the optic nerve was diagnosed and with the optic nerve was removed by Krönlein's method, the eye being left in its place. A semi circular incision with the convexity forwards, and extending to near the outer canthus, was made exposing the outer wall of the orbit The bone was removed as widely as possible by dividing it with a chisel at the fronto malar suture and just above the zygoma, extending the incision backwards to the spheno-maxillary fissure and turning the bony mass back with the soft parts. The tumour was then isolated and removed, there was a clear portion of optic nerve in front, but posteriorly the growth extended into the apex of the orbit and required removal piecemeal. There was some hæmorrhage, causing temporary protrusion of the eye ball after replacement of the flap No sutures were put in the periosteum and no drainage-tube was inserted. The lids, which were temporarily attached, became œdematous, but on removing the dressing on the fifth day union was complete and though anæsthesia of the globe persisted the eye assumed a normal appearance, and movements, except lateral, were free The tumour, inclosed in the dural sheath, was an alveolar sarcoma, the grouped cells being arranged concentrically, suggested endothelioma. The second case was that of a girl, aged 11 years, whose eye for 14 months had been prominent and divergent. The eye was removed with the growth, the inner aspect of the lid was scraped and the orbit was cleared out. The growth proved to be a myxosarcoma surrounding the nerve which had entirely degenerated. Krönlein performed this operation first in 1886 and published an account in 1889 It was not difficult and had many advantages. The wedge of bone freed should be as large as possible and the division of the outer orbital plate should be accomplished before completely freeing the anterior part to avoid splintering The risk was practically nil, of 73 cases one only had died. The limitation of lateral movement was temporary only and in cases where the nerve was not involved sight might be preserved.

Dr THOMAS SNOWBALL read a paper on the Formation of Bone in the Choroid Notes were given of a series of seven cases in which ossification had taken place in eyes that had become blind and shrunken as the result of old perforating injuries or long standing inflammation with or without perforation. In the choroid a chronic inflammation with plastic exudation was set up, leading to degenerative changes in the various layers of this coat, the outer pigmented stroma became more or less fibrous, the inner layers, the chorio-capillaris, and membrane of Bruch were to a large extent replaced by fibrous tissue which had become organised from the exudation poured out towards the inner surface of the choroid. In this fibrous tissue the bone had developed At the areas of bone formation the chorio-capillaris when present was never a continuous layer but was represented by only a few vessels here and there. The lamina vitrea when seen near the focus of bone was never found external to it This was contrary to the observations of Brailey, Fontan, and others, who described cases where the membrane of Bruch was seen as a distinct line external to the plate of bone In most of his own cases the bone formed a layer in the usual situation—namely, around the optic nerve entrance. In one case where colloid bodies were undergoing ossification, the bone in the choroid had evidently arisen independently of them and was a more advanced stage of development. In none of the cases was there a trace of sympathetic disease in the other eye. From a study of his own cases and those described by Knapp, Whiting, Legrange, and many others, it was concluded that ossification in the choroid arises most commonly in fibrous tissue developing in the chorio-capillaris and either replacing it or lying immediately external to it.

The following cases and card specimens were shown —

Mr L WERNER Coloboma of the Optic Nerve.

Mr F A C TYRRELL Congenital Malformation of the Lower Eyelids

Major M T Yarr, R A.M.C Changes in the Macular Region following Contusion of the Eye.

Mr E TREACHER COLLINS A Case of Favus of the Upper Eyelid

Mr W T HOLMES SPICER Sections from Nævus of the Orbit

Mr J H. FISHER Aneurysmal Dilatation of the Retinal Vessels in a boy suffering from Heart Disease.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY

The Sequelæ of Typhoid Fever

A MEETING of this society was held on Feb 6th, Mr. RICKARD W LLOYD, the President, being in the chair

Dr SEYMOUR TAYLOR opened a discussion on the Sequelæ of Enteric Fever and their Treatment. He defined sequelæ as conditions occurring after the end of the febrile process when the temperature had been normal for two days and two nights After mentioning the difference in type of epidemics occurring in Great Britain and in other climates, he called attention to the fact that many patients stated that their health was much improved after an attack of typhoid fever Dr Taylor then analysed 56 cases of relapse and pointed out that in many cases a change of diet, starchy food or an enema or purge seemed to bring about the relapse, although in many cases no cause could be assigned Under respiratory sequelæ tuberculous disease was mentioned, latent trouble being frequently aroused to activity Laryngitis with necrosis might occur, leading sometimes to emphysema of the neck and a condition resembling Ludwig s angina As regards the circulatory system, thrombosis, nearly always of the lower limbs, was fairly common. The extent of thrombosis was often large and the clot might extend into the vena cava Dilatation of the heart, with valvular incompetence, was also a sequela. Nervous sequelæ were not uncommon, such as definite insanity or some moral obliquity Aphasia might occur and also peripheral neuritis. Besides constipation and meteorism peritonitis and perforation might be sequelæ, peritonitis being possibly started by bacilli in a gland or by infection from the appendix or from the gall bladder Perforation might be suspected when with a falling temperature the pulse becomes rapid, associated with the characteristic facies Sequelæ affecting the skin, subcutaneous tissues, or bones were such as noma, gangrene, and necrosis. These were not necessarily due to the intensity of the fever but to the condition of the individual.

Dr WILLIAM HUNTER took a wider view of the definition of sequelæ. He regarded them as complications which occurred apart from the ordinary course of typhoid fever and with

with a milder form of the affection, while in other cases serum obtained from a patient had been reintroduced on a subsequent occasion The knowledge that acute specific diseases exerted a favourable influence on the course of epilepsy had induced some observers to attempt to obtain artificially similar beneficial effects by the inoculation of epileptic patients with filtered cultures of streptococci and staphylococci, erysipelas toxin, or antitoxin None of these measures, however, had met with a degree of success which justified the belief that a successful plan of treatment lay in this direction. Dr Russell was obliged to admit that the bromides were still the most potent agents for the treatment of idiopathic epilepsy This form of treatment, to be successful, needed much attention to detail. A timidity that courted failure was too often evident in the way in which the drug was given. If bromide was to do good it must be given boldly and the physician, the patients, and their relatives must rid themselves of the usual prejudices against the drug Many of the ill effects that were attributed to the bromides were in reality due to the epilepsy and much that was legitimately ascribed to the bromides might be averted if the drug were given more freely in the early stages of the malady In this way there would be a better chance of arresting the epileptic attacks early and therefore it would not be necessary to administer the drug over a period of at least two or three years Dr Russell had not seen any special advantage gained by giving the mixed bromides of potassium, sodium, and ammonium and his custom was to give the potassium salt. Bourneville had so persistently advocated the use of bromide of camphor and such excellent results had been published from the Bicêtre Hospital that the preparation seemed worthy of a trial Whichèver of the bromide salts was used a single dose should be given an hour before bed time in nocturnal epilepsy and two hours before an attack was due, when the fits recurred about the same time in the day It sometimes became necessary to give the drug twice or even three times a day, but it was, as a rule, better to increase the single dose up to one drachm or more than to give it in divided doses several times a day Of medicinal adjuncts or substitutes for bromide in the treatment of epilepsy borax, belladonna, digitalis, and arsenic had most justified their use Nitro glycerine had been advocated by Sir William Gowers Flechsig's method of employing opium in large doses for several weeks and then giving large doses of bromide had little to recommend it A subcutaneous injection of morphia, however was one of the surest means of arresting the recurring attacks in the status epilepticus The risk of employing the drug was great and it was better to rely on hyoscine by subcutaneous injection or large doses of chloral by the rectum. Of the newer preparations such as bromipin, bromalin, or bromocoll, the first had been most extensively tried and had been favourably received. In considering what dietetic and other measures aided in securing success for the bromide treatment, the importance of prohibiting stimulants, including tea and coffee, was well recognised. These patients did best on a diet which contained only a small amount of meat The most important modification that had been introduced into the dietetic treatment of epilepsy during recent years was the exclusion of ordinary salt from the dietary but this had been anticipated by Dr J Hughlings Jackson 30 years before. By limiting the amount of sodium chloride given in the diet much smaller doses of bromide proved effective Attention should be paid to the arterial tension. Much might unquestionably be done to secure greater toleration of the bromide salts and to render them more effective in their action by attention to a number of details in the daily life of the individual. This was one of the ways in which epileptic colonies proved of such great advantage

Sir VICTOR HORSLEY, in his opening remarks, expressed the belief that epilepsy should really be regarded as a symptom, not as a disease He would classify epilepsy according to its causation into four groups 1 Idiopathic epilepsy in which there was no gross lesion This might be of localised (focal) or generalised onset, but neither of these classes was very suitable for operation. He had however, operated on five cases of the former Two of the cases had proved to be of organic origin. These showed that an exploratory operation might be justifiable in cases which had resisted medical measures 2 In Jacksonian epilepsy there existed always a gross lesion or a toxæmia. In traumatic cases of a Jacksonian type the convulsions might be generalised or localised In the former surgical measures were not by any means uniformly successful, in localised cases, however, trephining was very successful, particularly when the scar was in the so called motor area, it was less successful when the scar was in the occipital region and still less successful when it was in the frontal or temporo sphenoidal region. Cases of congenital focal epilepsy did fairly well when operated on in early childhood. Cases of neoplastic origin were, of course, very amenable to surgical measures The fits in such cases were not always localised, they might be so generalised as to resemble idiopathic epilepsy 3. Reflex epilepsy might arise from injury to a nerve, injury to the spine, or from traumatism (e g, those rare cases in which touching the head had been followed by fits) 4 In hystero-epilepsy no operation should be performed, though ovariotomy and other procedures had been employed by some.

Dr C E BEEVOR thought it was very difficult to trace a toxic origin of epilepsy, though the cortical cells were admittedly in a very unstable condition. He wished strongly to indorse the view that bromide could be administered with perfect safety over many years. It was not this drug but the disease which produced the mental deterioration One of his patients had taken bromide for 20 years without harm He generally gave the ammonium salt, but this was a minor point. The doses were best given thrice daily

Dr J A. ORMEROD agreed with the remarks made by Dr Russell and Sir Victor Horsley He referred to the advantages of borax as a change from the bromide Belladonna was useful for *petit mal* Digitalis and bromide were useful in cases of hystero-epilepsy The chief reason why bromide failed was the dose being too small He suggested the possibility of cyclical changes in the course of idiopathic epilepsy and advocated a study of the determining causes of fits, such as worms, undigested food, fright, anxiety, mental overwork, menstruation, or the advent of puberty

Dr T SEYMOUR TUKE referred to the mental symptoms which occurred in epilepsy and quoted a case in which the attacks disappeared after matrimony

Dr W ALDREN TURNER had collected statistics bearing on the relative merits of different methods of medicinal treatment Before the introduction of bromides, the late Sir Russell Reynolds, treating cases by means of silver and zinc, and basing his results on a period of four years' exemption from fits, had accomplished a proportion of cures amounting to 10 per cent., the late Professor Trousseau in similar circumstances had accomplished 13 per cent By the courtesy of his colleagues at the National Hospital for the Paralysed and Epileptic he had investigated 366 cases of idiopathic epilepsy treated by bromides, and basing his results on a period of nine years' exemption from fits the proportion of cures amounted to 10 3 per cent. In the latter series of investigations the period of exemption was much longer and pointed to the advantages to be gained from the administration of bromides and this coincided with Dr Turner's own experience of the disease.

Dr R L. LANGDON DOWN had found bromide of potassium most useful in major epilepsy, but in *petit mal* it was, he believed, harmful He did not, after trial, attach much importance to the exclusion of meat

Sir VICTOR HORSLEY and Dr RUSSELL replied

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM

Hyaline Bodies in the Optic Disc —Primary Extradural Tumours of the Optic Nerve, Krönlein's Operation —Formation of Bone in the Choroid —Exhibition of Cases and Specimens

A MEETING of this society was held on Jan. 29th, Mr W LANG, the President, being in the chair

Mr A. STANFORD MORTON and Mr J HERBERT PARSONS brought forward a paper upon Hyaline Bodies (*Drüsenbildungen*) in the Optic Disc, with drawings and notes of two cases and lantern slides. Out of 42 cases recorded in the literature seven had retinitis pigmentosa, others were associated with injury, nervous disorders (from simple headache to chronic hydrocephalus and insanity) and chronic interstitial nephritis, but a large number of patients were normal, with normal vision The condition usually commenced in early life and was extremely chronic. In nearly all cases both eyes were affected but often unequally The prognosis was good. The pathological not go beyond the middle line There was loss of conjugate deviation of the eyes to the left. No other nervous phenomena were present The diagnosis at this time was paresis of the left internal rectus She could converge the eyes perfectly The third nucleus and the third nerve were apparently unaffected and the lesion was probably further down in the position of the sixth nucleus This nucleus innervates the sixth nerve and also indirectly the third nucleus of the opposite side, and consequently also the third nerve of the opposite side and thus also the corresponding internal rectus muscle When both the sixth nuclei act there is convergence of the eyes. There was evidently no affection of the pyramidal tracts and the diagnosis was thought to be an exceedingly limited lesion at the floor of the fourth ventricle, affecting the nuclei of both sixth nerves and the seventh nerve twisting round this nucleus Eventually the right eye became more prominent and the lateral movements of the eyeballs were entirely lost. The temperature began to rise, increased headache and vomiting and great pain at the back of the neck were complained of Shortly before death there were complete double paralysis of convergence and other symptoms of localised meningitis Up to the age of 15 years the patient had been fairly healthy, but the subsequent family history pointed to a possible tuberculous taint The necropsy revealed the presence of localised tuberculous meningitis at the base of the brain and a tuberculous tumour filling up almost the whole of the fourth ventricle. This tumour had nearly cut out the two nuclei of the sixth nerves and the facial nerve around it. Degenerated fibres could be traced upwards from the sixth to the third nucleus, though the third nerve remained intact with no degenerated fibres in it.—The PRESIDENT, Dr BYROM BRAMWELL Dr EDWIN BRAMWELL and Dr D CHALMERS WATSON took part in the discussion.

Dr. HARRY RAINY and Mr H. J STILES gave a lantern demonstration of skiagrams illustrating various Bone Affections in Children.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY—A meeting of this society was held on Jan. 28th, Mr W Bowen Davies (Llandrindod Wells) being in the chair—Dr C W Buckley (Buxton) read a paper on Local Factors influencing Climate with special reference to Subsoil. He said that the chief influence of soil and subsoil was on absolute humidity since different soils had different ratios of absorption and retention of water and thus the amount of water which was evaporated from the soil and which went to increase the amount of aqueous vapour in the air varied with the degree of permeability and the nature of surface drainage. Absolute humidity was a more trustworthy index than relative humidity and had an influence on diathermancy Drainage made a soil warmer as well as drier The different formations were dealt with in detail and their peculiarities as to soil and surface were discussed, and it was shown that the impermeable rocks where the surface drainage was good were the driest and that the clays were the wettest The dryness of porous soils depended on the presence or absence of clay and the surface formation Altitude slightly influenced the humidity and also the daily range of temperature and the rainfall The rainfall was greatly subject to local influences, but on well-drained soils a heavy rainfall was an advantage, purifying the air while it did not increase the humidity The chief contentions put forward were (1) that absolute humidity was one of the most important factors in climate and depended chiefly on local conditions, (2) that geological formation had a great influence on humidity (*a*) by the subsoil and (*b*) by the nature of the surface, (3) that the driest soils were the impermeable rocks and the next the porous soils so far as they were free from clay, (4) that the driest formation was the carboniferous limestone (5) that the amount of rainfall was more influenced by the relation of surrounding hills than by altitude *per se*, and (6) that altitude increased rainfall but tended to decrease humidity—Dr C Theodore Williams (London) congratulated Dr Buckley on striking out a new line in climatology or at any rate of drawing more attention to one of its factors. There was no doubt that on the subsoil and the vegetation depended the amount of rainfall retained in a district. But the amount of humidity, absolute or relative, depended on a good many other causes Nearness to the sea, and especially to coasts exposed to south-westerly winds, the influence of the Gulf Stream, the presence of lofty ranges on which the winds laden with aqueous vapour could impinge and thus condense their moisture, all largely influenced the amount of atmospheric humidity Localities situated to the lee of mountains often had a small rainfall and low humidity percentage, whatever their soil. The relation of soil to humidity in England was so large a subject that it ought to be treated by districts and not generally—Dr S D Clippingdale (London) expressed general concurrence with the statements made by Dr Buckley, but pointed out that the elevation and slope of a surface were probably more important than the nature of the soil or subsoil.—Dr W J Tyson (Folkestone) referred to the difficulty of discussing the paper, as the facts quoted were for the most part indisputable The subject laid the foundation for a further inquiry—viz, what were the diseases and symptoms affected by this inquiry? They knew that certain diseases such as ague had been practically banished from this country by suitable drainage, but there were many conditions of the body acted on by the various amount of humidity in the air that had not yet been noted—Mr G H Thompson (Buxton) said that Dr Buckley's paper had covered the subject as far as possible in the time. There was one point—viz, the rainfall in the Cumberland and Peak districts—which he mentioned as seeming to contradict the law of altitudes, this he (Mr Thompson) thought was easily explained by their nearness to the shores washed by the Atlantic. Another point in noting the larger rainfall in these districts was the configuration which so largely increased the area and was compensatory as well as an important factor in estimating the relative humidity The water holding capacity of different strata was well illustrated in Buxton, being much greater on the millstone grit than on the limestone.—Dr R. Fortescue Fox (London) remarked that whilst the meteorological authorities confessed themselves unable to explain the anomalies of humidity Dr Buckley endeavoured to connect it primarily with the subsoil. This new thesis would require careful examination The *rationale* of the influence of soil on humidity was not sufficiently clear Dr Buckley had not referred to soil temperatures which no doubt affected humidity Whilst sandy soil near the surface was warmer than the overlying air, chalk was of about the same temperature and a clay soil was from one to two degrees colder The capacity for absorption of water of the different subsoils did not appear to be proportional to the humidity With reference to differences of soil, plants and many human beings were undoubtedly far more sensitive than any instruments hitherto devised—Dr Leonard Ll. B Williams (London) thought that though purely local conditions, such as subsoil, might have some influence in determining the amount of humidity, yet there were some general considerations which could not be overlooked. High relative humidity was often regarded as essentially a bad feature in climate—a proposition which should not be received as altogether true High humidity was very useful in some lung conditions and some kidney diseases.—Dr Buckley, in reply, stated that the great extent of the subject prevented him from dealing with every aspect of it and he had therefore only attempted to deal with humidity and with rainfall so far as it was in relation with humidity

HARVEIAN SOCIETY OF LONDON—A meeting of this society was held on Feb 5th, Dr W Winslow Hall the President, being in the chair—Mr Noble Smith read a paper on the Treatment of Congenital Dislocation of the Hip, with especial reference to Lorenz's method of bloodless reduction illustrating the procedure on a child suffering from the disease The adductors of the thigh he said, were first put on the stretch and manipulated by chopping with the edge of the hand and rubbing After a time the muscles gave way Then the posterior muscles were dealt with until the foot could be brought up to the side of the head. The anterior muscles were next stretched by bending the thigh backwards with the knee bent the patient lying on the opposite side of the body With the patient once more on the back and the knee bent the head of the femur was gradually worked down into the acetabulum. In many cases the head of the bone could be heard slipping into the socket. The front of the capsule was then stretched by working the thigh outwards with the knee bent until with full abduction the hollow in the front of the thigh was filled up and the head of the bone could not escape. The limbs were finally fixed in a position of abduction by means of plaster-of Paris.

causes different from typhoid fever He analysed the cause of death in 50 cases, 48 per cent of the patients died from perforation, 20 per cent. from pneumonia, 8 per cent from asthenia, and 6 per cent. from heart complications including pulmonary thrombosis, heart thrombus, and fatty heart In 10 per cent. lung troubles other than pneumonia caused death, hæmorrhage in 6 per cent., and erysipelas in 2 per cent. Dr Hunter said that the mortality was greater formerly, probably in consequence of insanitary conditions These would account for the greater severity of epidemics in some German towns.

Dr A **Elliot** considered that from the military point of view the most important sequela of the epidemic in South Africa was disability, physical and mental In slighter cases men were able to do light work at the base, but for a long time the hardships of trek were quite beyond their powers In commissioned ranks the greatest stress was on the nervous system, producing slowness of cerebration and lack of decision, often rendering the patient unfit for responsible duty in the field Of specific sequelæ the most common and perhaps the most important was phlebitis, variously estimated as occurring in from 5 6 to 25 per cent. of the cases. In epidemics in England and America the frequency was estimated at from 1 9 to 3 8 per cent. As regards the cause of the trouble, the late Dr J W Washbourn suggested that it was due to tinned food and want of fresh vegetables But these led rather to scurvy and deficient coagulation of blood Another suggestion was the wear and tear of marching But an equal proportion of cases occurred in the cavalry and artillery Dr A E Wright found that the coagulability of the blood was increased during convalescence from typhoid fever This he thought, was due to an excess of lime salts from the exclusively milk diet But in South Africa there was a notable lack of fresh milk Probably all that could be said was that this sequela was due to bacterial invasion of the vein walls under conditions of lowered resistance. Embolism, although comparatively frequent in thrombosis associated with influenza and gout, was markedly absent in the thrombosis following typhoid fever Bradycardia occurred in one case, but it might possibly have been due to an excess of digitalis Tachycardia was a much more frequent and persistent trouble As regards the alimentary system, hepatitis with enlargement of the liver without suppuration occurred in one case There was jaundice in one case associated with fatal pneumonia Suppurative appendicitis closely followed enteric fever in one case Probably it was due to an enteric ulcer in the appendix. Two cases of enteric fever immediately followed appendicitis There was late perforation in one patient who had been on ordinary diet for a fortnight. A recent ulcer in the ileum was found to have given way Two cases of parotitis occurred during convalescence, in both there was suppuration As regards dysentery, out of 13 cases occurring during the disease or convalescence six proved fatal, while six patients who had dysentery before enteric fever all recovered. There were nine cases of joint affection, including six cases of arthralgia, two cases of arthritis with effusion, and one case of purulent effusion

Mr G A **Garry Simpson** did not consider it safe to say that a patient was convalescent till the temperature had been normal for three weeks as the bacillus might still be found in the stools and the urine.

Dr J E **Squire** had no hesitation in saying that enteric fever seen by him at Suakin was identical with that seen in England Climatic and other conditions might modify the course and symptoms of the disease, but these modifications were not in essential points In many cases in Suakin the febrile condition continued for two or three months but was probably due to malarial complications He regarded thrombosis as a comparatively frequent sequela. Pneumonia was more often a complication and hæmorrhage and perforation were also rathe accidents occurring during the disease. Joint affections occurred after several cases in the Soudan, chiefly those resembling malarial fever with enteric symptoms, rather than true enteric fever

Dr W **Aldren Turner** called attention to certain sequelæ affecting the central nervous system, such as hemiplegia and myelitis which were clearly due to arterial changes comparable with those occurring in syphilis

Dr E A **Saunders** said that it was of great importance to separate the sequelæ due to the bacillus typhosus from those due to other micro-organisms The case of hepatitis referred to by Dr Elliot was probably also a true typhoid fever infection Other sequelæ might be due to staphylococci and streptococci or to the bacillus coli. Such post-typhoid affections were abscesses—e g, in the larynx—parotitis, boils, bedsores, and the like. It seemed probable that many of the symptoms of severe cases of typhoid fever were attributable to simultaneous affection with the bacillus coli communis.

Dr A. **Whitfield** drew attention to the frequency of severe and persistent furunculosis after enteric fever

EDINBURGH MEDICO CHIRURGICAL SOCIETY

Exhibition of Cases and Specimens—Paralysis of the Deviation of the Eyes

A MEETING of this society was held on Feb 4th, Sir T R **Fraser**, the President, being in the chair

Dr **George A Gibson** exhibited a lad who was suffering from the results of Adhesive Mediastinal Pericarditis. This was a very uncommon disease and the history of this case was briefly as follows Six months before admission to hospital the boy began to suffer from breathlessness, with swelling of the legs and the lower part of the body On admission ascites, anasarca, and albuminuria were found to be present. There was no clubbing of the finger nails and examination of the heart proved chiefly negative The pulse, however, showed the typical characters of the pulsus paradoxus With every inspiration there was a great lessening in the volume of the pulse. The liver was enlarged, reaching to the level of the umbilicus, as well as the spleen, the lower border of which reached below the costal margin. A considerable amount of cyanosis was present and the proportion of hæmoglobin varied from 93 to 105 per cent. Under treatment the ascites, anasarca, and albuminuria disappeared though the liver and spleen still remained large. The case was evidently one of adhesive mediastinal pericarditis, though the diagnosis was not above suspicion and one cardinal symptom insisted on by some writers was absent—namely, the inspiratory collapse of the veins in the neck

Dr G H **Melville Dunlop** demonstrated two cases of Syphilitic Arthritis in children.

Dr **John Thomson** showed a female, aged six years, with a Peculiar Form of Giant Growth She weighed 66½ pounds, or almost double what her normal weight ought to be. The overgrowth affected the whole skeleton No paralyses were present, though the child walked very unsteadily and slowly All movements were awkward and slow She complained of no pain. Her mental condition was below the average. The onset of the disease was indefinite The child was even at birth large and had always eaten more than other children of her age. Her mother had first noticed the great increase in size about 18 months ago

Mr J M. **Cotterill** exhibited several pathological specimens

Dr **Alexander Bruce** read a paper on a case of Double Paralysis of the Lateral Conjugate Deviation of the Eyes The patient was a female, aged 27, who fell from the first step of an ordinary step ladder and struck her head against the leg of a table She was rendered unconscious by the blow and remained so for 20 minutes Next day she suffered from giddiness which became persistent and often caused her to stumble and generally towards the right side. There was also a feeling of stiffness in moving the eyes to the left side as also in moving the left side of the face At this time Mr J V Paterson examined her eyes and found that there was a crossed diplopia present, in his opinion probably due to paresis of the left internal rectus muscle, there was then no other affection of the ocular muscles On examination the left palpebral fissure was seen to be a little more open than the right, due to paresis of the facial muscles on the left side This amounted to an almost complete left-sided facial paresis When she was asked to look towards the right the right eye almost reached the outer canthus, but with a series of nystagmic movements While the left eye began this movement along with the right eyeball it was soon given up after a series of jerks and the left eye took up a position only slightly to the right of the middle line There was, in brief, divergent strabismus when the patient looked to the right all the other movements of the eyes being conserved On looking to the left both eyes would

Reviews and Notices of Books.

The Imperial Yeomanry Hospitals in South Africa, 1900–1902 Edited by the Countess HOWE Three vols London Arthur L Humphreys. 1902. Pp (three vols) 734

THIS is a very elaborate and voluminous record in three handsome quarto volumes of the work which has been done in South Africa in connexion with the Imperial Yeomanry Hospitals Fund That a history of the movement which led to the inception and organisation of these hospitals and an account of the services which they rendered in the late war deserved to be placed on record goes without saying, but whether it was necessary for this purpose to incur all the expense which must have been entailed by the production of this very elaborate, profusely illustrated, and costly work is another matter It is always a thankless and ungracious task to appear to cavil at anything in speaking of good work which has been undertaken in a philanthropic and charitable spirit and carried out on the whole in a highly commendable way We trust, therefore, that if we criticise our criticism will be taken in the same friendly manner in which it is offered.

The time is coming, if it has not already come, when great and radical changes will inevitably take place in our military system. The so-called irregular forces will be more closely amalgamated with the regulars in any forthcoming scheme for organising the Imperial army of the future and philanthropic efforts and provisions that are made in view of aiding the sick and wounded in war, large as these already are, will probably have to be on a still larger and more extensive scale. It is therefore a matter for serious consideration to fix the limits and to determine the nature and quality of the provisions that should be made in these respects if we are to render really useful and efficient aid and if our aim is to be to secure in time of war the greatest good of the greatest number That it will be impracticable to keep pace on such occasions with the growing demands of a luxurious age must, we think, be obvious, nor does it seem necessary or desirable to do so in the interest of those more directly concerned. That in any case everything required for the treatment of the sick and wounded as well as all that can add to their ease and comfort should be freely forthcoming and made available no one can doubt. Too much cannot be done for them in these respects in such circumstances. But it must occasionally happen that in the competitive trials of charitable societies and communities with one another, as in the case of the hospitalities of society, an effort is made to outdo the rest. The risk is lest, losing sight of the primary and fundamental object, such efforts may err on the side of ostentation and extravagance.

Let us turn, however, from such general reflections as these to the consideration of the volumes under review The intrinsic value of the information contained in them—in the way of additions to medical science or of guidance in designing and organising future war hospitals and as to the nature and amount of the equipment and medical and technical materials to be provided—is not, and possibly was not designed to be, in proportion to what might be expected from their size and handsome style and "get up." The total funds—£145,000 realised by collections, Government subsidies, and other sources of income, with the sale of materials and so forth—altogether amounted to over £174 000. There was consequently no lack of money available nor was there any parsimony about the way in which these hospitals were supplied, for if all we have heard about them be true they were very fine hospitals and were furnished on a scale and with an elaboration of detail and comfort which left nothing to be desired and which probably never took place in war before. It is only right to say that the work in connexion with the inauguration of these hospitals was the work of ladies. When the great call was made upon the patriotism of the country a strong committee was formed, Her Majesty Queen Alexandra (then Princess of Wales) being president and Countess Howe, who edits the volumes under review, occupying the chair. Earl Howe acted as honorary secretary All connected with the movement, whether at home or at the seat of war, appear to have laboured together with unselfish zeal and enthusiasm in the cause and to have put forth every effort to make the organisation and conduct of the Imperial Yeomanry hospitals a great success.

In addition to the large base hospital at Deelfontein other hospitals at Pretoria and elsewhere were opened as well as several subsidiary establishments The undertaking was therefore organised and conducted, as the military operations extended, on a big scale. The special reports deal with each hospital or section separately but it would be impossible within any reasonable limits of space to refer to all of them. That of Lieutenant-Colonel A. T Sloggett, C M.G , R.A.M C is an interesting and instructive one It treats exhaustively of the base hospital at Deelfontein which was erected in the short period of a fortnight under rather more than the usual difficulties experienced by the medical authorities during the war It may be noted that the Aldershot system of conservancy was carried out here with complete success. The medical report of this hospital is by the late Dr J W Washbourn, C.M.G There were in all 4731 medical cases with 262 of enteric fever, among 211 of which it was definitely recorded that 186 were *uninoculated* and 25 *inoculated*, with respectively 20 and four deaths, making a percentage of 16 for inoculated and 10 for uninoculated cases. It was also noted that inoculation had no marked influence in preventing or modifying the disease. The type of the fever in South Africa was much the same as in England or America. The surgical cases were 1157, with only 185 cases, however, of bullet wounds, owing probably to its being a base hospital. There were two useful innovations in the shape of departments for ophthalmic and dental work.

In the x ray department it was found that neither batteries nor accumulators were of any practical use, the good radiographs in the report were obtained by means of a dynamo run by an oil engine. No. 3 Model School Hospital at Pretoria was really a portion of the field hospital. There were in this hospital 3732 medical cases, the remainder (1324) being surgical with 235 gunshot wounds Enteric fever and dysentery were the chief diseases and these were most prevalent during December and January, showing a rise during March. There were 692 cases of the former (enteric fever), with 55 deaths, and 475 cases of dysentery with 15 deaths accounting together for about 75 per cent. of the whole death rate of the hospital.

The work of the bearer company and field hospital is lucidly and well described in the report by Mr C Stonham C M.G After some vicissitudes at sea, including a collision with the s.s. *Mexican* which sank, the bearer company intrained at Cape Town and went to Bloemfontein and afterwards "trekked" all over the Orange Colony and both the Eastern and Western Transvaal. There are 342 cases of gunshot wounds reported among the 1267 cases admitted into this field hospital with a very few shell wounds. The total number of admissions into the various hospitals were 13,327, being 9814 medical and 3513 surgical cases. Among the latter many interesting and instructive cases of gunshot wounds occurred and are described. The axiom ' in abdominal small bore bullet wounds do not operate' has become a practical rule in military surgery and we do not find any record of laparotomy for gunshot

Lorenz had shown that this position must be retained for six months. The thighs were then brought down half way and put in plaster again and were gradually straightened at the end of two years As to the suitable age for reduction, for double dislocation the best results were obtained up to six years of age. For a single dislocation the time might be extended to nine years of age. Older patients must be prepared by preliminary stretching and exercise Lorenz had cured a patient aged 28 years Mr Noble Smith thought that the advantages of the bloodless method were that it was a perfectly safe procedure, even such accidents as a fracture of the femur leading to no ill effects, that there was no risk of a stiff joint, with consequent crippling for life, that young children were not affected by being kept off the feet for two years, and as a matter of fact patients were not kept lying down the whole time, but pushed themselves about on a stool, which was shown. A block was also shown which was very useful for placing under the thigh during manipulation —Mr T H. Openshaw had used methods of manipulation for seven years and in 30 cases had had good results in about a third of that number Lorenz's method had been gradually improved, especially in the retention of the fully abducted position for six months In this time probably the glutei and other muscles became shorter and prevented re-dislocation. Possibly the head of the femur might ultimately make its way through the capsule into the joint, but often the bone could not be got into the acetabulum. In the open operation, if the cartilage was not interfered with there was no ankylosis.—Mr J Jackson Clarke quoted a post-mortem examination on a child dying from diphtheria one month after Lorenz's operation to show that the head of the femur could be replaced in the acetabulum. The glenoid ligament was sometimes so thick as to make replacement very difficult. He called attention to friction bands underneath the plaster splints whereby the skin could be kept in good order Difficulties in the treatment were due to parental neglect and indifference to this kind of work In cases difficult of reduction, much ecchymosis might be caused. In such cases it was better to do a preliminary operation of stretching or dividing muscles —Mr P L Daniel said that much improvement had taken place in Lorenz's methods and he instanced the thoroughness of the work of applying plaster of Paris splints He thought that cases treated by Lorenz's methods contrasted most favourably with the results of the open operation —Mr Peyton T B Beale wished to know what happened to the ligamentum teres after reduction Did it shrink or did a new ligament form ?—The President said that the subject was of importance to the general practitioner, with whom the fact that Lorenz's method did not endanger life or limb would have great weight.—Mr Noble Smith, in reply, said that the condition of the ligamentum teres had not been verified.—Mr P Sidney Spokes read a paper on the Immediate Regulation of Misplaced Teeth.

Cardiff Medical Society —The ordinary monthly meeting of this society was held on Feb 5th, Dr R. Prichard, the President, being in the chair —Professor A F Dixon exhibited the new Projection Lantern used in the anatomical department of University College, Cardiff (by Dr John Gordon of Glasgow), and demonstrated its method of working He then showed in the lantern photographs by Dr T H. Bryce and Dr J H Teacher of Glasgow illustrating the maturation, fertilisation, and segmentation of the ovum of echinus esculentus, from the preparations of Dr Bryce —Mr William Sheen gave a lantern slide demonstration of Fractures of the Lower End of the Humerus in Children. He first showed a series of x ray photographs of normal elbow joints in children between the ages of one and a half and 16 years He demonstrated from these the situation of the different epiphyses, their size and shape and the times at which they appeared, and called attention to the importance of not mistaking a normal epiphysis not yet joined on, for a fracture. He then by means of a diagram indicated the common types of fracture and showed that they usually involved the diaphysis, pure epiphyseal separations being extremely rare A series of x ray photographs of cases recently under his care was then shown to demonstrate fracture of the external condyle and transverse fracture above the condyles. The importance of taking photographs of both the injured and normal elbow and also of taking a lateral as well as an antero posterior view was also alluded to The symptoms and course of such cases, the possible complications, particularly deformities and nerve injuries, and the line of treatment to be adopted were briefly described.—The President, Dr P Rhys Griffiths, Mr W B C Treasure, and Professor Dixon commented on the demonstration and Mr Sheen replied.—Professor Dixon exhibited on behalf of Dr W S Haughton of Dublin and himself a series of stereoscopic radiographs illustrating the Structure of each of the Bones of the Skeleton The pictures showed in a striking manner the arrangement of the lamellæ in the shafts of the long bones and in the cancellous tissue A distinct spiral arrangement of the lamellæ could be made out in all the long bones in man and was especially marked in bones like the humerus and femur The lamellæ in question formed right- and left-handed spirals which intersected one another They could be seen to undergo a change in direction near the articular surfaces in such a manner as to bring the ends of the lamellæ into planes perpendicular to the surfaces of pressure. Although perhaps best marked in the bones mentioned the spiral lamellæ were also to be seen in all bones with a tubular formation and in each case they were very well developed in positions of curvature where they undoubtedly gave greater rigidity to the skeleton. Their arrangement was easily demonstrated in the ribs and also in structures like the transverse processes of the vertebræ

Edinburgh Royal Medical Society —A meeting of this society was held on Feb 6th, Dr S A. K. Wilson being in the chair —Dr Shaw read notes on a case of Hemiplegia in a girl, 15 years of age There was hemianopsia but no optic neuritis. There was very slight sensory disturbance The diagnosis was that the case was one of cerebral tumour affecting the posterior part of the internal capsule and the optic thalamus —Dr S Gilford read notes on a case of Extensive Cancer of the Rectum with Stricture of the Rectum. The patient had also severe aortic incompetence. Inguinal colotomy was performed, the operation being carried out under eucaine. During the operation it was observed that the handling of the parietal peritoneum caused pain and a change in the pulse, but that no such changes took place in regard to the visceral peritoneum.—Dr A. Murray Wood read a dissertation on the Rheumatic State in Childhood. He began by pointing out the easy diagnosis of rheumatism in the adult and the difficulty encountered in diagnosing the condition in children. After discussing the influence of sex and heredity on rheumatism in childhood he went on to enumerate the various symptoms and complications that might be met with, and he showed how far these assisted in diagnosing and in giving a prognosis of the case. He said that the presence of the subcutaneous tendinous nodules was the only sure diagnostic sign in children.

Rochdale and District Medical Society —A meeting of this society was held on Feb 5th, Mr W Stanwell, the President, being in the chair —Dr W Hirst Bateman read Notes on Two Cases of Extra uterine Pregnancy The first case occurred in a recently married woman and was treated at a very early stage of the pregnancy by operation on account of severe pain. Abdominal section was performed and the sac was found to be protruding from the fimbriated extremity of the Fallopian tube. The patient made an uninterrupted recovery In the second case the patient had been married four years and there had been no previous pregnancy Rupture of the sac apparently occurred in the second month, but the symptoms were not so urgent as to necessitate immediate operation and expectant treatment was adopted The patient was kept at rest in bed and gradually improved. Four months later she was practically well. Dr Bateman urged that operation was not always necessary in early cases —The President Mr H. H L Hitchon and Dr W J Kerr believed that it was better to operate before symptoms became urgent.

University of Cambridge —The new demonstrators of anatomy are Dr T Manners Smith (Downing) and Dr H. W Marett Tims (King's) The delegates of the University to the Brussels International Congress of Hygiene to be held next September are Dr D MacAlister, Professor G Sims Woodhead and Mr Nuttall Professor A. Macalister has been appointed an elector to the chairs of surgery and medicine (Downing), Dr D MacAlister an elector to the chair of zoology, Professor T C Allbutt an elector to the chair of anatomy, Professor Woodhead an elector to the chair of physiology, and Dr W H. Gaskell an elector to the chair of pathology many cases from the employment of children in the streets for the purpose of earning money for their parents, the facts are clearly proved by the reports of committees appointed by the municipalities and by police statistics. In 1882 the Manchester corporation obtained an Act enabling it to deal with street-trading children, providing that no child under the age of 14 years should, unless he had obtained a certain standard of education, be employed as a street-trader after 9 P.M. in the summer and 7 P.M. in the winter. The regulations made were to the effect that all children between the age of 12 and 16 years should be entitled to a licence provided that they intended to trade in the streets of the city, that they were not unfit to trade through being sickly, blind, deaf, dumb, deformed, or mentally deficient, and that they had the consent of their parents to their being licensed. The plan has worked well and the condition of the juvenile street-traders has improved.

Dr. Francis Warner read a paper at the congress on the Physical Training of Children from the point of view of exercises adapted to produce an educative effect. Progressive free-hand exercises made by the pupil in imitation of the teacher's finger movements in combinations, one at a time, two at a time, were illustrated, the author explaining the educative effects that may thus be obtained without the use of words in dull and backward children. "Exercises in transfer movements" were thus explained. 'Let a child hold out both hands, take his left hand in yours and explain to him that he is to move the fingers of his right hand in the same way as you move those in his left. Let him shut his eyes, then the action in his right hand will be an imitation of your passive movements of his left hand. Here the feeling of movement in the left hand controls and directs the action.' In view of the expected report of the Royal Commission appointed to inquire as to the various methods of physical training, the precautions to be taken in its general introduction, and the adaptations of method required for certain groups of children, it is advisable that all forms of training should be considered. It was resolved at the congress—

> That having regard to the important relation of physical exercises to intellectual as well as to muscular development they should form an integral part of education and that teachers should be specially prepared for teaching them by instruction in our training colleges.

This report is unusually interesting and readable, the various subjects touched on have been ably dealt with and throw much light upon the lines of action which it is desirable to follow for the benefit of children.

The Student's Guide to Medical Diagnosis. By SAMUEL FENWICK, M.D. St. And. and Durh., F.R.C.P. Lond., late Consulting Physician to the London Hospital; and W. SOLTAU FENWICK, M.D., B.S., M.R.C.P. Lond., Senior Physician to the London Temperance Hospital, Physician to the Evelina Hospital for Sick Children. Ninth edition. London: J. and A. Churchill. 1903. Pp. 480. Price 9s.

THAT Fenwick's Medical Diagnosis is a well known and highly popular book there is no need to tell. The first edition was published by the late Dr. Samuel Fenwick towards the end of 1869 and arose out of a desire to assist students attending the medical out-patient department of the London Hospital. It was at the time original in design and admirable in construction and execution and its merits as a simple and lucid guide to medical diagnosis were speedily recognised. Since the date of the appearance of the first edition it need scarcely be said that medical science has not stood still but has been progressing with rapid strides, and a conscientious attempt to keep abreast with this progress may be traced in the numerous editions which have been called for from time to time. The present is the ninth edition and the fact speaks for itself. It is curious as well as interesting to follow the gradual growth and to notice the progressive changes that have been rendered necessary and to contrast the latest with the earlier editions, while recognising that the aim has been, as far as is practicable, to preserve a continuity of method and plan throughout. The present edition makes an excellent and very useful little book for students and practitioners. What is stated in its brief preface is fully borne out by our examination of it—namely, that the work has been entirely revised and that several new illustrations have been added to it.

Outlines of Psychology. By WILHELM WUNDT. Translated by CHARLES HUBBARD JUDD, Ph.D., Instructor of Psychology, Yale University. London: Williams and Norgate. 1902. Pp. xxii., 390. Price 8s. net.

PROFESSOR WUNDT'S "Outlines" does not constitute an introductory work to psychology but is, in its present form, a somewhat advanced and systematic work in which the standard of exposition is throughout high and even elaborate. A considerable knowledge of psychological and scientific terminology is needed for the due understanding and appreciation of this work. The author recognises at the outset two chief forms of psychology—the metaphysical and the empirical—and in an elaborate tabular summary he gives the various subdivisions of these. The exposition of the subject begins after his preliminary survey with an elaborate analysis of "psychical elements"—i.e., simple sensations and simple feelings. A 'general sense' concerned with the appreciation of conditions of space and time is regarded as "belonging to *all* beings endowed with mind," and this 'general sense" is further held to be capable of analysis into sensations of pressure, heat and cold, and pain. The discussion here is highly abstract and difficult to follow unless the closest attention is given to it. Passing next to the subject of compound sensations and feelings it is shown that all such sensations and feelings contain more than the qualities of their constituent elements—in other words, that new attributes peculiar to the compounds always arise as a result of the combination of elementary sensations and feelings. Ascending thus in the scale of psychological complexity an exposition is given of the nature of our ideas of space and of time, of emotions, and of volitional process. The succeeding portion of the work deals with the interconnexion of complex mental processes such as are commonly included under the terms 'consciousness,' 'attention,' "association of ideas," and 'apperception processes," the last term being used by Professor Wundt to include a variety of psychical processes of which but little is as yet known. This section of the work concludes with a brief account of the psychological aspects of dreams, sleep and hypnosis.

The next section touches briefly upon the psychical attributes of animals, the mental development of the child, the development of speech, of customs, and of myths and the subject of the collective will and social consciousness. The work concludes with an account of the metaphysical concept of mind and of the principle of causality.

In estimating a work of this kind comparisons are hard to avoid. The classical "Principles of Psychology" of Herbert Spencer and the works of James and of modern authors show the inevitable influence of the principle of evolution, while the standpoint taken by modern psychological investigation is mainly biological. Professor Wundt's work, while containing many bibliographical references to investigations of this sort is permeated throughout with the metaphysical and speculative spirit. Its tendency is to be deductive rather than inductive, to be abstract rather than practical, and it is thus less likely to suit medical readers whose requirements lie more in the direction of the inductive and the biological sciences than in metaphysical speculation. The work is a remarkable and excellent type of the older psychology slightly influenced by the new spirit.

wounds in the report. We may incidentally refer to a valuable paper on the use of Sulphur in Dysentery by Dr G E Richmond. This has already appeared in THE LANCET [1]

The work is abundantly illustrated with reproductions of photographs and skiagrams, all of which are excellent. The former will bring back vivid memories to readers who have been through those or similar scenes, while others who have not will be enabled to realise something of what their *confreres* have seen and done during their war service in South Africa.

A Practical Handbook of Midwifery By FRANCIS W NICOL HAULTAIN, M D, F R.C P Edin Second edition, entirely revised. Illustrated London The Scientific Press, Limited 1903. Pp 253 Price 6*s* net.

AFTER a lapse of some ten years Dr Haultain has published a revised edition of this book which appeared first in 1893 It is intended as a practical help to the busy practitioner and as a reminder to the student of the points of practical importance in the study of obstetrics It consists of a short *résumé* of the chief facts of midwifery put clearly and very succinctly, most of the information being in the form of tables Such a work must of necessity suffer from its very briefness It is impossible for the author in the limited space allotted to the various subjects to discuss the reasons for the recommendations which he makes, and as a natural consequence not infrequently statements are met with to which other teachers might well take exception The information is, however, upon the whole good and accurate and the book forms, as is claimed for it a very practical handbook of midwifery It is of importance as giving what may be taken to represent the teaching of the Edinburgh School in great part, and it is interesting to ascertain the author's opinions upon various disputed points In the treatment of eclampsia we find the administration of pilocarpine advocated, a drug the use of which in this disease, at any rate, is almost universally condemned by London obstetricians As might be predicted, Dr Haultain prefers the use of axis traction forceps in the treatment of cases of delivery complicated by the presence of a flattened pelvis. Indeed, he uses axis-traction forceps in all cases of delivery by forceps and here we entirely agree with him. In considering the treatment of cases of accidental hæmorrhage we notice that he says, "Plugging the vagina has been recommended in cases of external hæmorrhage with an *actively contracting* uterus" The teachers of the Dublin School, who are the chief exponents of the treatment of external accidental hæmorrhage by plugging the vagina, recommend it in cases where the uterine pains are absent or feeble, a condition just the opposite of that quoted by the author Possibly he is not alluding to the Dublin method A departure from the ordinary teaching is that given by Dr Haultain in his description of the management of breech presentations In cases where the head is extended and delayed at the brim of the pelvis he recommends the Prague method of delivery, while in cases where the head is extended and delayed in the cavity of the pelvis he prefers the application of the fingers to the face and to the occiput of the child Our own experience does not bear out the statement that decapitation is best performed with a pair of long, straight, blunt-ended scissors In a really difficult case the instrument least dangerous to the mother and most efficacious is the saw edged decapitating hook It is surprising to find on p 42 in the discussion of the treatment of cases of cancer of the cervix complicating early pregnancy the induction of abortion recommended. We thought the almost universal practice at the present day was the performance of vaginal hysterectomy whenever possible in such cases, a mode of treatment of which nothing is said.

Although, as we have pointed out, there are here and there statements in the book upon which differences of opinion may well exist, yet upon the whole it should prove of value to the practitioner and the student.

Report of the Third International Congress for the Welfare and Protection of Children, London, 1902 Edited by SIR WILLIAM CHANCE, Bart. London P S. King and Co Pp 348. Price 2*s* 6*d*

THIS volume will prove attractive to those who wish to review the work which is being carried on in various directions for the benefit of childhood in this and in other countries. It expresses the experience and opinions of many acknowledged authorities on questions of health, legislation, and education as they bear on different classes of children Dr J F J Sykes, medical officer of health of St. Pancras, contributes an article on Hygiene and Sanitation in the Home and at School and points out the fact that diphtheria has enormously increased since the introduction of the Education Act, probably largely due to the aggregation of children Doubtless infectious diseases mostly spread in schools where points of contact are numerous. This fact is becoming more and more realised. The lower age-limit for school attendance was discussed and reference was made to Dr A. Newsholme's statistics which show that 11 per cent. of the children on school registers are under five years of age, 22 per cent. are between five and seven years of age, and 67 per cent. are between seven and 15 years of age. There seems to be a growing consensus of medical opinion that seven years should be the age fixed below which no child should be allowed to attend a public elementary school, a resolution to that effect was carried in the medical section but negatived by the congress. It was pointed out by Dr Sykes that overcrowding in homes is the great enemy of family life, while well constructed sanitary tenements may be the best remedy for those who must live in the towns they are not without attendant evils, and the extension of cheap means of communication with the suburbs must be looked upon as affording the best prospects for a healthy child population A plea was also raised for the extension of school classes in cooking and housewifery

As related to the home and the school we refer to Mr C Loch's paper on State and Parental Control He says "In so far as the sense of the reciprocal nature of the relation between parent and child is lost, improper and excessive use is likely to be made of any provision made by the State for destitute, abandoned and neglected children Parents then seek to turn to their private advantage the earnings and ability of their children whom they have not endeavoured to educate or control, and the child or young person is not retained sufficiently long under special training and guardianship to reap the full and lasting benefit of the education afforded him." The parent is too often anxious to be rid of a child when the child becomes a burden to him and equally anxious to secure the services and help of that child when he is sent forth from the institution. Mr Loch moved at the congress —

> That it is desirable that the laws relating to the control and welfare of children should be considered by a departmental committee or Royal Commission with a view (1) to prevent the influence of unsatisfactory parents on children placed under institutional care undoing the good results of the education given to the children and (2) lessening the temptations to parents to let their children be maintained by public authorities

This resolution was carried.

The paper last noticed is illustrated in a very practical manner by a contribution by Mr Robert Peacock, chief constable of the city of Manchester, on Employment of Children with Special Reference to Street-trading by Children This shows plainly the evils which result in very

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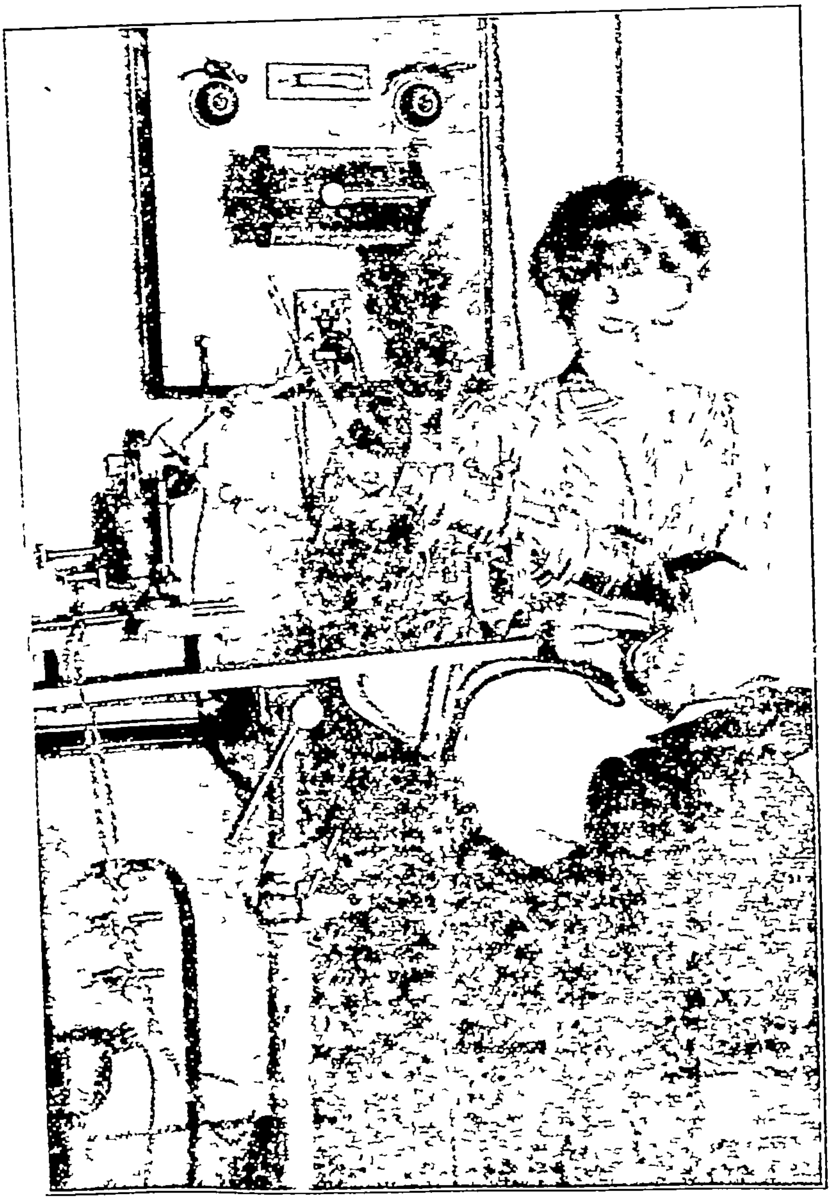
[1] THE LANCET, Nov 23rd 1901 p 1408.

New Inventions.

THE NEW FINSEN REYN LAMP

WHEN attending Professor Finsen's Institute in Copenhagen I found the authorities there hard at work experimenting with a new lamp that had been devised by Professor Finsen and one of his colleagues, Dr Reyn, and after a thorough, prolonged, and satisfactory trial, both in the laboratory and the institute, this lamp has now been issued with the guarantee and authority of the Institute. The first of these lamps sent out from Copenhagen has arrived in this country and is shown in the accompanying illustration. The principle on which the lamp is constructed is entirely that of the older and larger Finsen lamp, but one patient only can be treated at a time instead of four as with the latter thus insuring privacy in the treatment of each individual case—a point of considerable importance in England. The lamp consists of three parts—namely, the arc light, the concentration apparatus or telescope, and the compressor, the two latter being connected with a water circulating system for cooling purposes The lamp and telescope are placed at either end of a connecting rod which in turn is mounted on a moveable stand provided with a universal movement mechanism at its upper end. The arc lamp is for a direct current of 55 volts and 20 amperes and the carbons, which are automatically fed, incline at an angle directing the rays on to the concentration apparatus. It is mounted on a pin to which it can be fastened at the necessary height by a screw, and this in turn is attached to a rack-and-pinion arranged on the connecting rod giving a forward and backward movement, so that the lamp may be placed at any required distance from the telescope. The



The Finsen Reyn Lamp at work.

LIBRARY TABLE

Three Clinical Lectures on the Diagnosis and Treatment of Rectal Diseases By F C WALLIS, F R C S Eng, Assistant Surgeon to Charing Cross Hospital and to St. Mark's Hospital London The Medical Publishing Company, Limited. 1902. Pp 87—These three lectures were delivered last year at the Medical Graduates' College and Polyclinic and were published in the *Clinical Journal* They contain a very readable account of the more common lesions met with in the rectum and the treatment is described with especial fulness While the book on the whole is representative of the general teaching of the surgery of this region Mr Wallis is not afraid to think for himself and several original ideas are given and well supported by pathological and clinical evidence. Mr Wallis holds that pruritus ani is nearly always due to a small shallow ulcer of the mucous membrane situated between the two sphincters, frequently in the posterior part of the circumference He finds that the healing of this ulcer is followed by a cessation of the irritation. We are in accord with his contention that the common non malignant ulceration of the rectum is generally not syphilitic in origin, as is often taught, but probably septic. The lectures were well worth reprinting

Hazell's Annual, 1903 a Cyclopædic Record of Men and Topics of the Day Revised to Dec. 31st, 1902. Edited by W PALMER, B A. Lond. London Hazell, Watson, and Viney, Limited. Pp 750 Price 3*s* 6*d* net—This valuable work of reference has been published this year about a month later than usual in order to include a complete record of events for 1902, including the Education Act, the Metropolis Water Act, and the new scheme for the entry and training of naval officers issued on Christmas Day All the permanent features of the book have been revised and rewritten and the policy of classifying and grouping cognate articles has been carried still further Reference is made to the bequests of Mr Cecil Rhodes and the public house trust movement, and among other new articles are those on Christian Science, Consumption Sanatoriums, British and Foreign Copyright, London Medical Schools, Motor Vehicles, and the Nobel Foundation. There is also a valuable summary of the debates and legislation of the session of 1902, including a detailed analysis of all the principal Acts passed, all the principal Bills introduced, and the reports of Parliamentary committees and Royal Commissions. In "Hazell's Annual," indeed, is to be found the true meaning of *multum in parvo* and conciseness has been obtained without obscurity

JOURNALS AND MAGAZINES

The Review of Neurology and Psychiatry opens its first number with original articles on Local Panatrophy, by Sir William Gowers, on Psychiatry in General Hospitals, by Sir John Sibbald, and on the Relative Frequency of Disseminated Sclerosis in this country and in America. These are followed by abundant abstracts from foreign reviews and journals, giving an excellent *résumé* of current practical work bearing on neurology and medical psychology The articles and abstracts are both interesting and attractive and cannot fail to give the review a healthy "send off" on what we hope may prove to be a successful career The editor, Dr Alexander Bruce, is himself a well known worker and his name is a guarantee that readers of the new periodical will find their time profitably spent in its perusal The review will be issued monthly, and the bibliography which is a feature of the contents must prove useful for purposes of reference

Cambridge Review—The number of date Jan. 29th is enlivened by the productions of two poets, one of whom, modestly veiling his identity under the initials "F M C," has felt his soul stirred within him by the numerical disproportion between the students of anatomy and the "subjects." He has accordingly unburdened himself in a "Ballad of Cadavers" in six stanzas, humorous enough except for one dismal prophecy which we trust may not be fulfilled —

"When two must share an arm or leg
And four take head and neck,
Some forty three per cent. may pass—
The rest will be a wreck."

Mercy and Truth.—The January number contains an article on Medical Work among Women in Multan, in the Punjab, by Dr Wilhelmina Eger, and an illustrated Description of Progress in Hakodate, Japan, at which place the missionary is Dr W W Colborne

HOSPITAL MAGAZINES

St Bartholomew's Hospital Journal for December, 1902, contains, among other interesting matter, the report of a paper read before the Abernethian Society by Dr W d'Este Emery on the Specific Antibodies. The paper is accompanied by eight illustrations The following story is given SCENE—Out-patient room Physician (unravelling the finer points of the case) "Are you depressed in spirits?" Patient "Yes, sir" Physician "Why is that?" Patient "Well, sir, since I've been out o' work I haven't been able to buy 'em"

St George's Hospital Gazette for January contains a paper describing a Russian hospital on the banks of the Dwina "In the matter of medicine," says the writer, "they are prehistoric" Consequently "it is difficult to decide whether to treat it (the hospital) from a medical point of view or as a subject of antiquarian research." The writer does his best to deal with it from the medical point of view It is difficult to believe that even in this remote corner of the world notes of cases are kept in chalk. The problem of ventilation has been solved in this hospital by having no ventilation at all The paper is thoroughly interesting

London Hospital Gazette for December, under the heading of Random Notes concerning Stimulants, prints a very readable and instructive article from the pen of Dr. A. E Sansom The author concludes by saying "If you want, as you should, to know much about brandy the writer strongly advises you to peruse carefully a report in a recent number of THE LANCET" This is the sort of commendation that is particularly flattering to us, as our investigations of food stuffs and allied subjects are undertaken exactly with the idea of giving medical men information of a practical nature which cannot be found in text-books.

Westminster Hospital Gazette—There is nothing better in the January number of this journal than the following, which has a familiar ring to us —

"OUR DOCTORS

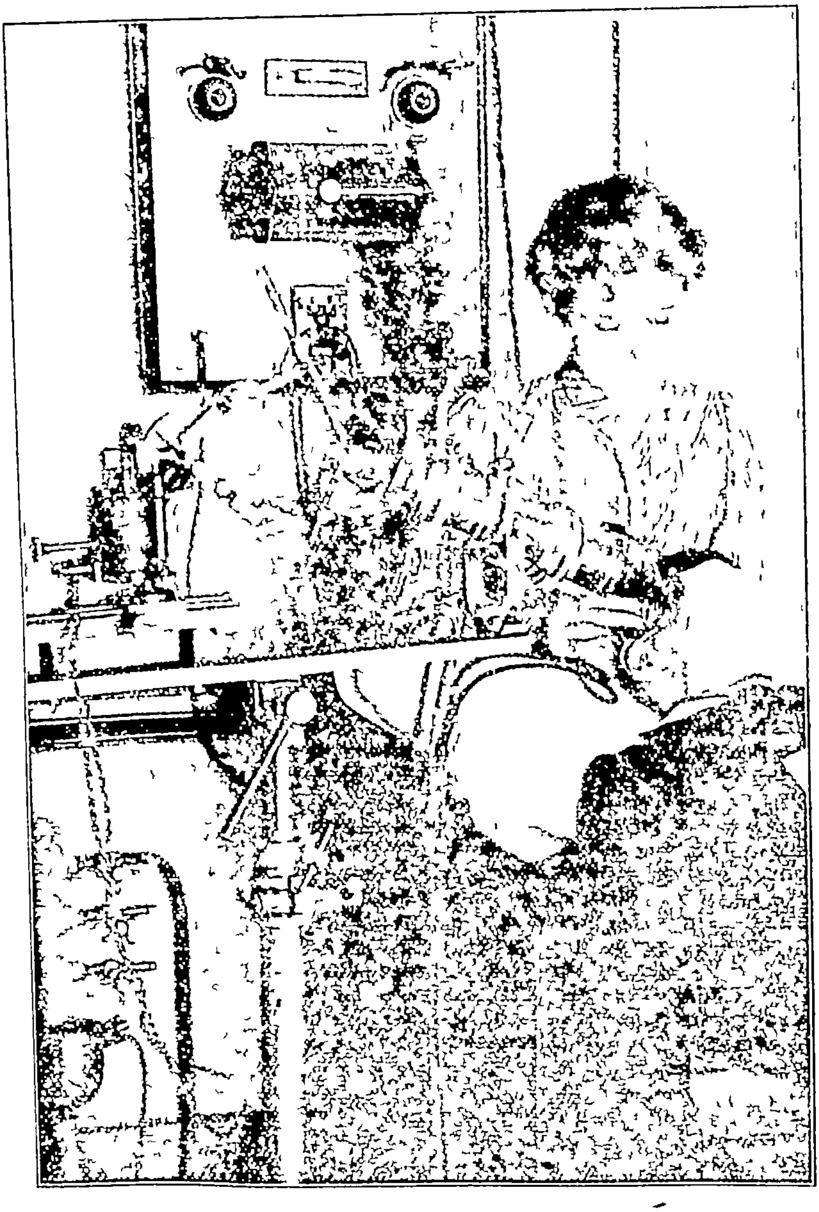
He must not walk his rounds for fear his patients think him poor
For dearly do they love to see a carriage at their door
And if his horse is fat he must have little work to do
And if tis lean the reason is he starves that poor old screw
If he calls upon his patients every day when they are ill,
The reason is he wants to make a great big doctor's bill
If he calls on them less frequently thus lessening their expense,
The chances are he ll be accused of wilful negligence.
About his own afflictions he must never say a word—
The notion of a doctor being ill is too absurd!
And when perhaps from overwork he's laid upon the shelf
His sympathising patients say Physician, heal thyself!"

BRADFORD AND WEST RIDING MEDICO-ETHICAL UNION—The annual dinner of this society took place at the Victoria Hotel, Bradford, on Feb. 5th Nearly 60 members and guests were present. Dr J Dunlop, the retiring President, was in the chair After the chairman had given the toasts of "The King, the Queen, and the Royal Family," Dr W H. Horrocks proposed the toast of "The Bradford and West Riding Medico-Ethical Union." This was responded to by the President (Mr H. Shackleton) and the secretaries, Dr J Metcalfe and Dr W Mitchell. The toast of "The Ladies" was proposed in a humorous speech by Dr A Bronner and responded to by Mr W Handcock. An excellent musical programme was then given by the ladies and members present.

New Inventions.

THE NEW FINSEN REYN LAMP

WHEN attending Professor Finsen's Institute in Copenhagen I found the authorities there hard at work experimenting with a new lamp that had been devised by Professor Finsen and one of his colleagues, Dr Reyn, and after a thorough, prolonged, and satisfactory trial, both in the laboratory and the institute, this lamp has now been issued with the guarantee and authority of the Institute The first of these lamps sent out from Copenhagen has arrived in this country and is shown in the accompanying illustration. The principle on which the lamp is constructed is entirely that of the older and larger Finsen lamp, but one patient only can be treated at a time instead of four as with the latter, thus insuring privacy in the treatment of each individual case—a point of considerable importance in England. The lamp consists of three parts—namely, the arc light, the concentration apparatus or telescope, and the compressor, the two latter being connected with a water circulating system for cooling purposes The lamp and telescope are placed at either end of a connecting rod which in turn is mounted on a moveable stand provided with a universal movement mechanism at its upper end. The arc lamp is for a direct current of 55 volts and 20 ampères and the carbons, which are automatically fed, incline at an angle directing the rays on to the concentration apparatus. It is mounted on a pin to which it can be fastened at the necessary height by a screw, and this in turn is attached to a rack-and-pinion arranged on the connecting rod giving a forward and backward movement, so that the lamp may be placed at any required distance from the telescope. The



The Finsen Reyn lamp at work

of supply and demand. Good nurses are not forthcoming at the wages and conditions offered. The Metropolitan Asylums Board was confronted with the same difficulty in its fever hospitals. It solved the difficulty by offering higher wages and better conditions of service and the Local Government Board would be well advised to adopt similar means. In the interests alike of the medical profession, the public, and the Poor law nursing service we feel bound to enter our protest at the earliest moment against a retrograde proposal. A large section of the public is becoming impatient at the non solution of this important question of workhouse nursing The constitution of this departmental committee was unsatisfactory, its recommendations carry but little weight, and the time has come for a Royal Commission to be appointed in order thoroughly to investigate the matter

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The Treatment of Intussusception

A TRULY remarkable series of cases of intussusception was recently met with at the London Hospital, where within nine days seven cases of this condition were admitted into the wards They were all under the care of Mr HUGH M RIGBY who contributed a detailed account of them to THE LANCET of Feb 7th (p 364) One of the seven patients was in a moribund condition when admitted and died four hours later, and therefore we need hardly consider that case, but the remaining six patients were submitted to operation and of these five recovered The one fatal case required resection of a portion of the bowel and this complication of the operation for intussusception is universally recognised as of the gravest prognosis Within recent years the whole question of the treatment of intussusception has undergone a great change and an examination of the reasons for the adoption of the present methods should be by no means devoid of interest.

Not long after the pathology of intussusception was investigated the idea of forcing back the invaginated bowel by fluid pressure arose The earlier attempts were made with air which was forced in by means of a syringe, later liquids were employed, water being chiefly used, though olive oil has been advocated Hydrogen and carbonic acid gas have also had their supporters There is a very obvious limitation to the action of both inflation and injection and this is imposed by the ileo cæcal valve. Any intussusception limited to the small bowel cannot be affected by the distension of the large intestine, for distension of the cæcum closes the valve firmly It is true that it has been demonstrated that in excessive distension of the cæcum some of the contents may escape upwards through the valve, but this can only happen to a slight extent and when the distending force is very great. Therefore these methods are possible only in some forms of intussusception. The treatment by inflation, and especially by injection did certainly succeed in reducing some intussusceptions, and this was so, not only in slight cases, but even in extensive cases, as in one recorded by Dr E MANSEL SYMPSON, where several inches of bowel protruded from the anus In what proportion of cases methods of distension succeed cannot definitely be stated, but the statistics collected by Dr F HOLME WIGGIN of New York, which give the percentage of successes as 25, may be considered as not underestimating the beneficial results of the treatment. Distension of the colon too, is not without danger, for numerous cases are on record in which rupture of the bowel has occurred. Mr R LAWFORD KNAGGS has collected seven cases in which this accident was encountered and no wonder need be felt at the rupture of the bowel under the conditions in which distension is usually performed, for in most cases no attempt is made to gauge the pressure exerted by the distending fluid. A syringe is usually employed and the pressure exerted by the hand on the syringe is a very poor index to the pressure in the bowel. A curious fact is here of great importance and that is that the smaller the syringe employed the greater is the distending force The quantity of the liquid injected is an equally fallacious test of the pressure in the bowel, for Mr D'ARCY POWER has shown that the capacity of the colon varies greatly in different children. Indeed, in one of the fatal cases of rupture of the bowel only nine ounces of water had been injected. The process of distension may also be very exhausting to the child, especially if it has to be repeated, as is necessary sometimes when this is the sole method of treatment employed. In some cases the process has been repeated four or five times. An important objection to the treatment by distension is that it is often very difficult for the surgeon to be certain that the reduction is complete, for so small a portion of bowel may remain invaginated that nothing can be felt through the abdominal wall and yet a fatal issue may follow On the other hand, the surgeon may feel a small swelling after distension has been practised and may think that reduction has not been complete, though the mass felt is only œdematous bowel

For these and other reasons there has been of recent years a growing tendency to resort to abdominal section at an early stage of a case of intussusception Even in the past a laparotomy frequently followed unsuccessful attempts at distension, but these unsuccessful attempts had been often so energetic and persistent that the severe exhaustion that had been induced entirely precluded the possibility of a successful result following the abdominal section Mr JONATHAN HUTCHINSON's case recorded in the fifty seventh volume of the *Medico-Chirurgical Transactions* appears to have been the first successful case in this country, though one had occurred in France towards the end of the eighteenth century Since Mr HUTCHINSON's case in 1871 many others have been recorded, still failures far outnumbered successes and, indeed, laparotomy for intussusception had fallen into a certain degree of disrepute With the development of abdominal surgery the confidence of the surgeon in the comparative harmlessness of a laparotomy developed, and the abdomen was opened for the treatment of this condition with less and less hesitation. Still, however, the mortality continued high, and it was seen that no small share of the blame was to be attributed to the exhaustion produced by the previous attempts at reduction. Abdominal section was therefore gradually performed at an earlier stage, until it was found that the best results were obtainable in those cases where little or no previous attempts at distension had been made, and at the present time recourse to injection or inflation is gradually falling into disuse, and their place is being taken by laparotomy The results justify the change and the series of cases recently treated at the London Hospital, to which we have already referred, clearly demonstrate the value of a primary abdominal section in intussusception It is essential to distinguish in preparing statistics between secondary laparotomy, where the case has been previously treated by distension, and primary laparotomy, in which no other remedial measures have been employed. A confusion of these two classes will utterly vitiate the conclusions from any series of cases. The ease with which the invaginated gut can generally be withdrawn after the abdomen has been opened is truly marvellous, but in this, as in all other forms of acute intestinal obstruction, much depends on the duration of the symptoms and the tightness of the constriction If several days have elapsed and the inclosed bowel is tightly nipped, peritoneal adhesions will have fixed it and it may be impossible to withdraw it In such circumstances the prognosis cannot fail to be very grave whatever method of treatment be adopted. Fortunately these complications are exceptional, especially in cases treated early, and therefore we may hope for even better results with a growing recognition on the part of the public of the importance of early treatment.

May it then be said that distension should never be attempted? The treatment of an analogous condition strangulated hernia, will furnish the answer Formerly when a hernia became strangulated severe and protracted taxis was frequently employed for its reduction with disastrous results to the patient, now the routine treatment is an immediate herniotomy, but this may harmlessly be preceded by a single gentle attempt at reduction if the strangulation is recent. So is it too with intussusception. Laparotomy is the best method by which to treat this condition, but a single gentle attempt at distension in recent cases which are confined to the large intestine and not of an acute type may be performed with impunity One condition, however, is essential. The pressure in the colon must be absolutely under control, and this can only be effected by employing a liquid as the distending agent and using a funnel and rubber tube to introduce it. If the funnel be raised not more than two feet above the level of the patient the pressure will not exceed one pound on the square inch and this pressure is probably perfectly safe. The attempt should be made under an anæsthetic and should it fail laparotomy can be immediately proceeded with, while the surgeon will feel sure that he has not by this gentle distension impaired the chance of success of his operative procedure.

The Royal Dental Hospital and its Anæsthetists

THE entire staff of anæsthetists of the Royal Dental Hospital of London have been dismissed from their posts in circumstances which require consideration from us and we think that our readers will agree that the circumstances also require more consideration than they have apparently received from the committee of management of the well-known hospital in Leicester square. The story is briefly as follows —At the Royal Dental Hospital of London there has lately been appointed an officer—and doubtless he has proved a very useful officer—who is known as the dental superintendent. His duty we find in a recent report of the medical committee of the hospital defined as being "to supervise and direct the work of the demonstrators, the house surgeons, the curators, students, and pupils, and in the unavoidable absence of the anæsthetists to act as their deputy", and the same report adds that his appointment has proved an unmixed benefit to the hospital. In October of last year the dental superintendent presented a report to the committee of management of the hospital which is not in our hands, but which appears to have attributed want of regularity and punctuality in the exercise of their duties to some of the dental staff and some of the administrators of anæsthetics attached to the hospital This report was referred to and read at a meeting of the medical committee without any special notice of its contents being sent to the anæsthetists, who are, however members of the medical committee, and as a result a sub-committee was elected upon the suggestion of the medical committee to consider the dental superintendent's report. The sub committee was composed jointly of members of the medical committee and members of the committee of management, and reported to the committee of management "that having regard to the enormous increase in the number of gas cases the sub-committee is of opinion that the best way of dealing efficiently with the problem is by the appointment of two paid anæsthetists in place of the present honorary anæsthetic staff." The report also defined the hours of attendance of the medical staff and concluded thus —"that the members of the anæsthetic staff be thanked for their services and be made honorary governors of the hospital and that the two seniors be elected consulting anæsthetists to the institution." This last clause amounts, in our view, to dismissal of the anæsthetists of the hospital and, it may be noted, without any marked expression of gratitude for past services The report was adopted by resolution of the committee of management, without being submitted to the medical committee, and was at once embodied in a circular letter and despatched to the anæsthetists of the hospital, the majority of whom received it with complete surprise. Perhaps the anæsthetists may have been, as the sub committee's report comically calls them an "anæsthetic staff' not to suspect what was in the wind, but they did not. Some two years ago, at the time, we believe, that the dental superintendent was appointed, dissatisfaction was expressed with the way in which the anæsthetists rendered their services, but this had not prepared them for a dismissal *en bloc*, with only a formal word of thanks and no regretful phrase.

Such is the story There are several points of a personal nature which may arise in the discussion of this unfortunate affair, but we intend to do our best to consider the matter wholly on the broad grounds of the good of the public and of the dignity of the medical profession. The committee of management proposes to make an immediate alteration in the regulations of the hospital which we are quite ready to believe is intended as a measure of reform, but which seems to us to constitute a possible danger to the public and to display scant respect for an important body of medical workers There may or there may not have been irregularities in the attendance of the anæsthetists, but there can have occurred nothing to justify the immediate adoption of a report dispensing with their services in less than ten weeks from date. It is by the terms of his office no business whatever of the officer called the dental superintendent, to make reports upon the irregularities of the anæsthetists His duties appear to us to be clearly defined and distinctly arduous, and he should not have been asked to add to his duties that of noting, supervising, and directing the work of the anæsthetists of the hospital—for we take it that he was so asked and that he did not make his complaints upon his own initiative The one and only authority which would most certainly have been in the right in calling the attention of the anæsthetists to any lapse in their duties towards the hospital was, and is, the committee of management, and that committee has been apathetic up to the day when the dismissal of the anæsthetists was ordered. It is perfectly well known that the arrangements for the attendance of the anæsthetists at the Royal Dental Hospital have been under discussion at the hospital for many years, and from time to time rules have been framed by the anæsthetists themselves for dealing with the situation But the rules have not been kept by all the anæsthetists, and so, with the ever increasing work, the difficulty has become acute Any causes of dissatisfaction that the committee of management may have had ought to have been clearly expressed by that committee to the anæsthetists, and any failures in the system under which the anæsthetics have been hitherto administered to the patients must be laid to a great extent at the door of the authorities who have condoned all lapses by their attitude The authorities should have brought any reasons for complaint to the notice of the anæsthetists and should have insisted upon hearing any other side of the matter that might be presented. No vague and general expression of dissatisfaction could be expected to meet the case The arrangements for the attendance of the anæsthetists at the hospital have been criticised in a desultory way for a long time—we know that, but the committee of management has never discussed these arrangements with a view to tackle squarely any question that might arise if they were altered Suddenly, however, it resolves to discharge its anæsthetists, somewhat as an autocratic householder might rid himself of a body of insubordinate or dishonest servants, and we cannot regard its tactics as otherwise than a want of respect to the medical profession We shall be surprised to find that our readers regard the matter in any other light.

But there is another and more important reason than any we have yet adduced why the committee of management ought to desire to reconsider its action. By dismissing its staff of anæsthetists it proposes to overturn a system which, on the whole, has worked well for many years. To the success of the system by which the Royal Dental Hospital has been supplied with anæsthetists many of the best administrators of anæsthetics in the kingdom have contributed, and by so doing have provided for the safety of the public in a manner that the new arrangement can hardly promise to do Under the old system which, in accordance with the recent decision of the committee of management, comes to an end on March 1st of this year, the patients enjoy the services of specially selected and highly skilled anæsthetists. There has been great competition to obtain these posts and on the principle of the survival of the fittest they have been well filled. It is perfectly impossible to suppose that two paid anæsthetists can discharge the duties of the present honorary staff of anæsthetists Candidates of the position in their specialty filled by the present anæsthetists of the Royal Dental Hospital will not compete for paid appointments to be held under conditions of inferiority, and the posts will probably fall into the hands of junior and comparatively untried men. To the element of danger for the public thus introduced must be added another Two paid anæsthetists may not be able to stand the physical strain of work which has hitherto employed a certain proportion of the time of eleven experts The administration of nitrous oxide gas is not absolutely and always a simple matter It is only those who do not know how to administer "gas" who take this convenient and perilous view We would press these reflections on the committee of management of the Royal Dental Hospital The resolution by which it has dismissed its staff of anæsthetists does not take effect for a fortnight. In the interim we trust that the members of the committee will with unprejudiced minds think over the matter from the points of view which we have ventured to put very plainly before them By all means let the anæsthetists be called to order if they have erred Discipline must be maintained and the committee of management is the right body to maintain it. But let it not hurriedly overturn a system which guarantees a security for the public which will be wanting if the hospital has to rely for the future upon the services of two paid anæsthetists. We are certain that the medical profession and the public alike will think as we do. And we fear that if the committee of management persists in its proposed action without, at any rate, giving the whole matter that thorough re-discussion which its importance merits, it will endanger the prosperity of the institution for the good of which many of its members work so hard and so generously We do not ask the members of the committee of management to change their minds without reflection, we do not suggest that they should retain upon the staff of the hospital anyone with whose work they have reason to be dissatisfied, but we beg them to reopen the matter

Annotations.

'Ne quid nimis'

SMALL-POX IN THE PROVINCES

HAPPILY for us, the small pox epidemic, as far as London is concerned, may now be said to have been practically stamped out, only about three cases weekly having been notified in the metropolis since the beginning of the present year, but from official information just received we learn that the disease still continues to spread in some other parts of the country The Registrar General's return for the fourth quarter of last year, which has recently been published, contains a table (pp xxiii.-xxvi) showing the number of cases of dangerous infectious disease reported to the local authorities of the principal towns in England and Wales This table, which is a recent addition to the Registrar General's returns, is the natural and necessary complement to the ordinary tables of mortality from these diseases with which we have been familiar for many years past. The table referred to shows that although small pox was notified in the metropolis in only 43 cases last quarter, as many as 1477 cases of that disease in the aggregate were reported in 80 of the provincial towns included in the return. Although, if these attacks were evenly distributed over the entire English population small pox could not be said to have, as yet, attained epidemic proportions, nevertheless, the excessive incidence of the disease in Lancashire and Yorkshire, in parts of Staffordshire, and in South Wales, has been so pronounced as to cause considerable local anxiety We have selected from the lists of towns in the two counties first mentioned, a continuous infected area, largely composed of industrial communities, and containing a population about equal to that of London. In this area the incidence of attack by small pox last quarter was such that, if continued for a year, the ratio would approximate to one in each thousand of the population. In a group of urban districts in South Wales the proportion of notified cases to population has been only slightly less than this, whilst in a few towns in the Potteries, especially in Hanley and Walsall, the disease has been seriously prevalent and has shown a tendency to spread. Unfortunately, there are no recent returns to guide us as to how far the several populations are protected by vaccination or revaccination against small pox, but apart from this it is certain that in many of the smaller towns, at any rate the inhabitants are but very insufficiently provided with hospital accommodation in case of need. Consequently although in London almost every known case of small pox has hitherto been promptly isolated in hospital, in many of the provincial towns to which we have referred it is greatly to be feared that the majority of the cases will necessarily be treated at home and thus infection will practically be left to spread unchecked, until every susceptible person has been attacked. The town of Keighley, in Yorkshire, the inhabitants of which are well known to entertain peculiar views on the subject of vaccination, has suffered severely during the last three months, as many as 31 attacks having been notified there amongst a population scarcely exceeding 42,000 With the exception of a single case the borough of Leicester which is also notoriously opposed to vaccination, seems to have escaped infection up to the end of December last. We learn however from trustworthy sources that since the beginning of January a considerable number of cases have occurred in that town in consequence as it is stated locally of failure on the part of certain persons to report the earlier cases to the sanitary authority The proportion of unvaccinated children in the Leicester population is, we believe, very large, and although the local authorities are commendably assiduous in their attention to isolation and disinfection we shall be surprised if, sooner or later the town does not become the scene of a terribly fatal small pox epidemic Referring again to the new table (No VIII) in the Registrar General's return, we think that it should be in the hands of every medical officer of health and of every sanitary authority in the country In addition to the ordinary tables of mortality, which, by the way now relate to 179 of the chief English and Welsh towns instead of to the 83 towns for which particulars were formerly given the table now before us gives account of the prevalence of infectious disease (not necessarily fatal) in the above mentioned 179 towns, which may be taken as representative of every part of England and Wales The price of each quarterly return is only a few pence and, having regard to its unique value for preventive purposes, we are surprised that up to the present time its circulation has been so small as it is reported to have been.

A STRANGE ROAD TO ROYAL FAVOUR

HISTORY and tradition afford many curious instances of the unexpected way in which fame and practice have come to the medical practitioner In some cases it has been an act of kindness proffered to some apparently obscure and impoverished patient that has returned a thousandfold in the legacy of an eccentric millionaire, in others the bold outspoken declaration of some unpleasant medical truth has been rewarded by its hearer—conscious of the facts yet never before meeting a medical man who dared to state them—by constant adherence to, and influential recommendation of, the honest and unflinching medical adviser We doubt, however, if a practitioner has ever received a Court appointment through a more curious set of circumstances than those which, if report is true, have raised Dr Botkine to the position of Court physician at St Petersburg The Court physicians in Russia have hitherto been almost exclusively German. It appears that a short time ago, the Tsaritsa suffering from some affection of the throat, the Tsar summoned to her aid a Russian physician named Botkine. This gentleman requested Her Imperial Majesty to remove the wraps from her throat in order (we quote a daily paper) "to apply his ear so as to ascertain what was wrong with the larynx The Empress declined to remove the wraps, remarking that "up to now no doctors who had attended her had made such a request" Dr Botkine, we are told, had no other course open but to retire' The Tsar on hearing an account of the circumstances "made some remarks on the too obedient German physicians and appointed Dr Botkine Court physician" It is to be regretted that we cannot more generally reckon upon pleasing one person if we displease another, as seems to have been the result of Dr Botkine's action in this instance Possibly the Tsaritsa holds, as we do ourselves, that auscultation of the larynx is an unusual step in the case of a slight affection of the throat. At any rate, the result of her refusal will be a pleasant fillip to patriotic medical men in Russia

THE MEDICAL MISSION IN UGANDA

A GREAT misfortune has befallen the missionary hospital at Mengo, Uganda. On Nov 28th in the midst of a tropical storm the hospital was struck by lightning and within a few minutes the whole of it except the isolation wards and the dispensary was destroyed Fortunately no one was killed, though a patient with hip disease suffered a fracture of the thigh owing to a fall as he was being carried out. Most of the patients were able to run out of the burning building, among these were a woman with her newly-born babe, a patient on whom an ovariotomy had recently been performed, and two men who had just undergone radical cure for hernia, and none of them appear to have suffered any harm from their sudden removal into the downpour of a tropical storm. The Baganda, who thoroughly appreciate the benefits of the hospital, made most strenuous exertions to save the patients and the contents, but unhappily much was destroyed A fresh supply of instruments with two new instrument cupboards of plate glass had been unpacked only the day before, and these were nearly all destroyed, but it was found possible to save some of the instruments. Two native helpers succeeded in rescuing two microscopes but did not bring away the higher powers, perhaps thinking that such small objects could not be of any great importance Such an accident is a dire misfortune to a flourishing medical mission such as that at Mengo The medical officers are Dr A R. Cook and his brother, Mr J H. Cook The hospital contained 70 beds and during 1901 had 1070 in patients, and out-patients made 76,840 visits It will thus be seen that a great work was being done in this hospital which was only built in 1899 It is hoped to rebuild it of much less inflammable material, and this is now possible as the railway has reached the lake, and corrugated iron roofing and concrete are comparatively cheap The natives have promised assistance and will provide the 400 000 bricks required and all the timber The new hospital will have accommodation for 100 beds. The commissioner has supplied free of all expense 400 men to assist in building a temporary hospital and some other local help has been obtained, but there is great need of extraneous assistance, both for rebuilding the hospital and for providing furniture, stores, and instruments We feel sure that this assistance will be forthcoming as soon as the merits and needs of the medical mission are known We would make one suggestion Thunderstorms are, we are told, extremely frequent in this part of Uganda, it would be well, therefore to see that the new hospital is provided with lightning rods Doubts have at times been expressed as to the value of missionary efforts, but whatever conclusion may be arrived at with regard to missions generally we do not believe that anyone will deny the vast extent of the good done at medical missions To any medical man who has travelled in the east the need for skilled treatment of the suffering millions is apparent. Diseases readily amenable to our treatment are endured for years and suffering and death are rampant. The work of the medical missionary in relieving this suffering is good and we earnestly hope that it may flourish more and more.

THREE DISTINGUISHED AMATEUR PHYSICIANS

THE above is the title of a paper read by Dr W S Colman before the Medical and Physical Society of St. Thomas's Hospital on Oct 16th, 1902, and reprinted from the *St Thomas's Hospital Gazette* Dr Colman is more courteous in his title than in the commencement of his paper, for after alluding to a predecessor of his who had given an address upon some eminent surgeons he continues, "I am going to deal with some eminent quacks." We must premise that Dr Colman's "amateur physicians" were Charles II., Valentine Greatrakes, and John Wesley Now we consider that a quack is a person who pretends to be able to cure sufferers and who always takes fees for his work or drugs Typical quacks are the Viavi Company and people of the type of "the Revd " Joseph Hope or "Dr " Bell. But we do not think that any one of the three unqualified practitioners mentioned by Dr Colman could be written down simply as a quack. To commence with Charles II All sovereigns of England from Edward the Confessor down to Queen Anne, with the possible exception of William III, considered that they were divinely commissioned by the Almighty to be able to cure "scrofula" by the royal touch. They were, we know, mistaken, but still they were not quacks There was a special service appointed for the "touching," and it was printed in the Book of Common Prayer down to the end of the eighteenth century "There is no doubt," says Dr Colman, "that many cases received benefit. Many of these we should now class as faith healing, but in other cases the good result may well have followed the cessation of the nasty messes which were then in vogue as dressings, since it was considered respectful to keep the part which the king had touched simply covered with a fair linen cloth " Dr Colman, by the way, says that the touch piece which was hung round the patient's neck was nearly always a gold angel. This was so, we believe, up to the end of the reign of Charles I., when the issue of "angels" was discontinued Subsequently special "touch pieces" were struck for the purpose. Although smaller in size (and their size varied) the "types" both of the obverse and the reverse were similar to those of the angel Valentine Greatrakes and John Wesley more nearly deserve the name of quacks than did the Royal "healers." The former was an Irish gentleman who was born in 1601 and who, after the Restoration, was persuaded that there was bestowed on him the gift of curing the King's evil. His method of treatment was by "stroking," and no doubt he relieved certain functional disorders by a combination of massage and hypnotism He charged no fees, but in one case at least, an unsuccessful one, he charged his expenses John Wesley, better known to fame as the founder of the Methodist body was an ignorant practitioner but at least a sincere one. He noted in his missionary journeys that the poor were badly supplied with medical advice and that even when they did obtain it it was grounded upon irrational principles Unfortunately, though having no medical education, he considered himself qualified to write a book upon treatment. Dr Colman allows that he was sound in maintaining that general hygienic treatment was as important as drug treatment, but still his book was full of absurdities, and even dangerous ones, as when he advises four grain doses of perchloride of mercury for fistula. But he made no charge for advice, although he did for his book, and then the profits were given to charity, moreover, if the patient suffered from a complication of disorders he says, "You would do well to apply to a physician that fears God' There was some excuse for both Greatrakes and Wesley Medical science in their day was crude, communication was difficult, and hospitals were few There is no excuse nowadays for the amateur physician, whether he be a parish priest who pretends that nine minims of carbolic acid will cure influenza, or for the inmates of a religious house who sell salves warranted to cure almost anything

THE FOURTEENTH INTERNATIONAL CONGRESS OF MEDICINE

THIS Congress will take place at Madrid from April 23rd to 30th, 1903. The final programme is being prepared The committee invites members to send to the secretary general (Dr A F Caro) at Madrid, as soon as possible, the *titles of* their communications accompanied by an extract (or *résumé* in the form of conclusions if possible), preferably in French All extracts which reach the secretary in time will be printed and sent before the opening of the Congress to the members of the respective sections in order to facilitate discussion during the Congress. In addition to the reduced rates for transport announced in THE LANCET of Sept 6th, 1902, p 693, the following are now announced France, Compagnie de Navigation La Transatlantique, Compagnie Mixte, and Transports Maritimes, 30 per cent, Italy, Italian railways (Mediterranea, Adriatica, and Ferrovie Sicule), 50 per cent, and Norwegian railways, Roumanian railways, and Servian railways, 50 per cent. At Madrid from April 3rd to May 24th special tickets at the same reduction of 50 per cent. will be issued to enable the different towns in the south of Spain (Seville, Granada, &c), to be visited, and it is probable that holders of these tickets will not be obliged to return to Madrid on leaving Spain. Such tickets will only be obtainable at the booking offices at the time of the excursions upon presentation of a card of identity which will be sent to every inscribed member Full programmes of these excursions can be obtained from the Voyages Pratiques, 9, rue de Rome, Paris, or in London at 11, Ludgate hill (Messrs. Seelig and Reed, Limited.) The Service des Logements denies the reports which have been circulated as to the difficulty or impossibility of obtaining convenient lodgings during the Congress. It is true, we are informed, that some of the better known hotels have been besieged with demands, but at Madrid there are a large number of other hotels which, though not so important as the Hotels de la Paix, Rome, Paris, &c., are in no way inferior in comfort and cooking. In addition the committee has secured thousands of lodgings in first-class private houses and many French, German, and other families have offered to receive one or more persons. The Service des Logements can therefore always procure a complete pension from 13 pesetas to 50 pesetas per day. The definite distribution of accommodation will not take place until the month of April, but in order to make sure of being well lodged demands should be made now to Mr. Ulrich Frei, Service des Logements du XIVe Congrès International de Médecine, Madrid. Grand fetes will be organised at Madrid in honour of the members of the Congress. Their Majesties will give a garden party and a general reception at the palace, and the municipality is organising a general fete and probably a special play at the theatre. There will also be a *corrida de toros* in addition to which the different sections are organising special fetes and excursions limited to the members of such sections. The definite programme will be communicated later to all interested. Subscriptions (25 francs, by cheque on Paris) may be addressed to the secretary-general at Madrid, or up to March 20th to the national committees of the various countries. Other particulars will be found in THE LANCET of Oct. 18th, 1902, p. 1070 and Dec. 13th, 1902, p. 1642. The honorary secretaries for Great Britain and Ireland are Mr. D'Arcy Power, 10A, Chandos-street, London, W., and Dr. P. Horton-Smith, 15, Upper Brook-street, Grosvenor-square, London, W.

THE DIAGNOSIS OF NEURASTHENIA.

CONSIDERABLE progress has been made in recent years in our knowledge of neurasthenia as regards its more minute clinical and diagnostic features, and the term as now used possesses a far more precise clinical and neurological significance than it did at the time when Beard of New York recorded his pioneer work on the subject. Professor Emil Kraepelin of Heidelberg has published in a recent issue of the *Münchener Medicinische Wochenschrift* (No. 40, 1902) an important article in which an attempt is made to define clearly the precise character and the limits of neurasthenia in the interests of diagnosis and treatment. Many nervous diseases, says Professor Kraepelin, may, at various stages of their development, simulate neurasthenia. One of the most important of these is general paralysis of the insane at its earlier stages. If a characteristic tremulous and paretic speech and oculo-pupillary disturbances in the form of inequality of the pupils with loss of the direct and consensual light reflexes are present, the co-existence of these with neurasthenic symptoms will point to early general paralysis rather than to neurasthenia proper. Moreover, the occasional occurrence of a maniacal outbreak will serve to distinguish general paralysis from neurasthenia when the diagnosis is for a time difficult. Some forms of dementia præcox—the precocious dementia of adolescents—are, it is pointed out, liable to be confounded with neurasthenia, and this is especially true of the hebephreniac form. The occurrence of positive mental deterioration and the presence of hallucinations will serve to distinguish the latter from neurasthenia. It is important to discriminate between neurasthenia and the degenerative psychoses of adolescence since useless and expensive efforts to obtain a cure by means of hydrotherapy, electricity, and hypnosis need not be made or disappointment incurred if it is known that the case is one of dementia præcox and not of neurasthenia. The development of any one of such symptoms as stupor and mental automatism, muscular hypertonicity, stereotyped oddities of posture and movement, and "negativism" or a passive resistance to everything that is required to be done by the physician or nurse should lead to the suspicion of dementia præcox and not of neurasthenia. There is moreover a group of mental disorders termed by Professor Kraepelin "manic-depressive insanity" which in their prodromal stages may be confounded with neurasthenia. On careful investigation of the clinical history and psychical condition of such patients there will be detected one or more of the following symptoms which sometimes are found in neurasthenia but which in their more intense or extreme developments are present in the group of insanities alluded to—viz., marked weariness or prostration (*Abgeschlagenheit*), incapacity for work, gloomy disposition, hypochondriacal apprehensions, cephalic paræsthesias, insomnia, and disagreeable sensations (including feelings of weight) in the limbs. In cases of insanity amelioration of these symptoms will occur sooner or later, since the psychoses of the "manic-depressive" group are characterised by symptoms which fluctuate considerably and periodically, whereas in neurasthenia such symptoms are more constant and less severe. Neurasthenia is usually, adds Professor Kraepelin, a slowly progressive state which diminishes the patient's capacity for work and mental application. Such patients may be spurred on by relatives to put forth greater efforts to overcome their weakness with the result that the malady invariably becomes aggravated. Many neurasthenic patients are thus driven to take stimulants such as alcohol or morphia, the latter being especially employed owing to the feeling of well-being and of heightened capacity for work and action that it promotes, and eventually such a patient becomes a drunkard or a morphinomaniac. The bodily processes of nutrition are perverted in neurasthenia and there is defective excretion of the waste products of tissue metabolism, while the nerve tissues exhibit a deficiency in the capacity for recuperation of energy during rest or sleep. A limited class of cases of neurasthenia, says Professor Kraepelin, may be the outcome of sudden and severe disturbance of the nervous system such as is caused by traumatism and physical shock as in railway accidents. Sudden fright without physical shock may also be a cause. Some of these cases are of grave prognosis. A large and important group of neurasthenias has a congenital origin and shows a close affinity to hypochondriasis on the one hand and to the insanities of morbid doubt and scruple (*Grübelsucht*) on the other. Those cases which belong to the category of insanity as distinguished from neurasthenia will be manifested by occasional outbreaks of great mental perturbation or of dangerous impulses towards homicide, crime, or suicide. The term "neurasthenia," concludes Professor Kraepelin, is, even at present, used loosely to include many psychoses as above mentioned, but its meaning should be restricted so as to exclude the latter which really belong to the category of mental alienation or insanity. A separation and classification of these types of mental disorder will lead to a more discriminating diagnosis and to a more satisfactory treatment of cases of neurasthenia as well as of these psychoses.

CHOLERA IN EGYPT.

DURING the week ending Jan. 19th there were 4 fresh cases of cholera at Alexandria and 3 deaths. Only one patient remained under treatment at the end of the week. These were all the cases in Egypt during that week and during the preceding week neither attacks nor deaths were registered in Alexandria. With reference to the outbreak at the small village of Khoos-el-Bousa mentioned in THE LANCET of Jan. 10th, p. 115, later information received from Egypt is to the effect that Mr A. T White of the medical department, assistant inspector of Upper Egypt, immediately carried out the sanitary precautions which resulted in the suppression of the epidemic Dr C Goodman and his staff of well borers arrived three days after Mr White During the week ending Jan 26th neither cases of, nor deaths from, cholera were reported throughout Egypt During the previous week four cases of cholera were notified at Alexandria, the last case occurring on Jan. 18th

THE SMOKE NUISANCE IN LONDON

THE Battersea borough council is to be congratulated upon having secured a decision from a police magistrate, Mr. Garrett, against the London, Brighton, and South Coast railway company for permitting a smoke nuisance It arose through the company's practice of firing their engines in a shed or covered way at Victoria road, Battersea, the smoke arising in the process being allowed to escape through funnels in the roof The defence was raised that these funnels were not chimneys within the meaning of the Public Health Act under which the proceedings were taken The magistrate held that they were and expressed himself satisfied that with care and some inconsiderable expenditure of money the nuisance complained of might be satisfactorily abated. He inflicted a small fine which no doubt will have the desired effect.

URÆMIC ULCERATION OF THE DUODENUM

URÆMIC ulceration of the duodenum was first described by Wilks and Moxon in their "Lectures on Pathological Anatomy," published in 1875 They pointed out the frequency with which ulcers of the stomach and duodenum were found in Bright's disease. In the Guy's Hospital Reports for 1893 Dr E C Perry and Dr L E Shaw published an important paper on diseases of the duodenum in which they described a number of cases of ulcer in Bright's disease But the literature of the subject is still very scanty At the meeting of the Société Médicale des Hôpitaux of Paris on Jan. 16th M Ernest Barié and M Paul Delaunay related the following case. A man, aged 52 years, who was addicted to alcohol, was admitted to hospital on August 29th, 1902 15 years before he contracted syphilis For two months he had suffered from breathlessness which at times culminated in attacks of dyspnœa. Digestion was painful and he often vomited his food There were symptoms of pulmonary emphysema and moist râles The urine contained albumin and the legs were œdematous On Sept. 15th pericardial friction was heard, on the 19th it had disappeared. On the 22nd diarrhœa began, and on the 23rd there was abundant enterorrhagia the mattress being soaked with blood On the next day he became comatose and died. The necropsy showed in the brain the remains of an old hæmorrhage and atheromatous arteries. The lungs were emphysematous and œdematous On the visceral pericardium was recent fibrin, the left ventricle was hypertrophied. The whole colon was full of blackish brown blood, but its mucous membrane showed no ulceration The second half of the small intestine was almost empty, the first half contained bile and a little blood, the whole mucous membrane was congested and covered by the viscid adherent mucus which has been described by Treitz in intestinal uræmia. In the duodenum, two centimetres from the pylorus, was an oval ulcer one and a half centimetres in diameter At its base the circular muscular fibres of the intestine were seen. Two centimetres below this ulcer was a smaller one half a centimetre in diameter, and three centimetres further down in the intestine, opposite the ampulla of Vater, were two still smaller contiguous ulcers. The kidneys were granular, Uræmic ulceration of the duodenum generally takes the form of a single ulcer in the first part of the duodenum, but there may be two or more ulcers Sometimes the remaining part of the duodenum has been found intact and sometimes inflamed. The remaining part of the alimentary canal also may be inflamed or present similar ulcers and the glairy adherent mucus mentioned above The symptoms are inconstant. Sometimes a subject of renal disease in apparent health is seized with symptoms of perforative peritonitis Sometimes the symptoms occur during uræmia there may be epigastric pain two or three hours after a meal, vomiting, diarrhœa, melæna, and, much more rarely, hæmatemesis Duodenal ulceration occurs in the most diverse renal diseases—acute and chronic parenchymatous nephritis, interstitial nephritis, ascending nephritis, peri renal phlegmon in renal lithiasis, and renal tuberculosis As to the pathogenesis of the duodenal ulceration several explanations have been advanced. The most reasonable seems to be that defective renal secretion leads to vicarious excretion by the alimentary canal. Hence the stomatitis, dyspepsia gastralgia, vomiting, and diarrhœa of uræmia Why the duodenum should be specially affected seems difficult to explain But Stassano has attempted to show that the duodenum plays a special part in the excretion of poisons. He found that mercury was excreted by leucocytes into the alimentary canal—slightly into the stomach, more into the intestine, and most into the duodenum.

GRASS AND PHOSPHATES

WE have received a copy of the Report upon the Utility of Superphosphate as a Top Dressing for Grass lands issued by the Chemical Manure Manufacturers' Association, the perusal of which we commend to every well wisher of his country The *brochure* is well headed by the celebrated quotation from Dean Swift about 'two blades of grass where one grew before" which deserves to be written in letters of gold. It is pleasant to see the modern agriculturist turning for encouragement to that staunch patriot who was to the last hour of his life passionately devoted to the interests of his fellow men We venture to think that the whole subject of phosphates, which has such an important bearing on the question of food supply is of national importance and has been far too much neglected by thinkers and statesmen. There can be no doubt whatever that the soil of the country has been more or less denuded of this vital constituent, the system of grass farming now prevailing having apparently had much to do with this mistaken policy, some farmers thinking that when land is devoted to grass cultivation little beyond farmyard manure is required, forgetting that each crop makes a heavy demand on the mineral ingredients of the soil. It seems worthy of notice that though nitrogen and potash are of great importance as fertilisers they are to some extent supplied naturally—the nitrogen from the air and potash from the inexhaustible inert matter of the earth—but phosphate once gone can only be replaced by the hand of man The reaction by which superphosphate is made (mono-calcic phosphate) was discovered by the celebrated agriculturist Sir John Lawes, and the manufacture has been principally carried on by the company founded by him ever since with great success and with immense benefit to the country Several efforts have been made "to improve" on superphosphate, but they appear unsatisfactory and ill judged, and superphosphates, the active and available combination of vital phosphorus, in every sense emphatically "holds the field.' An important committee has been recently formed to study the question of food supply in time of war Might we urge on its members to consider the question of artificial manures? Surely it would be easier to import in such circumstances of stress as occur in war time the essential elements of our food supply rather than vast shiploads of the harvested cereals. Besides, the question of work for the unemployed, now so painfully in evidence in the streets, would at the same time be to some extent solved by the increased demand for men to till the land. We cannot, however, go into this, but again commend the study of this pamphlet to our readers. Medical men are not uninterested in this matter The wise and benevolent physician will readily admit that a fertile country and a well nourished nation will tend to what no one wishes more to see than he does himself—the vigour, strength, and happiness of mankind.

THE DISTRIBUTION OF PLAGUE

AS regards Egypt, 7 cases of plague have occurred at the village of Barshoum el Koubra, Toukh District (Galioubieh Province), during the week ending Jan. 25th. Of these 3 proved fatal. Since Nov 19th last no cases have occurred at Alexandria. The reappearance of the disease is probably due to infection which has been lying dormant since last year amongst rats that may have migrated from the village of Sayafa which is almost contiguous and where plague occurred during last summer It is possible that similar outbreaks may occur in or near towns or villages where existed plague last year Such towns and villages are being carefully watched. As regards the Mauritius a telegram from the Governor received at the Colonial Office on Feb 6th states that for the week ending Feb. 5th there were 5 cases of bubonic plague and 4 deaths from the disease. As regards the Cape Colony the medical officer of health for the colony states that for the week ending Jan 17th no case of plague in any human being has been discovered at any place in the colony At the end of the week 1 case remained under treatment at the plague hospital, Port Elizabeth. Plague-infected rats have been found in Port Elizabeth during the week, the last being discovered on Jan. 15th. As regards Hong Kong a telegram from the Governor received at the Colonial Office on Feb 10th states that for the week ending Feb 7th there were 12 cases of bubonic plague and 12 deaths from the disease.

THE MENTAL CHARACTER AND THE TREATMENT OF THE EPILEPTIC

AN interesting symposium dealing with the mental character and treatment of the epileptic is contributed by various writers to the *Journal of the American Medical Association* of Jan. 17th. Dr H. A. Tomlinson, medical superintendent of the Minnesota State Asylum, pointed out that a special condition of irritability and instability of the cerebral cortex characterised all epileptics. Apart from causes acting in infancy, such as the irritation felt during dentition the epoch of puberty often served to disclose an epileptic taint latent in childhood. One of the main sources of danger to the epileptic arose from the conditions of the gastro-intestinal canal. The epileptic as a rule masticated food very slightly and was inclined ' to bolt " it Gastro-intestinal fermentation and indigestion were thus readily set up and the reflex irritation communicated from the stomach *viâ* the pneumogastric nerve increased the excitability of the brain and caused fits ' to appear with undue frequency Psychologically the epileptic was, as a rule, a dullard and few were brilliant Epilepsy tended to dull the finer sentiments and to exaggerate the brutal and primitive instincts of man. The epileptic frequently exhibited low cunning and a lack of moral sense while he was often ostentatiously religious. When states of stupidity or of mental automatism occurred in epileptics after fits the question of responsibility for acts done in such states might be raised, as dangerous acts and crimes were known to be perpetrated by epileptics under such conditions. Professor Daniel Brower of Rush Medical College stated that epileptic children were liable to fits of ungovernable passion Physical training should be the main employment of the epileptic child. All indigestible foods, such as pork, veal, nuts pickles, and pastry, should be forbidden, and stimulants in the shape of beer wine, or spirits should never be allowed. Sugar and salt should be given but little, indeed, it was best to avoid seasoning with salt the food taken by epileptics as the therapeutic effect of the bromides given as medicine was enhanced thereby The bowels should be kept open regularly with aperients such as blue pill and black draught A little salol given from time to time for intestinal asepsis was valuable. Dr William Spratling medical superintendent of the Craig Colony for Epileptics, New York, pointed out that to get the best results of treatment three kinds of institutions were required—viz., first, asylums or hospitals for insane epileptics, secondly, industrial colonies for selected cases of epileptics who were feeble minded or imbecile, and, thirdly, similar colonies for all epileptics who were not insane. In practice the last two classes of cases could be housed and treated in one institution with success At Craig Colony where this was the custom it was found that 50 per cent of epileptics could do remunerative work. Dr F S. Pearce spoke regarding the excellent results of hydrotherapy and of the administration of digitalis in epileptics with a feeble heart and circulation Dr Frank Norbury cited six or seven cases of nocturnal epilepsy, in which the fits occurred only at night and which appeared to benefit by the mixed treatment of borax and bromide. Professor Charles K. Mills of Philadelphia regarded the industrial colony as the ideal home for the epileptic. He found a mixture of bromide with conium or sometimes with digitalis to be most useful Dr Spratling said that among his cases of epilepsy at Craig Colony 15 per cent were due to alcoholism in the parents, 14 per cent. to tuberculosis, and 10 per cent. to insanity in the parents while 16 per cent. had epileptic parents A strong hereditary origin could thus be traced in 55 per cent of cases of epilepsy

STRANGE SUICIDES IN BED

IN a leading article in THE LANCET of Oct. 5th, 1901, p 921 we drew attention to the peculiar methods which persons have adopted for putting an end to their lives. Cases occur from time to time in which the fatal act is committed whilst the victim of self murder is in bed. Mr Troutbeck recently held an inquest as to the death of a patient named Joseph Green who was in King's College Hospital A lad who was a patient in the same ward noticed that Green was acting strangely There were movements under the bed clothes as if Green were stabbing himself in the abdomen, and he subsequently pulled the clothes up level with his eyes and seemed to be injuring his face. On examination a wound eight inches long was found in the abdomen and an incision seven inches long on the left side of the neck. He died the same night. Suicide by hanging has occasionally been accomplished in bed. A case is recorded of a girl who thus killed herself by merely securing a cord to the frame of the bedstead and then leaning back in bed, the tension so produced being sufficient to cause the necessary constriction of the neck. Two other girls who were sleeping in the same bed were not awakened. Another strange case is that of a woman who laid herself on a bed attached the running noose of a rope round her neck, tied the other end of the rope to a heavy piece of metal which she threw over the iron bar of the bed frame, and was thus strangled. A singular case is recorded of suicide by throttling A woman, aged 40 years, suffering from melancholia, who had previously made several attempts to commit suicide, was found dead crouched in bed with both hands compressing her throat, the elbows were supported on the knees and the back leaned against the wall. There were marks of her finger nails on both sides of the throat. Suicide by smothering is also rare, but an instance occurred in France in which a woman placed herself under the bed-clothes after desiring her little child to bring all the cushions, clothes, and other similar articles that were in the room and to pile them on top of her The child did so and some hours afterwards the woman was found dead. A woman in an asylum, aged 38 years, was found early one morning dead in bed with part of a stocking protruding from her mouth, death having resulted from suffocation No noise or disturbance was noticed by other patients who slept in the same ward. At the inquest a long stocking was exhibited which with great difficulty had been removed from the air passages As a final example of strange suicides whilst in bed we may refer to the case of a maid servant who was found dead. The body lay at full length, with the head turned a little on one side, the arms crossed over the trunk, and the bed clothes pulled up smoothly to the chin. Under the clothes, on her right side lay a corked phial which was wrapped in paper and contained three and a half drachms of hydrocyanic acid. From the size of the bottle it was probable that four and a half drachms of the poison had been swallowed and the question arose, could the girl after taking this quantity of the poison have corked the bottle, wrapped it up, and adjusted the clothes? A man was suspected of having murdered her, but as several cases were quoted at the trial showing that in other instances of undoubted suicide similar acts had been performed the prisoner was acquitted. Such cases afford considerable difficulty to jurists and no general lines can be laid down for their elucidation, each case must be considered in detail as it occurs.

ANTE-NATAL RIGOR MORTIS

AN interesting query has been addressed to us by one of our correspondents. Does rigor mortis occur in healthy, full term, still born children? Our readers will not be surprised to learn that this interesting question of ante-natal pathology has been very fully discussed by Dr J W Ballantyne.[1] He has collected and analysed some 25 cases of ante-natal rigor mortis. Although Casper in his text-book on Forensic Medicine stated that he had never seen an instance of cadaveric stiffening in the premature fœtus, yet the occurrence of such a condition is beyond dispute at the present day and in the more recent text-books of forensic medicine it is admitted to occur According to Dr Ballantyne the first case of ante natal rigor mortis is probably that of Chowne,[2] which was originally recorded in THE LANCET Since this cases have been published in our columns by Dr R. Boxall[3] and by Dr B Jones.[4] There is, indeed, nothing in the surroundings of the fœtus in utero incompatible with the occurrence of this condition, and the presence of the liquor amnii only produces a state of things analogous to that met with in the case of a person found drowned, and, indeed, ante-natal rigor mortis has been conclusively demonstrated by J Tissot to take place in fœtal kittens. It has further been pointed out by Dr Ballantyne and others that there are no essential differences between the cadaveric rigidity of the still born infant and that occurring at other ages. It might naturally be expected that differences would be found in the degree of severity of the stiffening due to the varying time of the occurrence of the death of the fœtus and to its cause which must of necessity vary very largely in different cases That the condition has not been more frequently observed is, no doubt, due to the fact that it has not been looked for, and to the further fact that it may have occurred and passed off in utero In the case of patients dying gradually rigor mortis comes on very early and passes off very quickly and this may well be so in some instances of fœtal death That rigor mortis does occur in utero has been proved by its presence in cases treated by Cæsarean section. The case recorded by Dr Boxall is one of great clinical interest, because the course of the labour was apparently prejudicially influenced by the undue rigidity of the fœtus interfering with the normal mechanism of delivery The subject is one of great interest and further observations upon it cannot fail to prove of value both from a clinical and medico legal point of view since, as Dr Ballantyne truly points out the occurrence of rigor mortis alone does not suffice to show that the infant was born alive in the legal sense of the term

IMMIGRANTS INTO THE UNITED STATES

DURING the year 1902 551,645 aliens landed at the port of New York. This breaks all records since 1819 when the authorities began to register immigrants from the Old World into the United States The nearest approach to the total for 1902 was in 1882, when 476,086 foreigners were landed at Castle Garden, and 1892 comes next with 445,989 This would indicate that the tide of immigration reaches its height every 10 years. In 1901 408,040 aliens passed through the Ellis Island Bureau and 341,712 in the previous year In 1854 319,233 immigrants arrived at New York and 213,736 in 1849 The percentage of deportations for mental or physical infirmity or poverty was also greater during last year than in any previous year The records show that out of 36,600 arrivals during December 900 were excluded, while for the same month in 1901 there were only 255 exclusions out of 29,685 arrivals. Of the total number landed during 1902 5533 were ordered to be deported, liability to become a public charge being the chief cause of exclusion. The increase in the number and percentage of deportations is due to the more rigid examination of immigrants which has been a feature of the present commissioner s administration. The work in connexion with the strict inspection has been so severe that in the past month four inspectors have handed in their resignations The various steamship companies were forced to exercise a stricter supervision over the class of steerage passengers who arrived in their vessels and to be more careful in making out their manifests, as fines ranging from 10 to 1000 dollars per steamship were inflicted upon the companies guilty of careless or improper manifestation.

CEREBRO-SPINAL RHINORRHŒA AFTER FRACTURE OF THE SKULL.

DISCHARGE of cerebro spinal fluid from the nose is a rare symptom of fracture of the base of the skull In the *Liverpool Medico Chirurgical Journal* for October, 1902, Mr F C Larkin has pointed out that this discharge may exist some time after the fracture when the patient has apparently recovered, a comparatively unrecognised fact. He relates the case of a man, aged 21 years, who on Nov 19th, 1901, fell a distance of 15 feet on his face, lost consciousness, bled from the nose, and vomited. He was removed to hospital where concussion of the brain was diagnosed. He regained consciousness in a couple of days and then complained of deafness On the fourth day there was left purulent otitis which lasted about a week. After another week the only symptoms were slight deafness and occasional headaches As he felt quite well he would not remain in bed and went home on Dec. 10th On the 12th he appeared among the out-patients and said that he was quite well, but his handkerchief was saturated with moisture and he repeatedly wiped his nose. He had first noticed the discharge on the 9th when he sat up in bed for the first time after the accident. On being made to stoop clear watery fluid flowed from the nose, principally from the left nostril. With difficulty he was persuaded to re-enter the hospital. Next morning he complained of severe frontal headache and the flow had stopped. The temperature was 102° F and he began to be heavy and stupid. Unconsciousness and symptoms of meningitis followed and death took place on the twenty seventh day after the fall The necropsy showed meningitis, several fine cracks in the frontal bone, and a slit in the basi sphenoid three-quarters of an inch long and one sixteenth of an inch wide, through which a fine probe could be passed into the nose. The posterior end was close to the pharyngeal end of the left Eustachian tube Mr Larkin thinks that the deafness and otitis were probably due to pressure on the Eustachian tubes from swelling of the parts. He refers to another still more remarkable case previously recorded by him in which fracture of the frontal bone extending into the fronto-ethmoid region resulted from a bicycle accident. The patient recovered from the injury and resumed work but was much annoyed by a watery discharge from the nose This suddenly stopped six weeks after the accident. The patient seemed quite well but occasionally complained of frontal headache. Nine months after the accident he died from meningitis Only one other case of cerebro-spinal rhinorrhœa after fracture of the skull in which the diagnosis was verified by necropsy has been recorded In this one, reported by Bosworth, there was a fracture of the cribriform plate of the ethmoid and death occurred on the eighteenth day after the injury In neither of the cases recorded by Mr Larkin was there any attempt at union of the fracture through the thin scaly bones He suggests that cerebro-spinal rhinorrhœa often occurs after fracture of the skull and is unnoticed. Patients with fractured skull being kept very quiet in the recumbent posture the escape is probably small and the fluid is swallowed The treatment which he recommends is to keep the nose as sterile as possible and the patient recumbent in bed in the hope that protective adhesions may form before infection occurs. Tillaux has described a case in which discharge of cerebro-spinal fluid from the nose resulted from the forcible removal of polypi and continued off and on for six years until the man died from convulsions.

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[1] Teratologia, vol. ii. April 1895 p 96.
[2] THE LANCET May 1st, 1841 p 199
[3] THE LANCET July 12th 1884 p. 60
[4] THE LANCET Oct 19th 1895 p. 1020

THE EFFECT OF AGITATION UPON THE MICROBE

MOST germicides are more or less poisonous to the human organism and therefore the destruction of bacteria in food and drink by the addition of powerful antiseptics is not available. It is well known, however that certain physical agencies exert a germicidal action, as, for example, light, electricity, and heat, and to these must be added the curious influence of mechanical shock. According to a number of interesting experiments on this point there can be little doubt that the vitality of lower organisms is influenced by agitation, even to the extent of total destruction. Thus by submitting to violent agitation certain bacterial cultures it has been found that the number of germs diminished to less than one-tenth of that originally present. Ultimately, by prolonging the treatment, the liquid was entirely freed from active germs and failed to develop further organisms, even when placed under favourable conditions By adding some glass beads to the bacterial culture the effect was more prompt, the liquid rapidly becoming sterile. In another experiment bacterial cultures were allowed to stand in an engine-room of a large manufactory in which an incessant vibration was produced by the strokes of the engine with the result that after four days the vitality of the germs was completely destroyed, while in the control samples which were left in a quiet place the germs, it was found, had retained their activity It would appear from this interesting experiment that minute vibrations have the power of hindering the growth of micro-organisms as well as violent shocks, while if either treatment be continued the germs at length die. The reason why the vitality of the cell is thus cut short is not quite clear but apparently the cells cohere and form a palpable powder Further experiments in this direction would be very interesting with the view of determining as to how far the process would be effectual in regard to the destruction of microbes in food. At the present time the oyster trade would welcome such a method could it be shown that it effectually destroyed the bacilli of the colon series in the oyster without disturbing its structure or spoiling its flavour In which case the guaranteed "agitated native" would be in brisk demand. The shaking, however, would have to be severe, no less than 180 reversed movements per minute over a distance of 15 inches being necessary

AN EXEMPLARY SENTENCE FOR CRUELTY

A CASE of child farming which was recently decided at the Middlesex Quarter Sessions is remarkable in more ways than one. The accused were persons living in comparative comfort, a retired clerk, his wife and daughter, with a total income of about £160 a year They had under their care no fewer than nine children, the eldest aged seven years and the two youngest 10 and 11 months respectively With most of these children sums of money varying from £10 to £30 had been received The two infants were kept in a rush portmanteau without either bedding or covering save a linen cloth The weather when the "baby farm" was broken up was bitterly cold. The other children were very insufficiently clad and slept on the floor without bed or covering All were half starved and ravenously hungry with the exception of one who was stated to be the daughter's child and appeared to be comparatively well-cared for In the face of such facts as these a conviction was inevitable, and we are not sorry that it was accompanied by the exemplary sentence of three years' hard labour in the case of each offender The children were taken into the workhouse. The credit of discovering this den of wickedness and misery, and of tracking its proprietors under changes of name and residence till their apprehension, belongs to the National Society for the Prevention of Cruelty to Children. There was a more or less overt attempt made on the part of the defendants in this trial to impute an excess of zeal to the agents of the society, but without success. The presiding justice had fortunately no sympathy with this view , on the contrary he took occasion to note the absolute fairness which had marked the proceedings of the society in all cases conducted by it which had come under his observation

FOOD POISONING AND EPIDEMIC DIARRHŒA

SEVERAL important questions bearing on the mutual relations of food poisoning and epidemic diarrhœa engaged the attention of the Epidemiological Society at its two last meetings held on Dec 12th, 1902, and Jan. 16th, 1903. Professor Sheridan Delépine introduced the subject with a paper on the Bearing of Outbreaks of Food Poisoning upon the Etiology of Epidemic Diarrhœa After defining epidemic diarrhœa as an infectious disease affecting many persons at the same time, more especially during the hot season and in populous districts, where it caused a high mortality among children, he said that the bacteriology of it was far from being settled. Most observers, following Escherich and Hueppe, believed that the bacillus coli communis was the most important factor in its causation, but Finkler and Prior ascribed it to a spirillum, Klein to the bacillus enteritidis sporogenes, Holst to various streptococci, and Baginski to bacillus lactis aërogenes After giving particulars of various outbreaks which he had carefully examined, especially those of milk diarrhœa at Manchester in 1894 and of pork pie and sausage poisoning at Derby in 1902 he said that the general conclusions at which he had arrived were that epidemic diarrhœa was caused by bacteria of the bacillus coli group, the least virulent being those that most resembled the bacillus coli communis of Escherich and the most virulent being those that most closely approximated to the bacillus enteritidis, especially the bacillus enteritidis of Gaertner The most dangerous were consequently those that acidified or coagulated milk or imparted an offensive odour to it and the obvious precautions to be observed were cleanliness, consumption as early as possible refrigeration to 4° C, or sterilisation by heat. Dr Arthur Newsholme opened the discussion and expressed the opinion that while on the one hand milk might be contaminated on the cowkeeper s premises or during transit to the consumer and might in this way give rise to sudden and widespread epidemics, yet, on the other hand, in the numerous sporadic cases which occurred it was *far more probable that it became* contaminated at the home of the consumer, especially among the urban poor The storage of milk and other food in living and sleeping rooms, and the opportunities for its infection by flies which are just come from a privy or other fæcal collections were amply sufficient to account for the prevalence of autumnal diarrhœa and sporadic typhoid fever

THE RECENT INCIDENTS IN THE GRENADIER GUARDS

WE have received several communications concerning what is known as the "Guards Scandal" inviting an opinion on this deplorable matter from a medical point of view The medical bearings of the case seem to us remote but this appears not to be the opinion of some of our readers Firstly it is suggested that the corporal injury inflicted by the illegal tribunals of junior officers might produce some of the terrible results that are known to have followed upon flogging in the army in the olden days In spite of one passage in Admiral Cochrane's shocking letter published in the *Times* on Tuesday last we do not think it at all probable that actual physical harm—harm, that is of the sort that might be serious to health—has ever been done in the course of the extraordinary and degrading ritual practised upon each other by the junior officers of the Grenadier Guards Acute mental suffering resulting, perhaps, in grave impairment of the efficiency of the victims to discharge their duties as officers, may have occurred, and upon such a condition a breakdown in health may have followed, but we do not suppose that any physical injury directly due to violence can be proved to have taken place Secondly, we have been asked to consider the possibility of a perverted sexual impulse playing a part in the disciplinary code of the Grenadier Guards We consider the suggestion a completely ridiculous one, and, were it not that certain so called humanitarians are sure to begin yelling of flagellation and Sadism, we should not mention the matter We do so now only to laugh at it. But the bare fact that such notions can enter educated brains shows that the incidents must now be thoroughly sifted and explained, and that punishment must be meted out with a strong hand to the true offenders, even though innocent persons have to suffer for an evil system or individuals in high posts have to pass out of official life We have lately in our columns discussed certain of the reasons that contribute to the difficulty which our country has in obtaining an efficient army A few more such stories as those that are now rife concerning the Grenadier Guards will leave us with no officers at all Therefore the stories must be made the subject of rigorous scrutiny Students of high education and elaborate training are not likely to enter upon a career where, even while they are successful in the performance of the duties which their country expects from them, they may have to submit to a disgusting penal code, yet these are exactly the kind of men whom recent events show to be the officers that we want. Again, those fortunate youths of rank and position whose desire it has hitherto been to be officers in our cavalry regiments, and whose personal prowess no one who remembers the episodes of our struggle with the Boers can deny, will certainly not desire commissions any longer We regard the situation as a most serious one, calling for an immediate, full, and fearless investigation

EPSOM COLLEGE

His Royal Highness the Prince of Wales has consented to take the chair at the festival dinner to be held this year, at a date shortly to be announced, in aid of the funds of the Royal Medical Benevolent College. The interest taken by the Royal Family in the affairs of Epsom College is thus again manifested, for some 50 years ago the buildings of the College were opened by the Prince Consort, who was accompanied by a little boy his eldest son, our present King

BURIAL GROUND SITES

ALTHOUGH both the testimony of experience and the tendency of certain bacteriological investigations seem to show that the danger to be anticipated from a properly managed graveyard is not so great as was once believed, it is eminently desirable that sites for such places shall be selected with the greatest circumspection. Not only must attention be given to the possibility of the pollution of water supplies whether public or private, but the probability of the insuction of polluted ground air into houses which have not been properly protected against such insuction must be carefully guarded against. Moreover, it cannot be contended that the proximity to an inhabited house of a burial ground which is in actual use is a matter of indifference to the landlord or occupier of such house Although experience may have shown that houses have been built up to the boundaries of existing burial grounds, and that it is difficult to detect any detrimental effect upon the health of the occupiers of such houses, it seems to us that the provisions of the Public Health Interment Act of 1879 which enact that in the absence of the written consent of the owner, lessee, or occupier of a house, no part of a cemetery shall be constructed nearer to such dwelling than 200 yards, should, on the grounds of public health and equity, be duly observed The margin provided for is not a very onerous one and it can hardly be contended that the exigencies of interment are at present so pressing as to call for legislation which shall dispense with this very reasonable provision Certainly, were we the possessors or occupiers of a house and a medical officer of health were to press the establishment of a burial ground within, say, 100 yards of such house, we should do our best to convince the justices that the step would be an illegal one There would seem to be no justification for a sanitary authority, the duty of which it is to see that the Public Health Acts are observed, to attempt, without extremely strong and altogether exceptional reasons, to run counter to such statutes, and certainly the Public Health Interment Act was enacted largely as a public health measure. A sanitary authority which makes light of its obligations may find the public quick to follow the example.

THE Lettsomian Lectures of the Medical Society of London will be delivered by Dr H. Radcliffe Crocker on Feb 16th and March 2nd and 16th, their subject being "The Conditions which modify the Characters of Inflammations of the Skin and their Influence on Treatment." The lectures will commence at 9 P M

THE Lord Mayor and the Lady Mayoress of London will on Monday Feb. 16th at 3 P M , open the 30 additional beds at the Royal London Ophthalmic Hospital towards the maintenance of which a grant has been made by King Edward's Hospital Fund for London.

THE Hunterian Oration of the Royal College of Surgeons of England will be delivered in the theatre of the College on Saturday, Feb. 14th, at 4 P M., by the President, Sir Henry G Howse

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THE anniversary dinner of the Medical Society of London will be held at the Whitehall Rooms Hotel Métropole, on Saturday, March 7th, at 7 30 P M

THE FIRST REPORT OF THE DEPARTMENTAL COMMITTEE APPOINTED TO INQUIRE INTO THE VENTILATION OF FACTORIES AND WORKSHOPS[1]

THIS report serves to mark a considerable advance in knowledge regarding the practical application of methods of ventilation and describes an apparatus which has been designed for the rapid determination of the amount of carbon dioxide (carbonic acid) which is present in the air These two points are perhaps the most important features of the book, but a very large amount of information on various other important matters is to be found scattered through its pages, and much of this material will be very useful to those who write text books on hygiene and questions concerning the public health generally

The departmental committee responsible for the report was appointed by Sir Matthew White Ridley in July, 1900, when he was Secretary of State for the Home Department. It consists of two members only, Dr John Scott Haldane F.R.S , and Mr E H. Osborn, engineering adviser to the Chief Inspector of Factories The report itself is short, consisting only of three pages and there are three appendices which deal respectively with (1) the results of examinations of ventilation of factories and workshops , (2) the conditions of efficient ventilation , and (3) the method for the quantitative determination of carbonic acid in the air of factories and workshops.

The apparatus which has been devised by Dr. Haldane for the rapid determination of the amount of carbonic acid contained in a specimen of air is fully described and there are three illustrations, two of which were drawn up by Mr Pendock. By its use an analysis may be completed, it is stated in about four minutes and those who have had the practical experience of making such determinations with the apparatus formerly in use will welcome any improvement which may be made It should be added that the new apparatus is not bulky and that it is easily portable. Another instrument has been devised to facilitate the extraction of specimens of air contained in small vessels and illustrations are given of bottles fitted with glass stoppers and provided with elastic bands and labels By means of these appliances it will be easy for factory inspectors to take a number of specimens of air and for the analyst to carry out a large number of analyses in a short time It must be confessed that the amount of air operated on is very small, not more than 25 cubic centimetres, and therefore any slight error of reading would make a great difference when calculated to 10,000 volumes of air And we observe that Dr Haldane obtains decidedly lower results for normal air than are given at any time in the classic researches of Pettenkofer, Risler, Saussure, Angus Smith, Marcet, and others.

The results of examinations of the air of factories and workshops which are given in Appendix I. (pp 7-90) show clearly enough that the present condition of things is by no means satisfactory The experiments recorded were carried out in the case of a vast number of trades, clothing factories, both English and Jewish, tailoring workshops dressmaking and boot workshops, laundries, cabinet and upholstering works, bakeries printing offices and stationery factories, engineering and file cutting factories woollen and cotton mills (humified and non humified) Some of the places examined are briefly described in the tables which are given, and it is not unworthy of note that some of the worst are in the rural parts of England. This point cannot be dwelt upon and a single example must suffice. A boot workshop in Gloucestershire was found to be ' a stuffy little place with less than the statutory (minimum of) 250 feet per person. Dark, dingy, and wretched, smell of oil, rough earth floor, very dirty, air stagnant and obviously foul." Analysis of the air showed that it contained 23 4 volumes of carbonic acid per 10,000, the corresponding amount in the outside air being 3 0

The account given of the conditions necessary for efficient ventilation (Appendix II., pp 93-144) is of extreme value. It commences by recording analyses of air in towns and in the country and then deals in detail with the nature of the impurities contained in the air of factories and of workshops, impurities from persons, from "lights" from dust and from fumes, and particulate matter given off in special processes of manufacture. The influence of the various impurities on the composition of the air is considered in detail. For purposes of description ventilation is divided into (1) natural ventilation, (*a*) without special openings, (*b*) through special openings , and (2) ventilation by fans The information on the latter subject, which is clearly and concisely given, will prove of great service to manufacturers who have at heart the good of their workpeople. The more general use of fans in large factories is greatly on the increase, and in cases in which large numbers of people are present in a small space their use is now universally appreciated The advantages of the method—which are, briefly that a practically unlimited amount of air can be introduced, that the supply is under control, that the incoming air can be warmed, moistened, or filtered should occasion require—are fortunately becoming matters of common knowledge. There is, however one fact established in the report which has hitherto not obtained the attention which it deserves It has of course been generally known that ventilation is carried out in no small measure through the walls of buildings, but the fact that a very large proportion of the fresh air is introduced in this way is by no means a fact which is fully appreciated Its importance is great and we have often insisted on this subject, especially when dealing with experiments on ventilation made on the continent and the teaching of that eminent architect and sanitary reformer M. Emile Trélat. It makes it at once evident why a detached house has the advantage of a semi detached house and why the end house of a row is better than one which has houses on each side. These things have been long recognised by the observant, although the reason of them was not generally understood The results of a series of experiments on the introduction of air through the wall of a room are given in the report and the information derived from them may come as a surprise to many people. It is hardly necessary to say that too much importance should not be given to a single series of experiments and the subject is certainly worthy of further investigation under varying conditions For example, the nature and thickness of the walls of the room the solidity or hollowness of the walls, the presence or absence of paper and of paint and the composition of the paper—all these things will undoubtedly be found to affect the result.

The recommendations given to the Secretary of State by the departmental committee are five in number and are as follows —

1 That the Secretary of State should prescribe for all classes of factories and workshops not otherwise specially dealt with that the proportion of carbonic acid in the air at about the breathing level and away from the immediate influence of any special source of contamination, such as a person or light shall not (except on very foggy days when no tests should be made on account of the vitiated state of

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[1] London, 1902 (Cd 1302) Eyre and Spottiswoode

the outside air) rise during daylight or after dark when only electric light is used beyond 12 volumes of carbonic acid per 10 000 of air and that when gas or oil is used for lighting the proportion shall not exceed 20 volumes after dark or before the first hour after daylight the only exception to this rule to be in cases where the extra carbonic acid is produced in other ways than by respiration or combustion as in breweries &c.

2. That in the case of cotton cloth factories with artificially humidified air the occupier should have the option of coming under the regulation just mentioned instead of remaining under the existing regulation

3 That inspectors of factories should inform employers of the results of any official analyses of the air in their factories or workshops should give notice that the ventilation is deficient to any employer in whose factory or workshop the above proportions have been found to be exceeded and at the same time supply so far as practicable information as to the nature of any defect noticed and that legal proceedings should not be taken against an employer unless after a reasonable interval following such notice, the stated proportion is found on an average of two or more samples taken in different parts of the room to be again exceeded by one volume or more and he is unable to show that he has taken measures reasonably calculated to secure the requisite ventilation

4 That arrangements be made by the factory department of the Home Office for the analysis by a specially qualified person or persons of samples of air collected by inspectors (see Appendix III) and that any analysis on which a prosecution immediately depends shall have been performed by such qualified person or persons.

5 That arrangements be made for inspectors of factories to have the use when desired of a properly tested portable apparatus for estimating on the spot the proportion of carbonic acid in air

It may be seen from what has been said that the report deserves careful consideration. In regard to the recommendations which are given *in extenso* it must suffice to say that the first is open to very grave objection , the last two, it will be seen, are devoted to recommending the general use of Dr Haldane's apparatus

PUBLIC HEALTH IN BOMBAY

IN his annual report for the year 1901[1] Dr J A. Turner executive health officer of the city of Bombay, gives much information highly valuable from the point of view of urban sanitation and public health. A report in which he dealt with the occurrences of the first quarter of 1901 was published a considerable time ago and was reviewed at some length in THE LANCET of Sept. 14th, 1901, p 746, chiefly with reference to proposals which he had made for an improved sanitary administration of the city The present report with its statistical appendices consists of 96 closely printed pages and is illustrated with four coloured diagrams. Bombay is built on an island which has an area of about 22 square miles and part of which is below the level of high water mark, so that drainage presents considerable difficulties Increase in sickness during, and immediately after, the rains, which occur in June July, and August, is chiefly due to the dampness of the soil and moisture of the atmosphere. In most of the houses of the poorer classes the floors are of mud and cowdung and the people sleep on the ground. The cold weather season, extending from December to March, is the period of highest mortality, the hot weather from March to June the lowest, and from June to November the period of seasonal increase in the mortality In the cold weather when the people are obliged to sleep indoors, over crowded and in a vitiated atmosphere, plague spreads rapidly, while the cold air easily affects them when exposed to it, causing diseases of the respiratory system The population according to the census of 1901 was 776 006, the proportion of males to females being 161 9 to 100 The principal divisions of the population were as follows Hindus, 522,947 , Mussulmans, 155,121 , Parsees, 46,231 , Jews, 5357 , Native Christians, 29,645 , Eurasians, 3258 , and Europeans, 12,273.

The number of births registered during the year was 13,520, giving a birth rate of 17 42 per 1000 The number of deaths during the year exclusive of stillborn, was 59,495, giving a death rate of 76 6 per 1000 Of late years the death rate has fluctuated considerably and has increased very much since plague acquired a footing in the city Thus the rates per 1000 were 29 0 in 1891, 30 5 in 1895 58 3 in 1897, 63 2 in 1898, 68 1 in 1899, 96 5 in 1900, and 76 6 in 1901. The number of deaths from zymotic diseases was 30,593 giving a zymotic death rate of 39·4 per 1000 The detailed list shows that 18,736 deaths were due to plague, 7266 to remittent fever, 1560 to relapsing fever, 1341 to dysentery, 514 to puerperal fever, and 198 to cholera. The total deaths among Europeans were 189, the detailed list showing that of these 18 were due to enteric fever, 14 to ague and remittent fever, 10 to plague, 29 to diseases of the nervous and circulatory system, 20 to diseases of the respiratory system, and 46 to diseases of the digestive system. The deaths are also classified according to the occupation of the deceased—whether engaged in, or belonging to, the service of the imperial, local, or municipal governments, the army or navy, the learned professions, domestic work, commerce, agriculture, and so on , for some unexplained reason one of the nine sub headings under "learned professions" specifically includes dancers, jugglers, snake-charmers, and billiard room keepers.

During the greater part of the year the control of all plague measures was under the Government, as in the previous year, but in October Dr Turner took over the duties of supervision in addition to his own and the control of plague is now in the hands of the Health Department The mortality from this disease began its seasonal rise in December, 1900, reached its maximum in February, 1901, and then declined There were 21,006 attacks and 18,736 deaths from plague during the year, as against 17,913 attacks and 13,285 deaths during the previous year, and the increase was felt in all the communities except the Europeans, among whom there were only 10 deaths, as against 11 in the previous year The mortality from plague was highest on Feb 26th, when 214 deaths were registered. The measures adopted for controlling the disease were the provision of camps for those willing to evacuate plague stricken houses, disinfection by washing the rooms with perchloride of mercury and phenol, and fumigation with sulphur Compulsory removal to hospital was not practised. The disease was of a very virulent type, the mortality in hospitals varying from 79 to 91 per cent The preparation of Lustig's anti plague serum was continued throughout the year at the municipal laboratory and patients at the Arthur road Hospital were treated with it

Dr Turner devotes several pages to an enumeration of the defects existing in the sewerage system of the city and in the methods of dealing with excrement and refuse. He also makes a variety of suggestions for their improvement. On the subject of the administration of the Health Department he says that during the past three years the investigation into the cause and control of all epidemics of infectious disease has not been vested in the Health Department, and that a health officer's ardour must be damped when his more important and interesting work is transferred to others unqualified in any way for the position. The work of the Health Department has, however, now reverted to its proper channel. During the year he was called upon to submit a report on the reorganisation of the department, and his report was directed chiefly towards—(1) an improved sanitary inspection , (2) a better class of inspectors , (3) a better system of refuse removal , (4) a more complete system of registration of births and deaths and notification of infectious diseases , (5) inspection of food, drugs, and milk supply , (6) a laboratory for analysis of food and drugs and chemical and bacteriological examination of water and pathological products , (7) a municipal analyst , and (8) ten municipal dispensaries. Progress has been made in the carrying out of these recommendations Of the other points in which improvement is required the chief are (1) hospital accommodation , (2) medical relief , (3) house drainage , (4) housing of the poor and over crowding , and (5) control of milch cattle stables by the Health Department with registration of all cow keepers and milk sellers The Arthur road Hospital is at present the only accommodation provided by the municipality for cases of infectious disease other than plague and the expenditure on it is relatively small, being only Rs.40,000, or £2660, per annum Dr Turner recommends that the accommodation should be increased and made sufficient for the reception of 100 patients In order to counteract the prejudices which the poorer classes have against hospital treatment he proposes to issue a circular inviting them to visit Arthur road Hospital so that they may see for themselves how well the sick are treated. We presume that these visitors would be admitted only to the parts of the institution occupied by convalescents fit for discharge. The highest mean monthly shade temperature recorded at Bombay Observatory was 86 6° F for May The total rainfall was 75 32 inches, of which 72 33 inches fell in June, July, and August.

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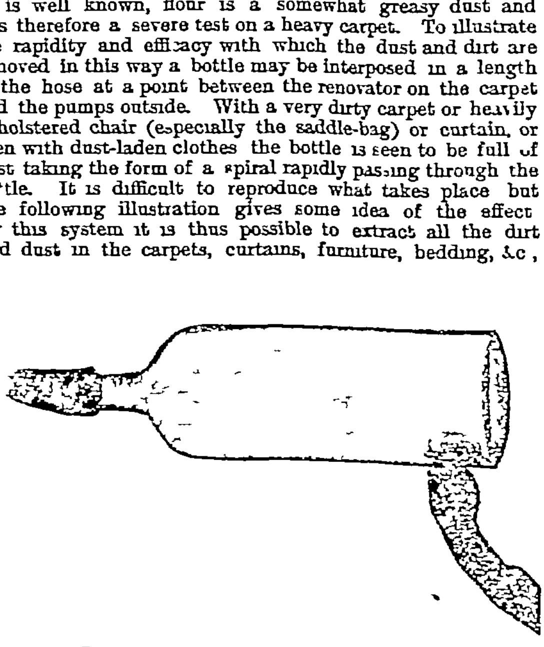
[1] The issue of this report is not so belated as might be inferred from the fact that it only reached us about a fortnight ago, Much time is sometimes taken up in the preparation of such documents for publication and in submitting them to various official departments. Moreover the statistical returns of patients admitted into the Arthur road Hospital are brought down to May 1902.

CLEANING BY VACUUM

THERE are few surely who are not averse to the ordinary annual house-cleaning process commonly called ' spring cleaning," at any rate during its progress, however pleasant and comfortable the results may be. "Spring cleaning,' in fact, entirely disturbs the routine of a household and the occupant, unless he is lucky enough to be able to go away during the process, is put to manifold kinds of inconvenience and discomfort. Therefore a process by which it is proposed to reduce this inconvenience to practically *nil* whilst the work of cleaning is done effectively is certain to be welcomed by a very large section of the community But the vacuum cleaning process deserves attention not on account of its being expeditious only but because it removes dust, and therefore septic matter in such a way as to render their complete destruction ultimately possible The process is simple enough and, indeed, such that it is a little astonishing that it has not been suggested and applied before. When spring cleaning is to be done a machine is sent to the house provided with a pair of vacuum pumps actuated by an oil or electric motor which serve to maintain an "exhaust ' of several pounds to the square inch. Varying lengths of hose are connected with this exhaust' and terminate in so-called "cleaners" or "renovators" which consist of tubes flattened out at the end into a kind of long slit. The renovator" is rubbed up and down the carpet or the cloth coverings of seats or chairs from which it rapidly sucks out all the dust. The result is quite remarkable. The dust is extracted not only from the surface but from the body of the carpet also so that at the end of the process not the slightest cloud of dust can be detected on beating the material. On sprinkling the carpet with flour, rubbing it well in so that it disappears to view, the vacuum renovator will be found to remove every particle As is well known, flour is a somewhat greasy dust and it is therefore a severe test on a heavy carpet. To illustrate the rapidity and efficacy with which the dust and dirt are removed in this way a bottle may be interposed in a length of the hose at a point between the renovator on the carpet and the pumps outside. With a very dirty carpet or heavily upholstered chair (especially the saddle-bag) or curtain, or even with dust-laden clothes the bottle is seen to be full of dust taking the form of a spiral rapidly passing through the bottle. It is difficult to reproduce what takes place but the following illustration gives some idea of the effect By this system it is thus possible to extract all the dirt and dust in the carpets, curtains, furniture, bedding, &c , *in situ* Carpets need not be taken up and need not be sent away, or curtains, furniture, or bedding and the whole operation in a 10-roomed house need not occupy more than eight hours, the time taken depending upon the amount of dirt it is possible to remove and upon the nature of the furniture



Bottle during the application of the renovator"

It is remarkable, as it is important from a sanitary point of view, that during this process dust or dirt is not raised in the room, for exhaustion is proceeding the whole time, the air of the room is constantly being changed, and it will be found when the cleaning process is over that the shelves, the mantelpiece, or the cover of the piano will be free from all signs of deposited dust This result alone constitutes a great advance on other methods which at their best remove the dust from one place only to scatter it in another Such, at any rate, is largely the result of sweeping Far from producing any deteriorating effect upon the carpet it improves it by restoring the pile and its colour. The restoration of the colour, especially of a dirty oriental carpet, is very marked and is seen the moment the renovator is applied. In a similar way the dust may be removed from the walls by means of a special cleaner which consists of a brush of horse shoe shape provided with an exhaust tube in the centre. The dust and dirt rapidly travel along the hose to the exhaust cylinder of the machine where they are deposited upon a screen.

An idea of the amount of dust which this method is capable of removing will be gained from the following results of its application to certain of the theatres and hotels of London. The carpets, curtains, and upholstery of the Royal Camden Theatre yielded no less than 408 pounds of dust by this method , similarly the Kennington Theatre yielded 382 pounds and the Coronet Theatre, Notting hill gate, 300 pounds, the Midland Hotel, St. Pancras, 196 pounds, the Savoy Theatre 82½ pounds, the coffee room and smoking room of the Junior Army and Navy Club and smoking room carpet 68 pounds, a restaurant carpet from the Carlton Hotel 46 pounds, a railway-carriage on the London and North Western Railway 4¼ pounds, the tea room and corridors of the House of Commons 25 pounds, and so on. We have seen the process at work in a music hall and in a private dwelling house and in both cases the results were very striking and the demonstration was very satisfactory The value of this method from a sanitary point of view is self evident, for the dust is entirely removed without scattering and is then collected for subsequent incineration. According to Mr Stanley Kent of the Clinical and Bacteriological Research Laboratory University College Bristol, the following organisms were isolated from a specimen of dust removed by this process—proteus vulgaris and other forms of proteus, bacillus subtilis, streptococcus (several forms), staphylococcus pyogenes aureus, staphylococcus pyogenes albus, diplococcus (several forms) sarcina flava, micrococcus tetragenus, micrococcus prodigiosus and the following moulds mucor mucedo, penicillium glaucum, and a red yeast. A sample of house dust removed by this process and taken by ourselves at a demonstration gave the following results on analysis organic matter 35 30 per cent. , moisture, 5 30 per cent. , and mineral matter, 59 40 per cent. Under the microscope starch cells, human hair, cotton fibre, &c , were easily detected. The mineral matter contained common salt potassium carbonate with some lithium carbonate (probably from tobacco ash), sand, clay, silica, alumina, and iron. The process is not costly considering the thorough way in which the work of cleaning is done and having regard to the inconvenience which it avoids and the expense which it saves, due, under existing methods, to removing carpets and replacing them, picking mattresses to pieces, and so forth The satisfactory removal of dust and dirt from the interior of a house has long been a troublesome matter, though sanitation demands that it should be regularly done, and this process it seems to us deals with it in a much more scientific way than has hitherto been possible. This method of cleaning by vacuum is being developed by the Vacuum Cleaning Co , Limited, of 25 Victoria street, Westminster, London, S.W

ASYLUM REPORTS

London County Asylum Hanwell (Report for the year ended 31st March 1902)—The average number of patients resident during the year was 2537 comprising 957 males and 1580 females The admissions during the year amounted to 480—viz 297 males and 183 females Of these 396 were first admissions Dr R. R Alexander, the medical superintendent, states in his report that 19 per cent of the male admissions and 4 per cent. of the female were cases of general paralysis. As the result of careful inquiry into the histories of patients it appeared that about 80 per cent. of the general paralytics had had syphilis As to the causes of the mental disorders among the patients admitted alcoholic intemperance was found in 32 per cent. of the males and 16 per cent. of the females The corresponding figures for males were 15 per cent. in 1898, 20 per cent. in 1899, and 25 per cent. in 1900, and for females the figures were 8, 12, and 13 per cent respectively Dr Alexander emphasises the "increasing share alcohol has directly or indirectly in the production of insanity, especially in the case of the men," and adds that if due allowance were made for the wilful concealment of a history of intemperance by relatives and friends of the patient the etiological frequency of alcoholism would be higher than the above. A hereditary predisposition to insanity was ascertained in 18 per cent of the males and 30 per cent of the females The number of patients discharged as recovered during the year amounted to 163—viz, 79 males and 84 females, or 6 4 per cent of the average number resident The deaths during the year amounted to 212—viz., 119 males and 93 females—or 8 3 per cent as calculated on the same basis Of the deaths, five were due to renal disease, seven to colitis, 12 to epilepsy, 13 to inflammation of the lungs, 19 to cardiac disease, 20 to senile decay, 21 to pulmonary and other forms of tuberculosis, 62 to general paralysis of the insane, and the rest to other causes The general health of the institution had been good There had been two cases of enteric fever and two small outbreaks of dysentery The latter could not be traced to overcrowding or any other sanitary defect. "Judging by its high infectivity, its tenacious hold on a ward, its stubborn resistance to treatment, its heavy mortality in the broken down, and its marked tendency to recur without any abatement of its original infectivity, I am disposed to believe that our dysentery of recent years is of a different variety from the sporadic dysentery that occasionally figured in our sick and death returns prior to 1895" There were no serious casualties in the institution during the year A male patient while out on trial made a murderous attack on his wife, who ultimately recovered, though for a time her life was despaired of During the epidemic of small pox in London all precautions, including vaccination of patients and restriction of visits from relatives, were adopted and the results were quite satisfactory The Commissioners in Lunacy state in their report that the asylum continued to be maintained in very good order, that the dormitories and bedding were scrupulously clean, that the patients were neatly dressed and orderly in habits, and that the medical case books were well kept. The committee of management states in its report that alterations and improvements according to a scheme approved by the London County Council in 1894 were completed, the net expenditure having amounted to £66,840 The expenditure on ordinary repairs and alterations during the year was £7689

London County Asylum, Bexley heath (*Report for the year ended March 31st, 1902*) —The average number of patients resident during the year was 1893, comprising 942 males and 951 females. The admissions during the year amounted to 1175, including 502 males and 673 females. Of these 1145 were first admissions. Dr T E. K Stansfield, the medical superintendent, states in his report that the year has been one of great pressure and "the asylum is now fully occupied. The villas which constitute one of the leading features of this asylum have now been in occupation under sufficiently varying conditions of season, weather, and temperature to justify one in giving a definite opinion as to the value of this system of housing a large proportion of the insane, as compared with the most recent 'barrack' system typified in the other part of the asylum, and I have no hesitation in pronouncing in the strongest terms in favour of the former" The number of cases among the admissions suffering from advanced age and physical decrepitude was unusually large, 206 patients, or 17 5 per cent, being over 60 years of age Pediculosis to a greater or less extent existed in 23 per cent of the admissions Evidences of syphilis were made out in 131 cases, or 30 per cent., among the males, and in 61, or 19 per cent, of the females. "The form of insanity most frequently associated with syphilis is general paralysis. 79 males and 20 females were admitted suffering with this disease (general paralysis) and of these 59 males (74 6 per cent.) and 11 females (55 per cent.) had undoubted evidence of syphilis." Alcoholic intemperance was present in 181 of the admissions, comprising 130 males (30 7 per cent.) and 51 females (16 per cent.), the form of intemperance being heavy drinking or secret "tippling" in small quantities for many years The number of patients discharged as recovered during the year amounted to 202—viz., 98 males and 104 females—or 9 5 per cent of the average number resident. The deaths during the year amounted to 281, including 157 males and 124 females, or 14 8 per cent, as calculated on the same basis. Of the deaths six were due to epilepsy, nine to bronchitis, 10 to renal disease, 15 to colitis, 21 to pneumonia, 27 to phthisis and other forms of tuberculosis, 32 to cardiac disease, 89 to general paralysis of the insane, and the rest to other causes The general health of the institution has been good, with the exception of colitis, "which disease has, I fear," adds Dr Stansfield, "become endemic here." Influenza was prevalent in January and February The well has yielded a constant supply of excellent water and the farm crops are reported as particularly good The Commissioners in Lunacy state in their report that the patients were orderly, neat, and tidy, that the dormitories and day rooms were in very good condition, and that the medical case-books were admirably kept The committee of management states in its report that the whole institution is fitted with telephones and fire alarms and lighted with electricity The expenditure on alterations, repairs, and improvements amounted to £4606 during the year

Montrose Royal Asylum (*Report for the year ended May 14th, 1902*) —The average number of patients resident during the year was 690, comprising 317 males and 373 females The admissions during the year amounted to 189—viz., 86 males and 103 females Of these 152 were first admissions. Dr John G Havelock, the medical superintendent, states in his report that a large number of the patients who were admitted were "in very frail bodily health, some in the last stages of incurable disease and many others in a state of senile decay with the vital functions rapidly wearing out" There seems to be an increasing tendency in the poorer classes, adds Dr Havelock, to send such cases to an asylum rather than to attempt to manage them in their own homes until the end comes, with the result that asylum accommodation is taxed to its utmost The prejudice against asylums is gradually disappearing under the influence of modern methods of asylum management and the custom of sending to asylums idiots half witted youths, disorderly inebriates, restless dotards, and persons who are the victims of drug habits is on the increase, and causes the appearance of a rapid growth in lunacy among the population The number of patients discharged as recovered during the year amounted to 74, or 10 7 per cent. of the average number resident. The deaths during the year amounted to 95—viz., 35 males and 60 females, or 13 7 per cent. as calculated on the same basis Of the deaths three were due to epilepsy, four to cardiac disease, six to cancer, eight to pulmonary and other forms of tuberculosis, nine to exhaustion from mania and melancholia, 14 to lobar pneumonia, 15 to general paralysis of the insane, 24 to senile decay, and the rest to other causes "An outbreak of influenza in the winter months was followed by various complications which carried off a number of feeble senile patients, causing the death rate to be higher than the average of recent years" The erection of a new villa for female patients has been started and it is hoped to complete the building during the year 1903 The whole of the institution is now furnished with electric lights. The Commissioners in Lunacy state in their reports that the general condition of the patients was highly satisfactory, that the dietary was adequate and judiciously arranged that the wards and rooms were in excellent order and that the medical case-books and registers were carefully and correctly kept The committee of management states in its report that the profit on the farm and garden account was £414 during the year, that a system of telephones has been fitted throughout the building that a villa for male patients has been completed and is now occupied, and that the villa for female patients will be completed in a short time

MEDICINE AND THE LAW

Injury by Nervous Shock

IN an action tried before Mr Justice Bigham at the Devon assizes the plaintiffs, a husband and wife, were tenants of a house and the defendants were making excavations at an adjoining site This they did with the result that the house occupied by the plaintiffs after showing signs of subsidence, fell in ruins. The female plaintiff, finding that her home was apparently threatened with destruction, hurried out to a relative near by to ask what she should do leaving her children behind her As she was returning the actual collapse took place with the result that, knowing that her children might be buried in the ruins, she sustained a very severe fright and shock with consequent injury to her health. The children had, as a matter of fact, been removed to a place of comparative safety and had not suffered. After a legal argument the judge left the following questions to the jury whether the shock sustained by the plaintiff was due (1) to fear for her own personal safety, or (2) to fear for the safety of her children, or (3) to fear for the safety of herself and her children The jury found that it was due to the last of these alternative causes, and in reply to a further question also found that the shock had produced personal injury Upon this the judge directed them that the plaintiff was not entitled to damages in respect of the shock caused by fear for the safety of her children, but that they might be awarded to her in respect to the shock caused by fear for her personal safety, and he told them to apportion the damages accordingly with the result that the plaintiffs obtained a verdict for £250 The question of liability for fright resulting in nervous shock and actual injury to health is a more or less open one in the eye of the law The Privy Council has held in a case that came from the colonies that an action will not lie for negligence where the damages arise from mere sudden terror occasioning a nervous or mental shock, but unaccompanied by any physical injury on the ground that injury to health in such circumstances cannot be considered as a natural consequence of the negligence. This decision was given where a woman, who had had a hair's breadth escape from being run over by a train at a level crossing through the negligence of the defendant railway company's servant had a miscarriage and otherwise suffered severely in her health as the result of her fright. It has however, not always been followed, and in Ireland it has been apparently considered and disregarded by the Exchequer Division, as well as upon other occasions and there is a recent judgment of Mr Justice Wright in an English case in which the question of injury by terror was gone into upon slightly different facts. In this instance a man was held liable who had made a woman ill by giving her fictitious bad news of her husband by way of a 'practical joke" Legal questions must always interest medical men in cases with regard to which medical evidence is of paramount importance so far as the facts are concerned. When once the principle is established from a legal point of view that injury to health may be the natural consequence of an act of negligence without any physical impact of anything injurious taking place the question of whether the injury was in fact due to the act alleged must in each case be one for medical evidence only Mr Justice Bigham's direction to the jury at Exeter is no doubt likely to come under review in London later It will be seen that it involves a little more than previous judgments by establishing a distinction between the fright of the plaintiff on her own account and her fear for her children. The jury seem to have been equal to the occasion and to have decided questions upon which only a jury would be asked to adjudicate. They cannot have derived much assistance from medical witnesses in determining the exact proportion of the plaintiff's ill health which was caused by her fear for herself as distinct from her fear for her children and in assessing the damages upon that basis

The Drink Question

Reference was made in THE LANCET of Feb 7th at page 331 to the letter of a Great Yarmouth magistrate to the *Times* calling attention to the unusually large number of licensed houses in that town in proportion to the number *of its inhabitants.* In case any who read the note in question may have wondered how public houses contrive to pay their way where they have so many competitors it will be instructive to quote from the *Western Morning News* of Feb 7th some of the evidence given before the borough bench at Exeter in opposition to the renewal of the licence of a "hotel there. The witness was a soldier recently returned from South Africa. He said that he came home from the front on August 6th. On Coronation Day (August 9th) he received £5 from the depot and went to the Blackamoor's Head, where he cashed the cheque and had a drink. He then went to the Albion and remained there from about 8 30 in the morning until 9 or 10 o clock in the night and went home penniless. He must have thrown or given away a lot of his money About a fortnight afterwards he received £30 from the Government It lasted about a week and most of it was spent at the Albion." In cross examination he stated further that "since he had been home he had received as much as from £60 to £70 from the depot. He had two months sick furlough and was drunk nearly the whole of the time He had never been summoned for drunkenness ' He is perhaps an extreme instance, and the means put suddenly at his disposal were unusually large, but if men of the working-class, when enabled to do so, are ready to ruin themselves in health and pocket like this young fool upon "sick furlough" it cannot be a matter of surprise that a large amount of disease want, and crime should be attributable to the abundant temptations put in the way of the weak and self indulgent It is also only to be expected that fresh applicants for licences should always be forthcoming wherever there is any population likely to supply them with customers.

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN 76 of the largest English towns 9220 births and 5164 deaths were registered during the week ending Feb 7th The annual rate of mortality in these towns which had been 17 5, 20 1, and 18 1 per 1000 in the three preceding weeks, further declined to 17 9 per 1000 last week In London the death rate was 17 6 per 1000, while it averaged 18 0 in the 75 other large towns. The lowest death rates in these towns were 7 4 in Bournemouth 8 0 in East Ham 9 8 in York, 11 1 in Willesden, 11 3 in Hornsey, 11 9 in Grimsby, 12 0 in Devonport, 12 2 in Halifax, and 12 4 in Barrow in Furness, the highest rates were 22 3 in Bootle, 22 4 in Bury 22 5 in Bradford 23 0 in Newcastle-on Tyne, 23 3 in Liverpool, 23 5 in Wigan, 24 2 in Preston, 24 8 in Tynemouth, and 31 3 in Hanley The 5164 deaths in these towns last week included 512 which were referred to the principal infectious diseases, against 450, 539, and 493 in the three preceding weeks, of these 512 deaths 162 resulted from whooping-cough, 92 from measles, 88 from diphtheria, 70 from diarrhœa, 51 from scarlet fever, 35 from 'fever' (principally enteric) and 14 from small pox. No death from any of these diseases was registered last week in Portsmouth, Bournemouth, West Bromwich, Wallasey, Barrow in Furness, Halifax, York, or Stockton on-Tees, while the highest death rates from the principal infectious diseases were recorded in Tottenham, Great Yarmouth, Hanley, King's Norton, Wigan, Salford, Rotherham Hull, and Merthyr Tydfil. The greatest proportional mortality from measles occurred in Wigan, Manchester Salford Newport (Mon.), and Merthyr Tydfil, from scarlet fever in St Helens and Wigan, from diphtheria in Hanley Coventry, and Salford, from whooping-cough in Croydon Tottenham, Great Yarmouth, Hanley, Grimsby Stockport Preston, Rotherham, Tynemouth, and Merthyr Tydfil from fever in Rochdale, and from diarrhœa in Walsall. 14 deaths from small pox were registered in the 76 towns last week, of which seven occurred in Liverpool and one each in Birmingham, Bootle, Bolton, Leeds, Sheffield, Rotherham, and Hull The number of small pox patients under treatment in the Metropolitan Asylums hospitals, which had been five four and seven at the end of the three preceding weeks, had declined again to six at the end of last week, four new cases were admitted during the week, against two, none, and six in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday Feb 7th was 1941, against numbers decreasing from 2528 to 2017 on the six preceding Saturdays, 189 new cases were admitted last week, against 193, 227 and 227 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London which had been 310 411 and 355 in the three preceding weeks, further declined last week to 315 and were 93 below the corrected average number The deaths in London directly attributed to influenza numbered 39 last week, against 34 43 and 25 in the three preceding weeks The causes of 60, or 1 2 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner All the causes of death were duly certified in West Ham, Leicester, Manchester, Leeds, Newcastle on Tyne and in 41 other smaller towns, the largest proportions of uncertified deaths were registered in West Bromwich Birmingham, Liverpool, St Helens, Bury, Sheffield, Stockton on Tees, and South Shields.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 23 4, 24 6, and 21 3 per 1000 in the three preceding weeks, rose again to 21 7 per 1000 during the week ending Feb 7th, and was 3 8 per 1000 in excess of the mean rate during the same period in the 76 large English towns The rates in the eight Scotch towns ranged from 13 9 in Perth and 18 2 in Dundee to 24 8 in Leith and 27 0 in Greenock The 711 deaths in these towns included 28 which resulted from whooping cough, 19 from diarrhœa, 16 from measles, seven from diphtheria, six from "fever," four from scarlet fever, and not one from small-pox. In all 80 deaths resulted from these principal infectious diseases last week, against 102 and 81 in the two preceding weeks. These 80 deaths were equal to an annual rate of 2 5 per 1000, which was 0 7 per 1000 above the mean rate last week from the same diseases in the 76 large English towns The fatal cases of whooping-cough, which had been 52 and 32 in the two preceding weeks, further declined last week to 28, of which 22 were registered in Glasgow, two in Dundee, and two in Leith The deaths from diarrhœa, which had been 21 and 13 in the two preceding weeks, rose again to 19 last week, and included six in Glasgow, five in Dundee, three in Aberdeen, two in Edinburgh, and two in Greenock. The fatal cases of measles, which had been 11 and 20 in the two preceding weeks, declined again last week to 16, of which nine occurred in Aberdeen, three in Leith, two in Glasgow, and two in Edinburgh. The deaths from diphtheria, which had been six, five, and seven in the three preceding weeks, were again seven last week and were all registered in Glasgow The fatal cases of "fever," which had been eight and five in the two preceding weeks, rose again last week to six, of which five occurred in Glasgow The deaths from scarlet fever, which had been five, five, and four in the three preceding weeks were again four last week, and included three in Glasgow The deaths referred to diseases of the respiratory organs in these towns, which had been 183 and 173 in the two preceding weeks, further declined last week to 134, and were 39 below the number in the corresponding period of last year The causes of 21, or nearly 3 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN

The death rate in Dublin, which had been 30 0, 28 1, and 24 8 per 1000 in the three preceding weeks, rose again to 26 4 per 1000 during the week ending Feb 7th During the past four weeks the death rate has averaged 27 3 per 1000, the rates during the same period being 18 4 in London and 18 9 in Edinburgh. The 192 deaths of persons belonging to Dublin were 12 in excess of the number in the preceding week, and included nine which were referred to the principal infectious diseases, against 10 in each of the two preceding weeks, of these, three resulted from diphtheria, three from whooping cough, two from scarlet fever, one from diarrhœa, and not one from small pox, from measles, or from "fever" These nine deaths were equal to an annual rate of 1 2 per 1000, the death rates last week from the principal infectious diseases being 1 9 in London and 0 8 in Edinburgh The deaths from diphtheria, which had been four, three, and one in the three preceding weeks, rose again last week to three The fatal cases of whooping cough also numbered three last week, none having been recorded in either of the two preceding weeks The deaths from scarlet fever which had been two and three in the two preceding weeks, declined again to two last week. Only one fatal case of diarrhœa occurred last week, against six in the preceding week. The 192 deaths in Dublin last week included 40 of children under one year of age and 56 of persons aged 60 years and upwards, these numbers were respectively 13 and six in excess of those recorded in the preceding week Seven inquest cases and two deaths from violence were registered, and 67, or more than a third, of the deaths occurred in public institutions The causes of 10, or more than 5 per cent., of the deaths in Dublin last week were not certified.

Vital Statistics of London during 1902.

Complete statistics relating to sickness and mortality during the year 1902 in the City of London and in each of the metropolitan boroughs are summarised in the accompanying table. The mortality figures relate to the deaths of persons actually belonging to the various metropolitan boroughs, and are the result of a complete system of distribution of deaths occurring in the institutions of London among the various boroughs in which the deceased persons had previously resided. With regard to the notified cases of infectious diseases in London during last year it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 9 9 per 1000 of the population, estimated at 4,579 110 in the middle of last year In the three preceding years the rates had been 9 3, 7 7, and 8 9 per 1000 respectively Among the various metropolitan boroughs the lowest rates were 5 3 in Kensington, 5 7 in Hampstead, 6 4 in Paddington and in Chelsea, 6 9 in the City of London, and 7 0 in Hammersmith, the highest rates were 11 3 in Holborn, 11 4 in Hackney and in Deptford, 12 0 in St. Pancras, 12 7 in Stepney, 13 0 in Southwark, and 13 4 in Bethnal Green The prevalence of small pox last year was greatly in excess of that recorded in any other recent year, the number of new cases notified during the year was 7798 against 29, 88, and 1702 in the three preceding years. This disease was proportionally most prevalent in Holborn, Shoreditch, Bethnal Green, Stepney, and Poplar The number of small pox patients admitted into the Metropolitan Asylums hospitals during last year was 8455, against 1788 in the preceding year, only 14 remained under treatment at the end of the year, against 666 at the end of 1901. The prevalence of scarlet fever during the year under notice showed a slight diminution as compared with the preceding year, the number of new cases notified being 18 258, against 18,094, 13,809, and 18,390 in the three preceding years Among the various metropolitan boroughs scarlet fever was proportionally most prevalent in Southwark, Battersea, Camberwell, Deptford, Greenwich, and Lewisham During last year 15 133 scarlet fever patients were admitted into the Metropolitan Asylums hospitals, against 13 641, 10,734, and 14,959 in the three preceding years, the number of cases remaining under treatment, which had been 2797 2460, and 3080 at the end of the three preceding years, had declined again to 2327 at the end of last year The prevalence of diphtheria during last year showed a marked decrease from that recorded in the preceding year, 10,735 new cases being notified, against 12,154 in 1901. The greatest proportional prevalence of this disease occurred in Fulham, St. Pancras, Hackney, the City of London, Wandsworth, and Lewisham The Metropolitan Asylums hospitals contained 927 diphtheria patients at the end of last year, against 1343 and 1369 at the end of the two preceding years, the number of new cases admitted, which had been 8777 and 9090 in the two preceding years, declined again last year to 7988 Enteric fever showed a slightly increased prevalence last year, the number of cases notified being 3412, against 3195 in the preceding year, among the various metropolitan boroughs this disease was proportionally most prevalent in Shoreditch, Bethnal Green, Stepney, Poplar, Southwark, and Bermondsey The number of enteric fever patients admitted into the Metropolitan Asylums hospitals during 1902 was 1806, against 1835, 2074, and 1480 in the three preceding years, 210 cases remained under treatment at the end of last year, against 406 403, and 195 at the end of the three preceding years Erysipelas was somewhat more prevalent last year than in the preceding year, the highest proportional prevalence of this disease was recorded in St. Marylebone, Hackney, Finsbury, Shoreditch, Bethnal Green, Stepney, and Southwark. The 312 cases of puerperal fever notified during the year showed an excess of 61 over the number recorded in 1901, of these 312 cases 22 belonged to Stepney, 21 to Wandsworth, 19 to Islington, 17 to Hackney 17 to Lambeth, 15 to Kensington, 15 to Battersea, and 15 to Camberwell.

During the year under notice the deaths of 80,105 persons belonging to London were registered equal to an annual rate of 17 2 per 1000, against 19 5, 18 6, and 17 1 per 1000 in the three years, the average rate in the 10 years 1892–1901 was 18 8 per 1000 In the various metropolitan

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING THE YEAR 1902

(*Specially compiled for* THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1902.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.											Deaths from all causes	Death-rate per 1000 living	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever	Diphtheria.*	Typhus fever	Enteric fever	Other continued fevers.	Puerperal fever	Erysipelas	Cholera.	Total.	Annual rate per 1000 persons living	Small-pox.	Measles.	Scarlet fever	Diphtheria.*	Whooping cough.	Typhus fever	Enteric fever	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living			
LONDON	4,579,110	7796	18,258	10,735	4	3412	47	312	6634	1	46,101	9·9	1314	2360	660	1159	1876	—	537	4	2470	10,280	2·21	80,105	17·2	139
West Districts																										
Paddington	146,107	113	364	222	—	83	1	14	148	—	945	6·4	20	83	9	33	23	—	13	—	75	256	1·74	2166	14·6	133
Kensington	177,005	99	378	186	—	83	4	16	189	—	954	5·3	11	93	21	19	21	—	19	—	81	265	1·49	2708	15·3	140
Hammersmith	114,210	100	353	182	—	61	1	7	118	—	812	7·0	13	77	7	23	27	—	11	—	64	222	1·90	1695	16·3	143
Fulham	143,102	94	563	420	—	74	—	7	124	—	1281	8·8	13	168	19	61	66	—	9	—	129	464	3·13	2488	17·1	148
Chelsea	74,018	39	204	133	—	35	—	7	60	—	478	6·4	7	67	8	13	14	—	6	—	40	155	2·09	1354	18·0	146
City of Westminster	180,800	232	475	285		133	1	6	144	—	1276	6·9	30	42	15	29	34	—	20	1	64	234	1·28	2353	13·1	136
North Districts																										
St. Marylebone	132,145	164	414	237		86		14	219	—	1134	8·4	24	97	14	27	23		15	—	67	267	1·98	2455	18·3	107
Hampstead	83,743	20	255	98	—	40	1	7	67	—	484	5·7	3	15	7	10	10	—	11	—	12	68	0·81	920	10·8	87
St. Pancras	235,621	360	1210	836	—	107	2	12	258	—	2884	12·0	81	113	40	107	113	—	44		83	590	2·46	4460	18·9	147
Islington	337,270	302	1380	881	—	203	5	19	364	—	3214	9·4	54	110	40	104	169	—	48		98	614	1·80	6034	18·4	133
Stoke Newington	51,700	51	202	89	—	22	—	1	62	—	427	8·1	8	5	5	6	14	—	4	1	18	61	1·17	702	13·4	115
Hackney	221,920	425	883	721	—	184	6	17	320	—	2556	11·4	70	78	15	61	92	—	31	—	96	443	1·98	3378	15·0	119
Central Districts																										
Holborn	58,535	210	203	117	—	40	—	7	85	—	671	11·3	40	30	8	10	27	—	6	—	19	140	2·44	1266	21·3	129
Finsbury	100,487	211	302	240	—	83	6	7	165	—	1094	10·7	36	83	15	38	75	—	9	—	69	325	3·18	2334	22·9	164
City of London	26,598	39	83	97	—	15	1	—	32	—	267	10·3	7	10	1	10	4		2		2	36	1·38	530	20·4	128
East Districts																										
Shoreditch	118,004	442	250	233		160	4	9	175	—	1263	10·6	76	88	8	25	70	—	22		130	425	3·53	2488	20·7	174
Bethnal Green	129,665	516	529	324		132	—	10	256	—	1766	13·4	64	59	19	33	89	—	14	—	61	339	2·59	2747	20·8	165
Stepney	300,551	1387	1070	780	1	297	—	22	447	—	4004	13·1	260	164	30	85	199	—	34	—	237	1009	3·31	6205	20·6	147
Poplar	169,214	630	670	469	—	210	—	10	191	—	2180	12·7	93	69	21	67	99	—	27	—	110	470	2·77	3326	19·3	164
South Districts																										
Southwark	206,825	618	1098	639	—	103	—	10	372	—	2730	13·0	78	164	42	63	114	—	23	—	169	653	3·10	4496	21·4	168
Bermondsey	130,218	224	600	283	1	130	1	6	96	—	1341	10·1	31	155	18	30	69	—	13	—	89	405	3·06	2763	20·8	165
Lambeth	305,102	362	1367	490	—	219	11	17	337	1	2704	9·0	60	83	48	63	118	—	38	1	170	581	1·89	5384	17·4	127
Battersea	171,401	180	893	294	—	98	—	15	200	—	1687	9·7	27	101	24	18	63	—	10	—	97	340	1·98	2618	15·0	127
Wandsworth	241,810	131	1079	768	1	146	1	21	243	—	2379	9·7	25	97	23	67	64	—	20	—	97	402	1·62	3300	13·5	127
Camberwell	262,775	356	1300	603	1	140	—	15	309	—	2910	10·9	93	121	41	84	110		31		146	606	2·23	4345	16·3	138
Deptford	111,677	146	649	268	—	76	—	9	150	—	1294	11·4	33	74	19	20	41	—	13	1	76	277	2·44	1873	16·5	138
Greenwich	98,013	102	403	183	—	68	—	6	122	—	944	9·5	22	41	6	15	20	—	9	—	48	160	1·60	1532	15·4	138
Lewisham	132,432	88	604	401	—	60	1	14	112	—	1340	10·0	12	27	19	45	65	—	9	—	64	241	1·79	1853	13·6	125
Woolwich	119,550	236	278	252	—	91	1	11	97	—	936	7·7	38	40	9	23	61	—	13	—	61	235	1·93	1837	15·1	125
Port of London	—	14	4	5	—	24	—	—	—	—	47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup

boroughs the lowest death rates last year were 10 8 in Hampstead, 13 4 in Stoke Newington, 13 5 in Wandsworth, 13 6 in Lewisham, 14 6 in Paddington, and 15 0 in Hackney and in Battersea, and the highest rates were 20 6 in Stepney, 20 7 in Shoreditch, 20 8 in Bethnal Green and in Bermondsey, 21 3 in Holborn, 21 4 in Southwark, and 22 9 in Finsbury Taking the five groups of boroughs the rates of mortality were 16 0 in the West, 16 2 in the North, 16 6 in the South, 20 4 in the East, and 22 0 in the Central To the principal infectious diseases 10,280 deaths were referred during the year, of these, 1314 resulted from small-pox, 2360 from measles, 560 from scarlet fever, 1159 from diphtheria, 1876 from whooping cough, 537 from enteric fever, four from simple continued fever, and 2470 from diarrhœa, but not one from typhus fever These 10,280 deaths were equal to an annual rate of 2 21 per 1000, against 2 49, 2 23, and 2 22 in the three preceding years Among the various metropolitan boroughs the death rates from these principal infectious diseases ranged from 0 81 in Hampstead, 1 17 in Stoke Newington, 1 28 in the City of Westminster, 1 38 in the City of London, 1 49 in Kensington, and 1 59 in Greenwich, to 3 06 in Bermondsey, 3 10 in Southwark, 3 13 in Fulham, 3 18 in Finsbury, 3 31 in Stepney, and 3 53 in Shoreditch. The 1314 fatal cases of small pox exceeded the average by 1250, of these 1314 deaths 734 were registered during the first quarter of the year and 507 during the second quarter, among the various metropolitan boroughs the greatest proportional mortality from this disease occurred in Holborn, Shoreditch, Bethnal Green, Stepney, and Poplar The 2360 deaths referred to measles were 366 below the average number in the 10 preceding years, this disease was proportionally most fatal in Fulham, Chelsea Finsbury, Shoreditch, Southwark, and Bermondsey The 560 fatal cases of scarlet fever were 300 below the corrected decennial average, the highest rates from this disease were recorded in St. Pancras, Finsbury, Southwark, Lambeth, Camberwell, and Deptford The 1159 deaths from diphtheria were only slightly more than half the corrected average number, among the various metropolitan boroughs this disease was proportionally most fatal in Fulham, St. Pancras, Finsbury, *the City of London, Poplar, and Lewisham* The 1876 fatal cases of whooping cough showed a decline of 285 from the average number in the ten preceding years, the greatest proportional mortality from this disease occurred in Finsbury, Shoreditch, Bethnal Green, Stepney, Poplar, and Southwark. The 541 deaths referred to "fever" were considerably below the corrected average number, among the various metropolitan boroughs the highest "fever" death rates were recorded in Hampstead, St. Pancras, Islington, Hackney, Shoreditch, and Poplar The 2470 fatal cases of diarrhœa were 1220 below the average number, this disease was proportionally most fatal in Fulham, Finsbury, Shoreditch, Stepney, Southwark, Bermondsey, and Deptford In conclusion it may be stated that the mortality in London last year from these principal infectious diseases in the aggregate was 17 0 per cent. below the average.

Infant mortality in London last year, measured by the proportion of deaths among children under one year of age to registered births, was equal to 139 per 1000, against 166, 158, and 148 per 1000 in the three preceding years The rates of infant mortality in the various metropolitan boroughs ranged from 87 in Hampstead, 107 in St. Marylebone, 115 in Stoke Newington, 119 in Hackney, and 125 in Limehouse and in Woolwich, to 154 in Finsbury and in Poplar, 155 in Bethnal Green and in Bermondsey, 166 in Southwark, and 174 in Shoreditch.

THE SERVICES

THE NON COMMISSIONED OFFICERS AND MEN OF THE ROYAL ARMY MEDICAL CORPS.

A COMPREHENSIVE scheme of reorganisation aiming at a differentiation of the duties of non commissioned officers and men of the Royal Army Medical Corps has been under consideration at the War Office. It has been decided to recommend that the non-commissioned officers and men of the corps should be divided into four distinct sections (1) the nursing section, (2) the cooking section, (3) the clerical section, and (4) the general duty section Special attention has been paid to the training of men for the nursing section, who will in future be employed in nursing duties only A very complete scheme for nursing instruction is being drawn up and every effort is being made to develop this section. Her Majesty Queen Alexandra has signified her wish that the most proficient and best conducted male nurses should be admitted to her nursing service and a scheme for carrying out this object, including extra remuneration to such selected non commissioned officers and men and the granting of a special badge to denote the distinction that has been conferred upon them, is under consideration To the general duty section will be allotted those duties in hospitals only indirectly connected with the care of the sick. Advancement to a higher grade of orderly and promotion (except to a limited extent in the clerical and cooking sections) can only be obtained through the nursing section. Revised rates of pay are under consideration with the view of making the nursing section the most important and attractive. It is believed that the employment of specially selected men in nursing only with adequate remuneration will attract to the corps the best class of men, while the admirable courses of instruction for which officers commanding hospitals and matrons are responsible should enable men to qualify themselves for posts in civil life on retirement.

ROYAL ARMY MEDICAL CORPS.

Captain C B Lawson proceeds to Woolwich for duty as Clinical Pathologist at the Herbert Hospital on expiration of his appointment at Charing Cross Hospital. Lieutenant-Colonel A. F Franklin is nominated for service in the Bengal Command, vice Major Forrester, *tour expired.* Major W T Swan has joined at Portsmouth for duty

The undermentioned Captains to be Majors (dated Jan 31st, 1903) —E E Powell, J W Jennings, D S O. E McK. Williams, J C Connor, F W Hardy, W A. Graham, D D Shanahan (Brevet Major), C W H. Whitestone, A. Pearse, and C Dalton.

Captain H. N Dunn, from the Seconded List, to be Captain. Dated Jan 17th, 1903.

Lieutenant M G Sterling is seconded for service with the Egyptian Army Dated Jan. 17th, 1903.

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers) 2nd Durham (Seaham) Surgeon Captain L. G Dillon to be Surgeon-Major Dated Feb 7th, 1903

Submarine Miners The Fourth Division Surgeon Captain H. Hay to be Surgeon Major Dated Feb 7th, 1903

Rifle 1st Volunteer Battalion the Royal Scots Fusiliers. Surgeon Major W Sneddon to be Surgeon Lieutenant-Colonel Dated Feb 7th, 1903. 3rd (Cumberland) Volunteer Battalion the Border Regiment Surgeon Lieutenant T G Mathews resigns his commission. Dated Feb. 7th, 1903 1st Volunteer Battalion the Hampshire Regiment The undermentioned officer *resigns* his commission Surgeon Lieutenant W B *Colquhoun. Dated* Feb 7th, 1903. 3rd Volunteer Battalion the Essex Regiment Surgeon-Lieutenant H. N A. Taylor *to* be Surgeon Captain Dated Feb 7th, *1903.*

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS)

The London Campanies Supernumerary Lieutenant E W Herrington to be Captain. Dated Jan. 27th, 1902.

VOLUNTEER OFFICERS' DECORATION

The King has conferred the Volunteer Officers' Decoration upon the undermentioned officers of the Volunteer Force who have been duly recommended for the decoration under the terms of the Royal Warrant dated July 25th, 1892 —*Home District Rifle* 1st Middlesex (Victoria and St. George's) Volunteer Rifle Corps Surgeon Lieutenant-Colonel Frederick Enos Fenton 7th Middlesex (London Scottish) Volunteer Rifle Corps Surgeon Captain James Cantlie *North Eastern District Rifle* 2nd Volunteer Battalion the East Yorkshire Regiment Surgeon Major Alexander Ferrier Angus Fairweather, retired *North Western District Rifle* 6th Volunteer Battalion the Manchester Regiment Surgeon Lieutenant-Colonel Robert Lancelot Sparrow *Scottish District Rifle* 6th (Fifeshire) Volunteer Battalion the Black Watch (Royal Highlanders) Surgeon Major Charles Edward Douglas

THE DUKE OF YORK'S ROYAL MILITARY SCHOOL.

The *Army and Navy Gazette* of to-day (Feb 14th) calls attention to "a remarkably anomalous condition of things" noticed in scanning the "Army List." Our contemporary has discovered that although among the *ex officio* members of the Commissioners of the Royal Hospital, Chelsea, a military medical member—viz , the Director General of the Army Medical Service—finds a place, yet among the *ex-officio* members of the Commissioners of the Duke of York's Royal Military School no military medical member has been appointed The *Army and Navy Gazette* goes on to say "Surely one is quite as necessary in the latter institution as in the former This will have to be remedied without delay, and we understand that a question on the subject will arise when Parliament assembles If the Chaplain-General and Judge-Advocate-General take places as *ex-officio* members of the Duke of York's School, surely a military medical member of rank and experience should be appointed for the sanitation of the institution, and matters connected with the health of the boys must come up now and again for consideration It is now well known that the sanitary condition of the Duke of York's School has been recently investigated, and it is not unlikely that the Secretary of State for War is by this time in possession of the report thereon, the particulars of which will be called for on the reassembly of Parliament We invite the attention of the medical journals to the foregoing comments, and would like to know their views." Our views coincide with those of the *Army and Navy Gazette* that the Commissioners of the Duke of York's Royal Military School should include among them a medical officer of experience and rank

SIR FREDERICK TREVES AND THE SOUTH AFRICAN WAR COMMISSION

The Royal Commission on the South African War resumed its sittings on Feb. 4th. Evidence was given by Sir Frederick Treves, who served with Sir Redvers Buller's army in Natal down to the relief of Ladysmith. Sir Frederick Treves expressed his views as to the over-organisation of the Army Medical Service at the date of the war, the need of decentralisation, and of giving to the individual officer more freedom of action and emancipation from merely clerical work. He gave evidence as to the inadequacy or unsuitability of much of the stores, instruments, and ambulances at the date of the war as to the training of army medical officers, and as to military hospitals generally He also gave explanations as to the recent action of the Medical Advisory Board at the War Office and the steps which have been taken since the war, or are now in contemplation, to reform the defects in the Army Medical Service.

The prizes gained by the members of the London Companies Royal Army Medical Corps (Volunteers) will be distributed on Feb 21st by Major General L. J Oliphant, C.B C V O, at the headquarters, 51, Calthorpe-street, London, W C The distribution will be followed by a dance

Correspondence.

' Audi alteram partem."

NATIONAL HEALTH AND PHYSICAL EDUCATION

To the Editors of THE LANCET

SIRS,—The Scottish poet Burns has given expression to a most excellent prayer, and one suited to almost everybody, in the lines

> Oh, that the Guid the gift wad gie us
> To see oursels as others see us."

The fact that a large proportion of our urban population is unfit for military service has, I believe, been fully known to, and carefully considered by, our German friends for a considerable time while we have been more or less blind to it and have certainly not given to it the consideration it deserves.

It seems to me that Sir Frederick Maurice by his writings and speeches, and you by your leading article in THE LANCET of Jan. 31st, p 315, have done public service by drawing attention to the fact It is, indeed, staggering to learn that out of every five would be soldiers only two are found to be fit for service after two years It is probable that, as you say in your article, this condition is not that of the population at large but only of a certain section of it. The fact that the record is constantly being broken for all sorts of feats of strength, agility, and endurance, such as lifting weights, high and long jumps, foot races, scores at cricket, bicycle rides, and swimming, indicates that the physique of the well to-do classes is improving rather than deteriorating But, on the other hand, the existence of a large section of the community, and that, too, the one which is most readily available for recruiting, having such a poor physique that only two out of every five are fit for military service is, as you most truly say in your leading article, an appalling fact. Nor is the condition a serious one only because it prevents us from getting the number of soldiers we need when an emergency arises, it is serious also from the civil standpoint, for if these men are unfit for military service what are they good for? Poor in physique as they all are, and poor in mental capacity and power of application as you suggest many of them are, What becomes of them? Many of them probably marry girls as weak as themselves and have children, some of whom go to swell the lists of infant mortality, some to join the criminal classes, while others grow up more weak and incompetent than their parents It is probable that for the existence of this class the medical profession is to a considerable extent responsible. For by its increased knowledge and more energetic application of medicine and hygiene children are now reared who, under less favourable conditions, would have died in infancy The harm which it has thus done the medical profession must now strive to undo by doing its best to secure that children shall not merely grow up, but shall be sufficiently strong and healthy to fit them for the battle of life. How this is to be done is a problem by no means easy to solve, in search for a solution, as Sir Frederick Maurice truly says one makes many mistakes and has often to change one's impressions, and therefore it is with the utmost diffidence and merely in a tentative way that I should like to mention some ideas which have occurred to me in regard to it First of all, we want information as to (1) the causes of physical deficiency, (2) the best means of remedying the defects, and (3) the best means at present available in case that the best means possible cannot as yet be applied.

Information having been obtained on these points the next thing is its practical application It is obvious that such tasks could only be undertaken by the Government and they ought properly to be undertaken by a board of health if such a board existed. In the absence of this much needed board I suppose the best means of obtaining information would be the appointment of a small commission, regarding the composition of which the Royal Colleges of Physicians and Surgeons might fitly be consulted. As you truly say in your leading article "No purpose can be served by attempting to answer a question of such a size as, What are the methods by which our national health can be improved?' But the scope of the inquiry might be limited to the three chief points insisted upon by Sir Frederick Maurice—namely, deficient teeth, flat-feet, and generally weak physique. The commission might ascertain to what extent decayed teeth are present at different ages among the children attending the Board schools throughout the kingdom. They might try to ascertain also how far the presence of decayed teeth coincides with the absence of phosphate of lime and silica in the food. If these substances be absent or deficient we can no more expect a child to have strong teeth than we can expect a hen to lay eggs with well formed shells when it is not supplied with lime in its food. The perfection of modern mills and the consequent separation of the outer part of the wheat and the mineral matter it contains from the starchy matter which goes to form white bread is probably responsible to some extent for decayed teeth. Secondly, the occurrence of flat-foot at different ages should form part of the inquiry and along with this might go an examination of the development in the calves of the child's legs. Thirdly, they might seek to find out how far early marriages are due to youths and girls having nothing to do after their hours of labour are over excepting to walk about with one another and if this be a cause how far its action might be prevented by providing such occupations and amusements as would not only fill up their leisure time but tend to develop them physically mentally, and morally

Until such information is obtained it is impossible to speak with certainty as to the best means of removing the physical deficiencies to which Sir Frederick Maurice has drawn attention. It seems to me probable, however, that though decay in teeth, like other nutritive phenomena, depends upon the condition of the body as a whole, especially of the nervous system, yet it may be greatly influenced by diet and cleanliness.

Of diet I have already spoken, but attention to cleanliness of the teeth is also of great importance. Caries is often started by acids formed by the decomposition of particles of food lying between the teeth. When the teeth are healthy and strong they may defy the attacks of such acids, but where they are weak they undergo erosion and begin to decay. During the day the teeth are kept more or less clean through being washed by the alkaline saliva and rubbed by the tongue, but during the night particles of food may lie between them for many hours and decompose. The bad effects of this might be greatly lessened by children systematically cleaning their teeth, especially at night. The expense of tooth brushes renders their employment out of the question by the poorer classes, but all that is required is a lucifer match which has already been used. One end of this is cut into a wedge shape and passed between the teeth, so as to press out any particles of food that may be lodging between them. It should also be drawn round the base of each tooth close to the gum so as to remove any adhering tartar. The expense of such treatment is *nil*, the trouble is very small, and the gain from it would be very considerable.

For flat-feet balancing exercises on the toes might be regularly given to school children, but they ought to form only a part of general physical training which should be as compulsory for every child as learning the "three R's." If, as I believe early marriages are partly due to want of suitable occupation and amusement in leisure hours, this might partly be avoided as far as men are concerned by developing their interest in volunteering through regular training at school in the use of a rifle between the ages of seven and 14 years. Their interest might be kept up by rifle and pistol saloons in which they could learn to aim with precision both at stationary and moving objects. The success that has been obtained by Colonel Fox in the development of young recruits by physical exercises shows how extraordinary the benefit is which youths derive from such exercises, and if they were systematically employed in schools many of the recruits who are now rejected would probably be well over the mark of efficiency, while their training in the use of the rifle would enable them to learn all the necessary drill much more quickly than at present and leave them with more spare time during their service. In regard to the employment of their spare time we might, I think, with advantage take a lesson from the Russian army, and upon this point Mr. Francis H. E. Palmer makes some remarks which are so apposite that, with your permission, I should like to quote them entire.

"Military training has naturally produced the most striking results among the lower classes as it has served to develop the very faculties in which the peasantry are most deficient. The recruit drawn from the easy going life of the village, where he seems incapable of doing anything except as a member of his artel, is suddenly transported into a new world in which many moral qualities that have hitherto lain dormant are called into play. Strict obedience is already a part of his very nature but the necessity for order, exactitude, punctuality, and alertness is impressed upon him at every moment. A Russian peasant or workman upon the completion of his military service can nearly always command from 25 to 50 per cent. higher wages than those who have not had this advantage. It is not in moral training alone, however, that the lower classes have benefited by military service. Only a very small part of the multifarious requirements of the Russian army and navy could hitherto be supplied by private industry, and the Government has been compelled to convert itself into a colossal manufacturer and universal provider. Private industry has been fostered, it is true, whenever possible, but nevertheless the Government has been compelled in almost every branch to take the initiative from the weaving of cloth for the soldiers' uniforms to the making of common or scientific instruments. In the army almost every trade is carried on and rarely does a recruit return home when his military service is over without having gained some technical knowledge that greatly increases the value of his labour."[1]

If the army were thus converted into a huge technical school and manufactory, in which all the uniforms shoes, saddlery, &c., were made, the expense of maintaining the army would be so much lessened that we might hope for a marked diminution in taxation, whilst the men trained in it after their return to civil life would be able to support their wives and families instead of becoming a burden on the ratepayers. I am, Sirs, yours faithfully,

Feb. 10th, 1903. LAUDER BRUNTON.

THE RISE OF BLOOD PRESSURE IN LATER LIFE.

To the Editors of THE LANCET.

SIRS,—The arguments on the subject of my paper on arterial pressure[1] in elderly persons come, to my honour, from correspondents so eminent that I must ask you again to publish a brief reply.

Sir William Broadbent's argument is, I think, that there is increased peripheral resistance, the area of which he places in the "capillaries," but that "it need not be viscosity in a physical sense" (I do not perceive any alternative sense?). This proposition is true, no doubt, in the healthy circulation the pressure in the capillaries is higher than the mean pressure of the system as a whole. Sir William Broadbent proceeds to discuss the phenomena of capillarity, which is treacherous ground to enter upon, as capillary phenomena are modes of surface tension and apply to open (air-containing) tubes standing in solutions having a free surface and under the uniform pressure of the atmosphere only. The capillary vessels of the body contain no free air, while, on the other hand, the contents are under a mean pressure above that of the atmosphere. If we turn away from surface tensions and consider only the phenomena of adhesion of surfaces, as, for example, the wetting of the surface of a slip of glass dipped into water, which glass when dipped into mercury had not been wetted—keeping to these simpler, and I think more apt, of the phenomena quoted I would point out that if the blood wet the wall of the capillary the wetting layer ceases to move while the rest of the blood flows on; thus, practically speaking, no energy is lost. If, however, the blood be so altered as not to wet the wall (as the mercury did not wet the glass slip) the outermost layer or cylinder of blood remains no longer stationary, it is forced along with the rest, and friction against the wall, with loss of energy, ensues. There may be, as Sir William Broadbent suggests, some change of this kind; the blood may lose some adhesion to the capillary wall; but such a supposition is highly speculative and to me the speculation seems an unlikely one. Again, projections from the walls, such as would set up contrary currents or "eddies," would obviously imply loss of energy; but such knotty places belong rather to arteries than to capillaries. Now let us suppose, what I think to be more probable, that the outermost cylinder of blood in the tube always wets the wall, and, so wetting it, remains stationary—changing, that is, by molecular processes only. Then, as in the normal state, this layer may be disregarded—and we shall regard the axial stream and the layers nearer and nearer to the still envelope. Of these cylinders within cylinders—for so we may reason of the blood stream—we know that the more axial travel the more rapidly; or, conversely, that the outer layers travel more and more slowly in the degree of their remoteness from the central or axial current. At no two points of a radius of a transverse section is the rate the same; it falls as we move from centre to circumference. Yet how can such differential rates be possible? By continuous deformation of the blood stream; by the shearing force of the more inward cylinders as they slip past the more outward. In the great retardation due to this internal friction of the several layers of blood one upon another a large part of that energy is lost which is continually replaced by the pressure head (the left ventricle). The loss amounts to at least 100 mm. of Hg per second. Were the vessels filled with water this internal friction would be less; if with alcohol less still; but not even alcohol is free from "viscosity." If the vessels contained treacle the shearing frictions would be so great as quickly to raise the friction coefficient to an equality with the maximum pressure within the left ventricle, when, of course, the circulation would stop. I did not pretend to have proved that in senile hyperpiesis the viscosity of the blood is increased; I suggested, and suggest still, that as in healthy capillaries the viscosity of the blood is the main factor in peripheral resistance, we should try first to estimate the variations of this factor which we know rather than to assume the intervention of a new and unknown factor At any rate, let us try to establish a standard of blood viscosity, as yet we have made no attempt to find even a method for its estimation. But since my paper was read, my colleague, Dr Graham Smith, has suggested such a method to me, of which, if it prove to be valid, we shall hear more hereafter

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[1] Russian Life in Town and Country. By Francis H. E. Palmer. London: George Newnes Limited. 1901. p. 260.

[1] The full text of this paper which was read before the Royal Medical and Chirurgical Society on Jan. 13th will appear in our columns shortly.

Sir William Broadbent argues with Sir Douglas Powell that this alteration of the blood—namely, that it wets the wall less—is due to admixture of impurities, the products of imperfect metabolism. I must repeat that this seems to me at present to be sheltering under a phrase. For my part I also have hinted at this line of research, so have Dr Haig and others. But who will try the experiments? Does blood into which, let us say, purin bodies have been introduced wet membranes less than normal blood (as Sir William Broadbent suggests? Or, again, is it of higher viscosity, as I suggest? And if the latter be the case, has the former factor any existence at all?

For the rest of Sir William Broadbent's letter I am especially grateful The views which he so powerfully supports I brought before the Hunterian Society in equivalent terms a few years ago but was little heeded The German schools continued to hold, with von Basch and the rest, that senile hyperpiesis is due to arterio-sclerosis, and if at the outset arterio-sclerosis be not discoverable, then to latent arterio-sclerosis, the French school continued to assert that in these changes should be recognised not only a primary arterio-sclerosis but also a primary cardio-arterio-sclerosis—a wear out all round—whereas in my opinion the heart in uncomplicated cases, so far from being a skulker or a cripple, dies in the trenches. The English school meanwhile has spent most of its time in disputing whether the middle coat of a thickening arteriole is primarily hypertrophied or degenerated and has not settled the point yet. I believe—and this is a contribution to Dr. Russell's point of view—that the muscular coat of the artery increases, but as that of the heart increases, under abnormally high mean tensile stress, and that as in the heart, so in the artery, the hypertrophy is somewhat fugitive and tends to early decay Dr Russell seems, if I read him aright, still to maintain that arterial spasm comes first and raises the mean arterial pressure, an opinion which from the beginning I have contested, that if universal it would have this effect is true, but so long as compensatory mechanisms are intact it never is universal, nor nearly so. However I must skip the rest of Dr Russell's letter, which I read with sore discouragement. One narrow purpose I thought by long and ascetic discipline in letters to have attained—namely, the negative virtues of austerity, order, and precision, that, whatever my stuff, my style should be concise, lucid, and definite. And, after lifelong lopping, stripping, and drilling, Dr Russell tells me that by "literary garnish my style is unintelligible to the ordinary mind!" Garnish! which I detest in all the arts. How hard life is! Other critics have said, and said it in print too, that I had become too condensed and allusive, presupposing in the reader knowledge which he does not always possess

O glücklich! wer noch hoffen kann
Aus diesem Meer des Irrtums aufzutauchen
Was man nicht weiss das eben braucht man
Und was man weiss kann man nicht brauchen."

I am, Sirs, yours faithfully,

Cambridge, Feb 9th, 1903 T CLIFFORD ALLBUTT

To the Editors of THE LANCET

SIRS,—While feeling some timidity in entering the lists with the distinguished disputants who have recently addressed letters to THE LANCET on the above subject I am tempted with your permission to do so, both on account of its importance to the physician and of the interest I have long taken in it. The fact that there is so little unanimity in regard to so comparatively simple a point as the mechanism of protracted high pressure in the systemic arteries, shows at once the difficulties surrounding the science of medicine and how much how very much, we have yet to learn.

The chief points at issue in regard to these cases of protracted high pressure would appear to have reference to—(1) the situation of the morbid resistance, whether e g, it is located chiefly in the arteries or capillaries, and (2) the nature of the resistance, how far, e.g., it is attributable to active vascular contraction and how far to augmented frictionality (if I may be allowed the term) of the blood. Sir William H Broadbent holds that it "has its primary seat in the capillaries" and that it is due to an alteration in the blood which so influences the vital reaction between that fluid and the capillaries as to interfere with the normal easy flow through these vessels—he assumes, as it were, an increased vital frictionality Professor T Clifford Allbutt attributes the essential cause of the morbid resistance to an increased viscosity of the blood by virtue of which (presumably) its mechanical (as distinguished from vital) frictionality is increased, while he is not disposed to assign to active vascular narrowing any influence in effecting a long sustained high pressure. Finally, Sir R Douglas Powell and Dr William Russell place the chief resistance in the arteries and attribute it to a generalised hypertonus of them

We shall, I think, be helped to a decision on these questions by first considering (1) the situation of the chief vascular resistance under strictly physiological conditions, and (2) how this resistance is modified physiologically 1. It is now some years since you were good enough to publish in THE LANCET a communication from me in which I pointed out that, contrary to the opinion then prevailing, the resistance in the capillaries is normally so small as to be practically negligible. This conclusion is now, I believe, generally accepted among physiologists. It is also generally recognised by them that the large and moderate sized arteries offer very little resistance to the current, and that the chief vascular resistance—say five sixths of the total amount—is located in the arterioles 2 It is equally certain that physiological modifications of vascular resistance are almost wholly due to active alterations in the calibre of these same arterioles, modifications in the frictionality (vital or mechanical) of the blood playing but an infinitesimal part. Were the blood as thin and mobile as spirit, a wide spread arteriolar spasm would yet be adequate to augment resistance to the furthermost limit, and to cause a corresponding augmentation in arterial blood pressure, and, on the other hand, even were the blood of semi tarry consistence it would still, given a widespread arteriolar dilatation, rush with an all too fatal facility into the veins, causing the arterial blood pressure to sink to a few mm. Hg It cannot, indeed, too emphatically be insisted upon that, normally at all events, vascular resistance is essentially arteriolar resistance, one which is placed in a certain part of the systemic circuit for a special physiological purpose, and that the most complex and colossal vascular system—as of the whale, e g—offers in the absence of this arteriolar resistance but a feeble obstacle to the onflow of blood. Further, that the degree of systemic arterial blood pressure is essentially dependent upon the degree of arteriolar resistance a widespread and pronounced arteriolar dilatation lowers arterial blood pressure to a few mm Hg let the heart beat never so vigorously, while the opposite condition leads, except in cases of extreme cardiac failure, to supernormal pressure I say *except in extreme cardiac weakness*, for although it is true, as Dr Russell contends, that general arterial hypertonus does not necessarily go along with augmented pressure, yet in my experience the pressure is only low in cases of hypertonus when the heart has come to the very end of its tether, provided only peripheral resistance is high we shall often find arterial pressure ruling high even in cases of considerable cardiac weakness, as may frequently be observed in the last stages of granular kidney when the failure of the heart has reached the stage of pulmonary engorgement and general anasarca.

Seeing then, that the normal vascular resistance is mainly situated in the arterioles and how overwhelming is the part played by arteriolar contraction and dilatation in modifying resistance physiologically, one is naturally led to ask whether it is needful to seek elsewhere for protracted morbid resistance, or for any other mechanism in explanation of it? In other words, cannot we satisfactorily account for these cases on the supposition that there is a widespread arteriolar contraction? The more so if it can be shown that such an arrangement makes for a good end, as I believe it does. It is admitted by all that the primary cause of persistent high blood pressure is a toxæmia, and what, I submit, happens is this in response to the action of the poisoned blood all (or most) of the systemic arterioles contract, save those within the kidneys which dilate, the effect being greatly to increase the flow and pressure of blood within the kidneys, and thus to favour the elimination of the poisons by these latter This view which I have already set forth in the pages of THE LANCET[1] is strengthened by the remarkable observations of Dr Russell to the effect that in what he calls arterial hypertonus the muscular coat of all (or most) of the systemic arteries is hypertrophied, *while that of the intrarenal arteries tends to be atrophied* Let us not lose sight of the physiological aspects of disease. Are we to regard the heightened blood pressure in the cases we are considering as an instance of mere blundering on the part of the organism? Are we to suppose that the organism would permit the maintenance through long years of a morbidly high vascular resistance which by the strain it puts on the heart and arteries inevitably leads to their undoing—are we, I say, to suppose all this when in the twinkling of an eye that resistance could, by the opening of the arteriolar flood gates, be effectually lowered, even to the point, if need be, of inducing collapse? That seems to me an unwarrantable assumption. The animal organism possesses elaborate means of coping with its maladies and in so doing displays an infinitely greater wisdom than the wisest physician can ever hope to attain to Bearing this fact in mind, can we doubt, if a low arterial pressure would advantage the organism in the cases in question, that the organism would very soon bring it about, seeing that the means of doing so are ready to hand? We must conclude, therefore, that the high blood pressure in these cases plays a useful part. The view advanced by Sir George Johnson and adopted by some, that the arteries contract for the purpose of protecting the tissues from their poisoned contents, credits the organism with a shortsightedness which I am loth to attribute to it. Such a course could only defeat its own ends by diminishing the circulation through the kidneys as well as through other parts, and thus actually diminishing the elimination of the poisons apart from wearing out the heart and arteries.

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[1] THE LANCET June 8th 1901 p 1627

Professor Allbutt doubts whether vascular spasm is capable of maintaining a protracted increase of resistance, though he admits the indefatigability of the arteries, indeed, the average condition of the arterioles throughout life is one of spasm, temporary local relaxations occur, it is true, but taking the arterioles at large their active contraction at any one moment is considerable, for otherwise death would inevitably occur from bleeding into the veins The life of the organism is, in fact, as much dependent upon the tonic contraction of the arterioles as upon the rhythmic contraction of the heart. And if these vessels are capable of so much, why, I would ask, should they not be capable of a little more? and it needs, be it observed, but a moderate increase in their normal contraction to cause a substantial augmentation in resistance Have we not, moreover, both clinical and anatomical evidence of the existence of sustained arterial hypertonus, clinical in those cases of "tightly contracted vessels" to which Professor Allbutt himself refers, and anatomical, in the cases of hypertrophied media, observed by Dr T D Savill, Dr Russell and others?

The fact that normally the resistance in the capillaries is infinitesimal appears to me to tell against the view that they constitute the chief resistance in cases of high blood pressure. I cannot think any altered condition of the blood could without destroying life right out, so increase the friction between the blood and the capillaries as to change a capillary resistance of from 1 or 2 Hg mm. to one of say 50 or 60 Hg mm. or more—that is to say, by from 20 to 30 times its normal amount. If, on the other hand, we assume the morbid resistance to reside essentially in the arterioles which normally offer a resistance of, say, 70 Hg mm., we have but to postulate an increase in this resistance by a fraction of its normal amount in order to get a very substantial increase. Again, would not a resistance of from 50 or 60 Hg mm in the capillaries render the occurrence of shock impossible by preventing the sudden rush of blood into the splanchnic veins upon dilatation of the corresponding arteries? And is there any evidence that patients with protracted high arterial blood pressure are proof against shock? These considerations lead me to doubt whether the systemic capillaries can take any but a very moderate share in the production of the morbid vascular resistance which we are considering

One word more before I end this very imperfect letter I find it difficult to accept the view expressed by Sir Douglas Powell to the effect that loss of arterial elasticity "tends to a low blood pressure and at the same time to cardiac hypertrophy" Given a healthy heart, is not the arterial blood pressure the measure of vascular resistance? And does not low arterial blood pressure (I am still assuming the heart to be healthy) imply that the vascular resistance which the heart has to overcome is correspondingly low? Does it not, in other words, imply diminished rather than increased work for this organ?

I am, Sirs, yours faithfully,
Wimpole-street, W Feb. 8th, 1903 HARRY CAMPBELL

ORGANIC COMPOUNDS OF ARSENIC

To the Editors of THE LANCET

SIRS,—With regard to Sir Thomas R Fraser's paper on Arrhénal and his conclusions as to the physiological inactivity of organically combined arsenic, it may be of interest to point out that Robert Bunsen 60 years ago demonstrated the comparatively non toxic nature of the cacodylic compounds He injected 0 35 gramme of cacodylic acid into the marginal vein of a rabbit's ear without producing toxic symptoms Later Rabuteau determined the minimum lethal dose for a medium sized bitch as two grammes (about 30 grains or 16 grains of arsenious acid)

I am, Sirs, yours faithfully,
J M FORTESCUE-BRICKDALE, M A., M.D OXON.
Clifton, Bristol, Feb 9th 1903

THE MEANING OF URIC ACID AND THE URATES

To the Editors of THE LANCET

SIRS,—If I may be permitted to make a few remarks in reply to those of Dr Woods Hutchinson[1] I would say that the method I have used for the estimation of uric acid was subject to some criticism when it first appeared in 1885, but that Professor Haycraft has long since vindicated its position and it is to be found to-day, as the bibliography of my book ("Uric Acid") shows, in most European standard works of reference. I think also that anyone who will read carefully the experimental portion of my book will see that the chief results there recorded are far beyond the range of any single method, and can be demonstrated by many methods, even by a third year student of physiology, with no more elaborate instrument than the point of his finger For the food poisoning which has been dignified by the names of many diseases produces two main classes of effects—(1) those general on the circulation, and (2) those local on the tissues, and the former are so very obvious that it may be said to-day that no taker of poisons (flesh, tea, &c.) ever has a capillary circulation as quick as that of those who abstain from poison, the difference even amounting to 50 per cent, nor have the self poisoners as good a blood condition (blood decimal or worth), the difference here amounting to quite 20 or 30 per cent. I have often offered rewards of £5 and upwards to anyone who will produce a habitual taker of flesh and tea with a circulation and blood colour equal to my own. No one has as yet claimed the reward, perhaps Dr Woods Hutchinson will now do so A glance at the gums in good daylight and a touch with the finger on the front of the chest generally suffice to dispose of the claims of all self poisoners, as I demonstrated to some of those who attended the recent debate on Professor T Clifford Allbutt's paper on the Rise of Blood Pressure in Later Life (see THE LANCET, Jan. 17th, p 171), and this rise of blood pressure in later life with its collæmia (uricacidæmia) and anæmia is as simple and easy to explain for those who understand uric acid pathology as the rheumatism and chlorosis in girls of 13 and 17, which it exactly parallels. So much for the great circulation group of uric-acid poisoning, though I may say in passing that the intestinal putrefaction on which Dr Woods Hutchinson lays so much stress can easily be proved to be a mere result of the defective circulation which uric acid produces. Put the circulation right and no intestinal antiseptics will ever be required, for stomach, liver, and intestines will be able to act normally As to the local group of uric acid troubles it is my experience, and that of hundreds of others, that to abstain from swallowing these poisons for from 18 months to two years means relief or cure of all arthritis and local pain which is due to uric acid, and that any relapse into taking of uric acid promptly brings them back again It is to the gradual spread of a knowledge of these simple facts and to the practical results which follow their application that the present wide acceptance of my views is due, and this has astonished Dr Woods-Hutchinson because he has confined himself too much to ancient theories and has made too small an attempt to examine modern facts which can be demonstrated in a few moments. With regard to his conclusions I may point out that I, for one, have never suggested the limitation of nitrogenous food, except in relation to body-weight, and there I have always adopted the *ordinary* physiological standard of from nine to ten grains of albumin per pound per day Finally, I assert, without fear of contradiction, that the gouty or uric-acid diathesis is a myth, the product of past ignorance, and that all those who cease to swallow uric acid will also soon cease to be lethargic, anæmic, and puffy, walking or limping demonstrations of its poisonous effects. Of many such with their short and miserable lives it may be truly said, they "do not die, they kill themselves."

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[1] THE LANCET, Jan. 31st 1903 p 292.

I am, Sirs, yours faithfully,
ALEXANDER HAIG

Brook-street W., Feb. 9th 1903.

ASEPTIC AND ANTISEPTIC SURGERY

To the Editors of THE LANCET.

SIRS,—Writing under this heading in THE LANCET of Feb. 7th, p 347, Mr W Watson Cheyne says that the return of buried sutures is due to their infection at the time of operation and not to any defect in the nature of the material used. With this statement most surgeons will agree and admit that the infection is due to contact with the hands of the operator or his assistants. Mr Watson Cheyne seems to think that it is not due to want of initial disinfection of the hands but to the neglect of use of chemical solutions during the progress of the operation and he goes on to say that the 'aseptic method" lays too much stress on marble floors and rounded corners and neglects to enforce disinfection of the hands and general care during the conduct of an operation. This is certainly not my experience and I fail to see why a person working in a clean room should be less careful than one working in a room that is hard to clean. In addition, I believe that a student who is made to change his boots and to envelop himself in a clean overall is not less likely to clean his hands than one who simply takes off his coat, puts on an old mackintosh apron, and pins a carbolised towel round his neck. It is then stated that the nurse trained in aseptic methods is likely to pick up an instrument *off the floor to return it as sterile after* two seconds in the steriliser, to touch the handle of the door, or to soil her hands in some other way and then without disinfecting her hands to return and to help at the operation. This certainly cannot be laid at the door of aseptic technique which, above all things, teaches the value of soap, even if it tends to minimise the use of chemicals

On the other hand, a student or nurse trained in the antiseptic school is prone to place too much reliance on a wash in chemicals and too little in hot soap and water In the same way a person trained to believe largely in disinfection by chemicals is more likely to think "medicated" cotton wool sterile than one who has been taught that dressings are to be sterilised by pressure steam or boiling water. In spite of some experiments performed at Liverpool it is still unlikely that the human skin can with any certainty be rendered sterile. A method that bears this in mind and teaches that dressings, swabs, ligatures, and instruments after being sterilised in the most perfect method known should be handled as little as possible and that the hands should be kept out of wounds or covered with boiled rubber gloves is better than one that lays great stress on the use of chemical disinfections. In this connexion it is well to remember that Bulloch and Andrewes have recently stated that some pus-producing organisms are extremely resistant to the persalts of mercury I have seen both methods carried out side by side over a considerable period of time, and in this instance the aseptic method was not behind the antiseptic in results. The adoption of the aseptic method does not involve the abandonment of suture in layers, silk, silkworm gut, all sterilised by heat, can be buried with safety Judging from recent literature the Americans have not given up suture in layers, but some operators by the adoption of a particular form of knot have contrived to withdraw their continuous buried sutures after healing is complete.

I cannot see that there is any great difficulty in carrying out the aseptic technique in private practice. At St Thomas s Hospital boxes containing sterilised towels, swabs, and dressings have for some time been provided for the staff. If these are not to be obtained boiling water is always available and by its means all that is required can be as efficiently sterilised as by chemicals. There is certainly no harm in weak antiseptic solutions, but when strong ones are used to disinfect the skin the hands of some operators become a positive danger in themselves

In conclusion, I doubt that anyone who has worked with the aseptic method will agree with Mr Watson Cheyne that it leads to a lax and careless technique

I am, Sirs, yours faithfully,
CUTHBERT S. WALLACE.

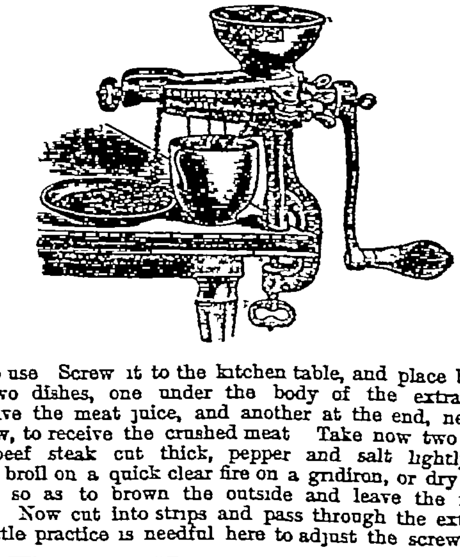
Upper Wimpole-street W Feb. 7th 1903

SPECIAL BEEF-TEA.

To the Editors of THE LANCET.

SIRS,—Having studied a remarkable article by M. Charles Richet, of the Faculty of Medicine of Paris (*La Semaine Médicale*, July 18th, 1900), my interest in the use of raw meat and raw meat juice was greatly revived, and I realised that so far I had not given the matter fair trial Of the value of such nutriment, especially in cases of exhausting diseases such as tuberculosis in its various forms, I was quite satisfied. However, I was met by such difficulties in inducing patients to drink raw meat juice that I was *driven to make experiments in order to render* it more palatable and acceptable. I tried it administered in a coloured glass, also mixed with port wine, also sweetened, and even in effervescence. All failed in most cases. At last I succeeded in accomplishing the end and I now publish the method *after more than two years'* trial and *experience*. We are all familiar with the differences of opinion regarding the value of beef-tea. Some set it down as almost worthless, others praise it too highly The truth seems, as usual, to lie between. My own impression is that beef tea, as ordinarily prepared, is mainly a mild stimulant, especially of appetite, and of small nutritive value.

I shall now offer a new receipt for a "special beef tea," in which the nutritious elements are preserved, and reinforced, as far as possible I may premise that it is mainly a device for administering raw meat juice in a form so palatable and concealed that even the most delicate and fastidious do not refuse it, but on the contrary, relish it I have used it extensively for the last two years, and with most satisfactory results. The receipt is as follows —First procure an "Enterprise Meat Juice Extractor" and study its construction and use.[1] It is simple and comes asunder easily Before use, and when it needs cleaning, pour scalding water through and over it [2]



To use Screw it to the kitchen table, and place beneath it two dishes, one under the body of the extractor to receive the meat juice, and another at the end, near the screw, to receive the crushed meat Take now two pounds of beef steak cut thick, pepper and salt lightly, and then broil on a quick clear fire on a gridiron, or dry frying-pan, so as to brown the outside and leave the interior raw Now cut into strips and pass through the extractor. A little practice is needful here to adjust the screw at the end of the extractor, so as to get all the juice to pour out from the slot in the under surface of the instrument. If the screw is tightened up too much the pulped meat will come through with the juice. If, on the other hand, the screw is left too far out the meat is not compressed sufficiently and the quantity of the juice is reduced. A little experience enables the operator to strike the right point. Two pounds of beef should give about two wineglassfuls of juice Collect the juice and separately collect the crushed meat. Strain the juice through muslin and leave it aside till wanted Next take the crushed meat, pour on it a pint and a half of cold water, and let it stand for two hours. Then simmer very slowly for two hours, set it aside, and when cold strain off the clear fluid

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[1] This Extractor is of American make, imported by John G Rollins and Co. Old Swan Wharf London, and sold in Dublin by Fannin and Co., 41, Grafton-street and Messrs. Hughes, 23 Dawson-street.

[2] A similar meat juice extractor was described in THE LANCET of Oct. 26th, 1901 p. 1130—ED L.

For use, heat this clear beef tea and when it is just fit to drink—say at a temperature of 105° to 115° F , just comfortable to swallow—add to it the strained raw meat juice Flavour with salt and serve. Observe particularly that the meat juice must be added when the beef tea is so far cooled that the patient can drink it If the beef tea is hotter (say 160° F or over) the albumen of the meat juice coagulates and its nutritive value is deteriorated. Beef tea thus prepared is very palatable and can be given to patients without their knowing that they are taking raw meat juice—a very important matter as many persons would not touch raw meat if they knew it. For those who like a full flavoured beef tea half a teaspoonful of "Maggi's essence aux fines herbes" may be added. This excellent condiment can be had from Cosenza and Co , 95, Wigmore street, London, W This beef tea may be rendered still more nutritious by the addition of some farinaceous element, as follows. Before the addition of the raw meat juice bring the clear beef tea to boiling point and then dust in a teaspoonful or so of Groult's tapioca and boil for ten minutes or until the tapioca is transparent, or add to it a teaspoonful of fine arrowroot or cornflour, blended in a tablespoonful of water, boiling then for ten minutes. Now let the beef tea cool so as to be fit to drink, then add the salt or flavouring essence and the strained raw meat juice. I have never yet met a patient who did not like this "special beef tea" and take it willingly

I am, Sirs, yours faithfully,

Dublin, February, 1903 FRANCIS R. CRUISE, M.D Dub

URANIUM SALTS IN CANCER A SUGGESTION

To the Editors of THE LANCET

SIRS,—Any drug that offers the faintest hope in the treatment of cancer seems worthy of a trial. Now, since cancer seems to begin as an overgrowth of the cell, anything that tends to modify this might do good Uranium nitrate when given to animals causes ulceration at the pyloric end of the stomach, but when given to man does not do so, though it doubtless tends to It might be worth an extended trial in certain cases of cancer at the pyloric end of the stomach and it would be interesting to know in what way the cells had been modified as shown by the microscope The action of uranium is specific, since it acts in animals when the drug has not been introduced directly into the stomach. From this one might reason that it would modify an overgrowth of the cell in any part of the body, and that a sterilised injection into a growth, be it cancer or fibroid, might do some good. The claims of a country practice do not allow me to work out all this, and the material is not available My only experience is in the case of cancer of the larynx, where a 1 per cent. spray had a marked effect in checking hæmorrhage and in lengthening the interval between each attack. I have put the idea before some of my medical friends in Liverpool and they think it worth a trial, but as I cannot find any record of its use in this way, I venture to bring it forward Dr S West has used it with some promise in diabetes and has given it in doses of from one-eighth of a grain up to 20 grains three times a day The late Dr Drysdale recorded a cure in ulcer of the stomach. The action of uranium in diabetes has been thought to be due to its helping to eliminate uric acid, and this brings another view of cancer before us It seems to be established that cancer is more common in the well nourished, and it may be that the overgrowth of the cell is due to excess of nutrition over combustion and excretion, thus causing products akin to uric acid to irritate and so cause an increased growth. If this is so, then probably the best drug would be salicylate of uranium when the chemist can make it. For experience teaches me that there is a good deal in Dr Haig's opinion of the value of the salicylates in chronic gouty conditions. Possibly they act by increasing combustion and oxidising uric acid into urea, or in fevers by oxidising the specific virus to render it inert. No one, of course, expects a drug to cure cancer, but it might be possible to modify it in the way that mercury modifies syphilis. When mounted on a theory one is apt to ride it to absurdity, but it may be that such growths as post-nasal adenoids which are far more common in the children of the rich and presumably well nourished than in the children of the poor, may be due to excess of nutrition over combustion either in the mother or child or both. The theory occurred to me before I had heard of uranium and as the drug seemed to offer some chance of success I venture to put it forward in the hope that some may think it worthy of a trial.

I am, Sirs, yours faithfully,
ARTHUR C. WILSON, M B , Ch B Vict

Formby, Feb 4th, 1903.

BRISTOL AND THE NON-VENTILATION OF SEWERS

To the Editors of THE LANCET.

SIRS,—Your Special Commissioner's report on the above *subject*, published in THE LANCET of Jan. 17th, p 202, shows that notwithstanding the long stretch of daily exposed mud or river deposit and its system of non ventilation of sewers Bristol has always had a better *health record than* towns and districts professing to have a system. This, one would think, should have called forth remarks either from the engineers or the medical officers of health connected with towns and districts whose records are not so good as Bristol, and also of towns and districts, including the London districts, whose records have a better average

There cannot be much doubt but that the major portion of sewered towns and districts suffer from systems which are most defective in that the ventilators of the *lower levels poison the atmosphere of the higher levels*, and the leaky sewers of the higher levels poison the atmosphere of the lower levels *viâ* air currents underground, including the channels into the residences formed around drains, water- and gas-pipes, &c., the circulation set up causing a more virulent outbreak of illness in the high portions of the town than in the lower, the higher portion being supposed to be the most healthy and containing as a rule the better class of residents Trusting that even now the question (which is a serious and most important one) may have attention from those able thoroughly to discuss it.

I am, Sirs, yours faithfully

Feb 3rd 1903. D T BOSTEL, Sen.

THE DANGERS OF CALCIUM CARBIDE

To the Editors of THE LANCET

SIRS,—Calcium carbide is a substance which has come into considerable use within the last few years, as it has the unique property of developing a gas which can be used as an illuminant when water is poured on it. Not only is it used for lighting houses, &c., as a source of acetylene gas, but it is extensively adopted all over the country for bicycle lamps. This substance is already the subject of legislative enactments as to storage, &c., on account of its inflammable and explosive character, but I beg to point out that it has been overlooked from the public health point of view and that persons who are compelled to handle it should be protected by provisions of law

My attention was forcibly directed to this matter by a patient who presented himself for treatment for dyspnœa, hæmoptysis, headache, anorexia, and various neurasthenic symptoms, and who exhibited signs of patchy consolidation of the lungs, but who exhibited no rise of temperature or sign of tuberculous trouble. He was a lad, aged 14 years, but quite stunted for that age, and on questioning him to elucidate some cause for his symptoms I discovered that his occupation was to fill tins with calcium carbide and he gave a vivid and graphic description of the hissing sound which was produced when a particle of the substance happened to be inhaled through the nose or get down the throat, as well as the irritant cough and difficulty of breathing which troubled him whilst at work and the comparative ease he at once enjoyed when he got into the air From the violent chemical action which takes place when calcium carbide comes in contact with any mucous surface I suggest that some protection for workers with it is imperative.

I am, Sirs, yours faithfully,

Dublin Feb 5th 1902. J C MCWALTER, M A., D P H

THE MIDWIVES ACT

To the Editors of THE LANCET

SIRS —The passing of the Midwives Act of 1902 devolves a grave responsibility on the nation in order that, as the untrained midwife vanishes, the poor who either cannot, or will not, be attended by medical men may not be left without necessary assistance. A clergyman writes to me, "We have no maternity charity or help of any sort towards doctor or nurse, it is sad to see the suffering from neglect and ignorance and feel utterly at the mercy of these untrained women. How the Act will affect us I cannot guess if it stops the present dangerous system and gives us nothing in its place I am not sure that it will be an advantage. I am sure our poor women won't consider it so They can't afford to engage a trained monthly nurse, especially from a distance, *or to send for a doctor.'*

Now it is to help these remote scattered parishes, as well also as the crowded provincial towns where these untrained women are so numerous and prosperous that I am anxious to gain the sympathy of those able to help First of all, I would enlist the coöperation of the local medical man who feels that the village midwife working under proper supervision would be a help rather than a hindrance to his work—of the busy and often overworked family practitioner who recognises the fact that such women will relieve the pressure by taking those cases that use up his most valuable time and pay so little, if at all and whom he may trust to send for him in good time when surgical skill is required. Then I would, where nursing associations exist or could be started, have one or two midwives attached and thus make use of existing organisations where possible I have done this in my own case, the woman prepays an extra fee of from 5*s* to 10*s*, which is returned to her if the medical man is not required If he is sent for the association guarantees the payment.

In very sparsely populated districts one or two might join together to provide a midwife, and the midwife might be encouraged to combine with her work some occupation not detrimental to her calling In towns the work would become quickly self paying, and I feel that a very moderate outlay would start a sound, substantial work. I cordially invite those interested, and especially medical men who approve of this scheme, to communicate with me, and I would ask others to help me with funds to make a good beginning

I am, Sirs, yours faithfully,

JOSEPHINE JOHNSTONE.

Bignor Park, Pulborough Feb 7th, 1903

THE SURGICAL TREATMENT OF RHEUMATIC FEVER

To the Editors of THE LANCET

SIRS,—From a long experience in South China, I can fully confirm the statements made by Dr A. Haig in his letter under the above heading in THE LANCET of Feb 7th, p 398 Arthritic pains of all kinds are quickly relieved by the salicylates during the cool season, but much harm may follow if given when the thermometer stands above 80° F

I am, Sirs, yours faithfully,

EDWARD HORDER, F R C S Edin

Limpsfield Feb 9th 1903

"'TIS FORTY YEARS SINCE"

To the Editors of THE LANCET

SIRS,—Having had occasion to refer to the lists of the London hospital staffs of 40 years ago as given in the Students Number of THE LANCET of Sept. 20th, 1862, I think that it may interest your readers if I give a brief summary as to the survivorship of these gentlemen. Of course all who held office in 1862 have retired from active hospital work, as life appointments have long ceased to exist, and I shall *only mention those still living*

At St. Bartholomew's Mr Luther Holden, then assistant surgeon, is the *sole survivor* of the hospital staff, and Sir Thomas Smith, K.C V O, then demonstrator, of the teaching staff. At Charing Cross Mr R. Barwell, then assistant surgeon, alone survives At St. George's Sir Henry Pitman and Dr J W Ogle, who were physician and assistant physician, Mr Holmes, assistant surgeon, and Dr W Ogle, lecturer on physiology, survive. At Guy's Sir S Wilks and Dr F W Pavy, assistant physicians, Mr J Birkett, surgeon, and Mr T Bryant, assistant surgeon, remain. At King's College Dr L S Beale, physician, Dr A. B Duffin Dr E. Thompson, and Dr E Liveing, assistant physicians, and Mr Spencer Watson, assistant surgeon, remain At the London Dr R. Barnes, obstetric physician, and Mr J Hutchinson, Mr J Couper, and Mr L S Little, assistant surgeons, survive. At St. Mary's Sir E H. Sieveking, physician, with Sir W H Broadbent (physiology), and Mr A. H. Norton, demonstrator, are the survivors. At the Middlesex Mr Mitchell Henry and Mr T W Nunn, assistant surgeons, and Dr R. Liveing, demonstrator survive. At the Royal Free Mr Thomas H. Wakley and Mr F J Gant, surgeons, and Mr Hasler Harris, dental surgeon, remain. At St. Thomas's Dr E Clapton, assistant physician, Dr H. Gervis, assistant accoucheur, Sir John Simon, K.C.B, surgeon, and Mr Sydney Jones, assistant surgeon, survive. At University Sir Alfred B Garrod, physician, and Sir H. Thompson, assistant surgeon, with Professor Williamson (chemistry), and Professor Oliver (botany) remain. At Westminster Dr P W Latham, assistant physician, and Mr H Power and Mr C Heath, assistant surgeons, and Dr Dupré (chemistry) survive.

I am, Sirs, yours obediently,

HISTORICUS.

NOTES FROM INDIA

(FROM OUR SPECIAL CORRESPONDENT)

The Plague Epidemic

THE mortality from plague throughout India is advancing by leaps and bounds This week the total has risen to 19 224 The details published are Bombay Presidency, 8962 deaths, the Punjab, 2442, the United Provinces, 2291, Bengal, 2124, the Central Provinces, 605, the Madras Presidency, 683, the Mysore State, 806, Bombay City, 443, and Calcutta 37 In Poona the disease is raging very virulently, nearly 100 deaths are occurring daily, the normal death rate of the city being 12. In Calcutta a fresh outbreak has started and the figures are running up rapidly This year the general development of plague is more widespread and involves a larger population than at any previous period. The Government has been compelled to abandon the system of inspection for plague on the railways in the United Provinces as hopeless. This inspection is credited with having postponed the invasion of certain areas, but when the disease has once attacked a province precautions on the railways are of no further avail.

Jan. 24th

PRESENTATIONS TO MEDICAL PRACTITIONERS —At an "At Home" held at the Bath Saloon, Truro, on Feb 5th, the Mayor of Truro, on behalf of the subscribers, presented Mr Frederick Harold Carlyon, M.D C M Edin., with an illuminated address and a cheque for £55 as a mark of respect and esteem on the occasion of his leaving for Johannesburg The Mayoress presented Mrs Carlyon with a diamond and sapphire bracelet.—Mr Michael Halpenny L.R.C P L R.C S. Edin., L F P S Glasg, has recently been presented with a gold semi hunter keyless watch and a purse containing a sum of money by the inhabitants of Gilfach Goch. Mr Halpenny recently left Gilfach Goch to practise in Ireland.—At De Keyser's Royal Hotel, Thames-embankment, London, E C, on Feb 4th, Mr Theophilus Hoskin, J P, L.R.C P Lond. M R.C S Eng, was presented by the Master of the Worshipful Company of Makers of Playing Cards with a silver salver bearing the following inscription —' Presented to Dr Theophilus Hoskin J P, by his colleagues on the Court of Assistants of the Worshipful Company of Makers of Playing Cards, in commemoration of his services to the Company as Master, 1901–1902"

THE ORGANISATION OF THE PROFESSION

(From Our Special Commissioner.)

Prompt Formation of an Association by the Swansea Practitioners —The New Organisation Deals with Emergency Vaccinations —It Commences the Battle of the Clubs — The Local Custom of not paying for Attendance on the Wives and Children of Members of Clubs

The medical practitioners of Swansea have set a good example. There are one or more unions of colliery surgeons in the South Wales mining districts, but in the large towns no successful attempt at organisation has been made It is true that at Swansea the need of some such effort was more especially urgent, but what is most required is not always obtained. Some 18 months ago at a meeting of the local branch of the British Medical Association the question of club practice was discussed and a committee was appointed to look into the subject, but the matter fell through and nothing appears to have been done, at least by the British Medical Association. After the lapse of several months a few practitioners met at Mr J Kynaston Couch's house to talk over their grievances in an informal manner Though there were but six practitioners present they nevertheless determined to strive to form a medical union for the express purpose of dealing with economic questions For this purpose they appealed to all the medical men in practice in Swansea and the great majority were very willing to take part in the movement. Only a few hesitated In May, 1902, sufficient propaganda work had been done and the initiators ventured to summon a general meeting This meeting elected a committee which was to frame rules and generally to pave the way for the formation of a society The committee met several times and then convoked another general meeting which was held at the Swansea Hospital on June 3rd Of the 50 practitioners invited 22 were present minutes were taken, and from that date the union of the Swansea medical men may be said to have come into existence Indeed, it was then formally proposed by Mr A. Lloyd Jones and seconded by Mr Jabez Thomas —

> That the practitioners of Swansea and district be invited hereby to form themselves into an association for the purpose of raising the standard of contract practice and that such association be called the Medical Practitioners' Association of Swansea and District

This was carried and then Dr T D Griffiths was elected president and Mr Couch and Dr John D Davies were elected secretaries, together with a committee of ten Their first business was to call on all the medical practitioners who had not yet replied to the circulars sent to them Following quickly upon this action another general meeting was convoked at the hospital on June 10th and this time 28 practitioners were present. Vice presidents and other officers were appointed a temporary subscription of 5*s* per member was fixed upon, and the committee was instructed to study at once the question of a minimum rate of remuneration for contract work. This committee met on June 12th and 16th and yet another general meeting was convoked for June 20th On this latter occasion the rules with some slight alterations, were finally adopted It was also decided to select a solicitor who should be consulted in regard to the bond or pledge which it was proposed to impose on all the members. This was done, and the following is the text of the pledge which has now been signed by 55 medical men of Swansea and neighbourhood —

> We the undersigned members of the medical profession practising in Swansea and district pledge ourselves honourably to adhere to the following rules and regulations adopted at a general meeting of the Swansea and District Medical Practitioners' Association held on June 20th 1902, and refuse to recognise in any way any medical man who acts in opposition to any of these rules and resolutions

The following are the most important of these rules and it will be seen that they are so framed as to apply to the struggle waged in regard to contract work —

> 8. That in the event of any member being given notice to terminate his engagement by any club or works the grounds for complaint will at the request of such member be considered by the association, and if in the opinion of a majority of two-thirds of the meeting the grounds for complaint be unjust or frivolous the member will be supported by the association to the extent that no member may become a candidate for such a position
>
> 9 If any member applies for an increase (above the minimum) from any club or works such member shall, before making such application, bring the matter before the association and if approved, the member will be supported to the same extent as in Rule No 8
>
> 10 In the case of any medical man coming into the district or any medical man at present in the district accepting any appointment contrary to the rules of this association no member may meet the said medical man in consultation, or act as or meet his deputy in consultation
>
> 11 That any member of this association employing an assistant or entering into partnership with any other medical man shall make it a condition of appointment or partnership that the assistant or partner shall at once become a member of this association In the case of an assistant there shall be no annual contribution
>
> 12. That in case of any dispute arising between members with regard to the interpretation of these rules the matter shall be referred to the association and the final interpretation shall be decided by a majority of two-thirds of its members

Having regard to these principles and rules the association did not lose a moment but at once proceeded to take action. The committee met on July 1st and agreed that a demand for an increase should be made, beginning with the workmen's medical aid funds organised at the different works There are at Swansea numerous works for the extraction of metals such as copper, silver, and iron from ore, and for the manufacture of steel, of tin plates, of jointless steel tubes, &c From time immemorial a medical attendant has been appointed to these works, and formerly he used to be selected by the employer Of late years, however, the workmen have maintained that they should themselves dispose of the money which they subscribe and should select their own medical attendant. Therefore the employer now only deducts from the wages the sum agreed upon, and, in fact, acts as a collector for the men The men employed at the same works agree to pay 8*d* or 1*s* per month for medical aid purposes. This sum is handed over to the medical man whom they have selected without, as a rule, any commission being charged for the trouble of collecting A sub-committee met on July 3rd and 8th to draft the text of the demand of the medical men, when an incident occurred which created an interlude but gave the members of the profession their first opportunity of testing the efficacy and advantage of organisation.

An emergency general meeting of the association had to be convoked on July 14th to consider a circular sent by the poor law guardians to each medical practitioner in the town. There was at that time a small pox scare and the guardians asked each practitioner whether he was willing to undertake house to-house vaccination in his district for 2*s*. 6*d* per case. It was felt that the medical men should not be left to answer individually this application, that this was a case for joint action and that all should agree and insist upon the same terms. This impression was confirmed by the result, for at the meeting a motion was carried appointing a deputation to wait upon the vaccination sub-committee of the guardians and to explain that the Swansea and District Medical Practitioners' Association was anxious to afford every assistance to the guardians in their endeavours to stamp out small pox and approved of the proposition of the guardians to organise a house to house visitation for the purpose of revaccination. The association was glad to approve the undertaking of this work by its members at the remuneration offered by the guardians provided that no subsequent visit for inspection was required and that the lymph was supplied or paid for by the guardians. Otherwise the association would consider that the work should be paid for at rates not lower than those which the Local Government Board had formulated as a minimum. The association further recommended that the house of every medical practitioner willing to undertake such work should temporarily and during the emergency be converted into a public vaccination station. The guardians, in reply, agreed to supply the lymph and to pay 2*s* 6*d* for vaccinations at the patient's home. The arm was to be inspected subsequently at the vaccinator's surgery If the vaccination was performed at the surgery then the vaccinator was to supply his own lymph. Thus it will be seen that on the whole a satisfactory arrangement was concluded. It is true that later someone discovered that it was quite illegal, but this does not seem to matter, for while it lasted the arrangement worked satisfactorily for all the parties concerned.

While this was proceeding the main work of the Swansea and District Medical Practitioners' Association was being pushed forward with the rapidity and energy which have distinguished the proceedings throughout. Rarely has an association of this sort held so many meetings in such close succession and organised itself into a fighting machine so rapidly When the next general meeting was held on August 15th the demand had been forwarded to all the medical aid associations formed in connexion with the different works of the town, and now it was decided that a similar letter should be sent to the different clubs or friendly societies. This letter took the form of a sort of circular and was forthwith forwarded to 76 courts, lodges, tents, branches, &c., of the friendly societies. It at once disclosed what is the special grievance at Swansea. As a rule the families are not included in the membership of friendly societies or clubs. If contract work is accepted for the wife and children of members—and this has been strenuously resisted in many localities—then a separate payment is required for the wife and each of the children. As a rule, the general charge is 1*d* a week for the man and the same for his wife, while the children up to the age of 14 years are paid for at the rate of ½*d* a week. Should, however the family be so large that the total sum would exceed 6*d* per week not more than 6*d* is charged. A totally different system obtains at Swansea, and this not only with regard to the friendly societies but also with respect to the medical aid associations formed by the employés of the different works. The members all pay the same sum whether married or not and if they have families the members of the families consider themselves entitled to receive gratuitous medical attendance. Unless it be urged the bachelors pay for them nothing is paid, and yet they all receive medical advice, medicine, and care. It is only when a confinement occurs that a special payment is made for the wives of members and then this is but 10*s.* 6*d* In such extraordinary circumstances it would be thought that the men must pay a very large sum indeed if their families, however numerous, are attended without any extra charge. But this is not the case. Some friendly societies did not pay more than 4*s* 6*d* a year others 6*s*, and others 8*s.*, but 6*s* 6*d* was considered a fair average 1*d* per week each for husband and wife makes 8*s.* 8*d* per annum and ½*d* for the children makes 2*s* 2*d* more per child, but here entire families, however numerous, only paid on an average 6*s* 6*d* These most unfair conditions were instituted 35 or more years ago, and up to the present time they had not been altered. The Swansea and District Medical Practitioners Association in some of its circulars points out that formerly unqualified assistants could be obtained for from £60 to £80 a year and qualified assistants for from £100 to £120 Now none but qualified assistants can be employed and they must be paid from £200 to £250 Then it estimates the cost of qualification at £1000 instead of £500 and the time as six instead of three years as formerly While the expenses of a medical education, of medical practice, and of medicines and dressings have so much increased and thus reduced the profits a medical man may hope to realise, the wages of the working classes at Swansea have increased considerably The circulars also give details in regard to the larger payments made in other towns.

A question of tactics now presented itself. Dr Davies and one or two others addressed themselves early in the history of this movement to the medical aid organisations of the works to which they were attached and succeeded in obtaining an increase from the 8*s* or 10*s* which they had been receiving to 13*s* per family per annum. It was thought that such individual successes would serve as a precedent, yet others making similar applications were refused. Then the association applied on behalf of all the practitioners to all the medical aid organisations at the works and to all the friendly societies. Now the question of tactics is whether it would have occasioned less feeling if each medical practitioner had conducted his own case. A single lodge could not import a medical officer from the outside, but this collective appeal on the part of their medical officers was the means of eliciting a collective reply and collective resistance. Then, after all the medical men had been united very recently and in great haste. The bond drawn up between them had had no time to be tested and no one could tell what was its strength As a matter of fact, a few weak links were discovered which still further encouraged the friendly and other societies to resist the demands of the medical profession, and they did not fail to bring forth the old threat which has done service in so many places of amalgamating all the societies so as to start a medical institute with their own medical men and thus to be independent of all the medical practitioners of the town. However, a great deal was done to clear the air by the acceptance on both sides of a proposal to hold a joint meeting and ten medical men were appointed to meet ten delegates of the friendly societies. This meeting occurred on Nov 12th last and both sides had ample opportunity to make the best of their case. It was a means of throwing light on the one sided view that is often taken. For instance, one workman argued that if the fee were raised many members would leave the friendly societies, and that these would be the most healthy men, the men who gave the least trouble either to the society or to its medical officer, and therefore he did not see the use of paying more Some men had left two years ago when the subscriptions were raised and said that they did not want sick allowances As for the proposal to raise the charge for midwifery to £1 1*s*, half that sum was quite enough, for at such moments workmen had many other extra expenses to meet. It will be seen that in this not a thought is given to the other side—namely, the needs of the medical attendants. In regard to midwifery it is forgotten that in easy cases the medical officer is not sent for at all. It is only in difficult cases that his assistance is requested and then there is more than usual trouble and much time and many visits have to be devoted to the patient. Therefore a fee of 10*s* 6*d* is absolutely inadequate. As for men leaving the friendly societies this is decidedly advantageous to the medical practitioners, because when they are ill they pay full fees Thus what the workman qualifies as unfortunate is considered fortunate by the medical practitioner and it follows that such divergence of interests requires careful handling and a thorough knowledge of both points of view if reconciliation is to be rendered possible.

The workmen also argue that in regard to the increased cost of living this affects them equally Here there is a misunderstanding The chief increase in the cost of living is in rent, rates, and taxes, and in this the workman suffers as much as, and in regard to rent, at least in large towns, even more than, the medical men. But as a whole, with the great reduction in the cost of provisions and clothes, living is cheaper now than it was 30 or 50 years ago. What has increased in cost is the especial outlay that a medical man has to incur so as to obtain his qualification to practise, and to purchase drugs, instruments, &c To put workmen in the same position it would be necessary to enact a law rendering it illegal to employ any workman in any trade unless he had a diploma to show that he had been through a course of technical training and had passed a qualifying examination. This is actually done in a voluntary manner in regard to plumbers and it might greatly contribute to maintain the industrial supremacy of this country if something of the sort were imposed in many other crafts and industries But as matters now stand a workman when a mere youth actually earns money while he is learning his trade. It is but in a few trades that a period of apprenticeship is imposed By far the best argument on the workman's side is that the rent for working-class tenements or cottages has increased much more in proportion than the rent charged for middle-class villas or houses. At Swansea it is said by the workmen that the cottages for which they paid 3*s* 6*d* rent per week some 30 years ago are now rented at 8*s.* 6*d* It is further argued that medical men by taking long leases of their houses can protect themselves against sudden or constant increase of their rent. Also, it is said that the poor rate at Swansea was 1*s* 6*d* in the pound 20 years ago and is now 2*s* 4*d*

On the other hand, Mr E. Reid has calculated that, according to statements made by the corporation, and at the Lambeth Copper Works and the gas works it appears that during the last 20 years wages have increased for joiners from 33*s* to 38*s* 3*d* per week. The figures are the same for masons but for plumbers the increase is from 27*s* to 38*s* 3*d*. The pay of labourers has risen from 20*s* to 24*s* 9*d* and in the case of the lowest paid labourer of all—namely, the labourer in the copper works—he now receives 18*s.* instead of 15*s* a week. Consequently, the workmen can afford to pay more than they did 20 and 30 years ago. They can afford to pay 7*s.* 6*d* for dog licences and they charter special trains so as to attend football matches held in neighbouring towns, they could therefore afford to pay for medical attendance for their families. It is the question of the families which constitutes the bone of contention at Swansea. For instance, Dr Rhys Davies states that the Robin Hood Lodge of Foresters had a short time ago 288 members but there were 193 wives and 270 children, so though there were only 288 members of the society the medical officer had to attend 751 persons He urged that 751 men would be preferable, for he calculated that three wives gave as much trouble as two husbands and that one child required as much attendance as three men. Therefore he might reckon the 193 women as equal to 289 men and the 270 children as equal to 810 men. Consequently the 288 men with their wives and children gave their medical attendant as much trouble as if the lodge had consisted of 1387 men without families Again, if there were a club consisting of 100 children, another club of 150 women, and a third club of 300 men, it would not matter to a medical man which club he took if the pay were the same for each. Mr Reid had calculated that he has given to the members of the Robin Hood Lodge close upon 4000 consultations in the year or 13 consultations for every working day of the year, and this has brought him in 4¾*d* per consultation. For this paltry sum he had to give his time and the drugs and to pay his tram fares and other working expenses Mr Couch has also made calculations and found that when he was receiving on an average 6*s* a year from members of friendly societies for attending them and their families this did not amount to more than 3*d* per consultation and he had to give medicine for that sum He consequently had thrown up all societies that paid less than 7*s* a year Then there is a Provident Dispensary at Swansea and this is to some extent a charity and is partly supported by voluntary contributions, nevertheless, the subscribers pay 1*d* per head for all the members up to 14*s* a year per family, so that this charity is better than the friendly societies which boast of their independence. Consequently the first demand made was that there should be a considerable increase in the amount of the subscriptions so as to cover the cost of attending the families of the members

(*To be continued.*)

MANCHESTER

(FROM OUR OWN CORRESPONDENT)

The Licensing Question

AT the opening of the licensing sessions for Manchester on Feb 6th Mr T T Shann, chairman of the licensing committee, made some interesting observations on the New Licensing Act and on the position of Manchester as compared with some other large towns In 1901 there were 484 licensed victuallers, 1695 beer licences (on), and 744 others (off), making a total of 2923. Since then some further licences have been granted and now there are 2941 to a population of 543,872, so that there is one licensed house to 184 92 men, women, and children Thus "Manchester occupies a most unenviable position, both as regards drinking facilities and intemperance, as compared with other large cities and towns" It stands at the head of a list showing the number of licensed houses, population, and proportion of inhabitants to each licensed house in all the cities and towns in England with over 200,000 inhabitants It has the lowest number of people to each licensed house and possesses several hundred more licensed houses than any other town in the list. Sheffield comes next with one licensed house to 220 95 people Nor does Salford lag far behind, for its proportion is 1 to 222 30 Seaports are proverbial for drinking facilities, but Manchester surpasses in this respect Bristol, Hull, Newcastle-on Tyne, and Liverpool Indeed, Liverpool offers fewer drinking facilities than any in the list except Leeds and West Ham, where the proportion of licensed houses to inhabitants is respectively 1 to 362 91 and 1 to 777 20, which latter stands in marked contrast to Manchester with its proportion of 1 to 184 92. A very large number of the licensed houses are beerhouses, where the sanitary and domestic arrangements are often most unsatisfactory, drinking frequently taking place in the private rooms Mr Shann stated that the facilities for drinking were too great in Manchester as shown by the proportion of licensed houses to population and also by the fact that "the convictions for drunkenness in Manchester are almost double the number per 1000 inhabitants of any other large town." This unenviable state of things is to be altered by a gradual reduction of licences, but with regard to some classes of houses there are certain difficulties. A reduction has already been made of about 11 licences. There is no making people sober, it is said, by Act of Parliament, but it is no less true that with many men the sight of a beerhouse produces a great thirst.

Waterworks for Stockport

The Stockport corporation has a large scheme in hand and is proceeding with the operations for obtaining a supply of water from Kinder Scout. The sources of the supply, according to the report of Dr C Porter, the former medical officer of health, were not ideally perfect, and it will be a great boon to have a supply above suspicion even if it is to cost, as is estimated, nearly a million of money

More Accommodation for Small-pox

At the last meeting of the Manchester city council held on Feb 4th Alderman McDougall said there were 51 patients in the hospital and there was accommodation for 100, which would soon be required if the small pox cases increased as they had done during the previous week The committee therefore, proposed to provide, at a cost of £1500, another ward for 40 patients, and if necessary a second one for 40 more also at a cost of £1500 He stated that out of 49 cases received at Clayton there had been two deaths—one of a child two weeks old and in the other case the disease was complicated with other ailments. In the meantime the number of cases steadily increases. Four were reported yesterday, one from a lodging house and three from the Crumpsall workhouse. Since the end of September last over 100 cases have occurred in Manchester At Eccles yesterday a man was charged with exposing himself while suffering from small pox and failing to notify his case. He travelled from the borough of Eccles to a brick croft in Salford and returned, and his friends and relatives also visited him while the eruption was out. Two cases were removed to hospital yesterday in Oldham. It is said to be impossible to know how many cases there are now, as a policy of secrecy is observed, the health committee having given instructions—so it is stated—to its officials to afford no information to the representatives of the press. What is to be gained by this attempt at concealment one cannot tell Publicity would be less likely to cause panic than concealment, on the principle of *omne ignotum*, &c

Death of Canon Henn.

By the death of Canon Henn, which took place last week at Deganwy the Manchester hospitals have lost a friend who more than 30 years ago did a great work on their behalf. In the year 1870 he organised the Hospital Sunday collections and as long as he was in Manchester he performed assiduously the duties of honorary secretary of the Hospital Sunday and Saturday movement His services in connexion with this work were acknowledged in 1874 by the presentation of a public testimonial which took the form of a purse of money and a silver salver He was consulted and accepted as a guide in the establishment of similar collections in most large towns and even so far away as Melbourne. Up to 1899 about £225 000 were handed over to the medical charities of Manchester from this source Canon Henn broke down in health some years since and in 1900 he was compelled to give up his active work. From that time till his death at the age of 72 he lived at Deganwy, near Conway Till his health failed he was an energetic, hard working man and his zeal in the cause of the medical charities was only a part of a very full life given to his own calling and to that of education

Feb 10th

SCOTLAND

(FROM OUR OWN CORRESPONDENTS.)

Royal Association for Incurables, Edinburgh

THE annual meeting of the Royal Association for Incurables, Edinburgh was held on Feb 5th in the Longmore Hospital Dr Joseph Bell presiding The report of the committee of management for the year 1902 stated that in April last the association had sanctioned a petition by the committee to His Majesty praying that the association might be incorporated under a Royal charter They had every reason to believe that Royal assent to this would be granted in the course of this year The committee also reported the receipt of a sum of £21,000 from the trustees of the late Miss Brown of Lanfine. By the terms of the will the money was to be utilised as follows the sum of £6000 to be expended in the provision of a cottage home in the county for incurable cases of consumption the sum of £14,000 to be held in trust, the interest derived therefrom to be annually devoted to the maintenance of the patients resident in the above home, and the sum of £1000 to be held in trust, the interest thereof to be applied to the outdoor fund of the association The committee reported that it had selected a site which it believed would be approved by the association It was at present in treaty for its purchase The committee, while congratulating the association on this munificent recognition of the value of its work, pointed out that the endowment provided for this new home must only be looked on as the nucleus of an annual revenue, the greater part of which must be obtained from annual subscriptions. The committee hoped to commence building early in 1903. The number of applications for admission to the Longmore Hospital during 1902 had been 259 The number of urgent cases had been far in excess of the available accommodation, with the result that 31 cases had died before they could be admitted and many others had become too ill to move The total number of beds and cots was 150 The total number of patients in the hospital on Dec 31st, 1902 was 69 males and 81 females. The daily average number of patients in the hospital during the year was 143. The legacies during the year, including Miss Brown's bequest, amounted to £28 537 as against £5020 in 1901. The donations amounted to £244 as against £141 in 1901. The ordinary subscriptions amounted to only £1460 7*s.* 5*d* For some years past the ordinary subscriptions had been decreasing The expenditure of the hospital had largely increased in recent years as a result of the increased number of patients, so that now the ordinary expenditure exceeded the ordinary income by something like £2000 per annum. The committee therefore appealed earnestly to all interested in the hospital to secure an increase in the annual subscriptions to the institution, which was the only one of its kind in the south-eastern district of Scotland. The chairman, in moving the adoption of the report, remarked that he was the last survivor in the service of the hospital of the men who nearly 30 years ago started that institution. The other gentlemen who had been associated with him then had all either gone or had left the service of the hospital. He had had the honour of being on the staff of the hospital and on its directorate from the beginning That was his only excuse for his being there. Dr Bell then referred to the various stages in the history of the hospital a history of which, he said, they had no reason to be ashamed. The income from subscriptions, however, had not grown proportionally with the hospital, but had instead shown a falling off. It was scarcely credible, and certainly not creditable, that in 1882 with 50 beds the subscriptions amounted to £2100 while with 150 beds the subscriptions had fallen to considerably less than that sum. Dr Bell then referred to the two classes of patients in the hospital—the incurable cases who, notwithstanding lived for a considerable time, and the more acute and incurable cases, mainly tuberculous and malignant. Although it was a hospital for incurables they nevertheless managed to cure some patients and a cure was very cheering to the other patients as well as to the nurses. One of their incurables was now driving a milk-cart and another had been a tramway conductor for nine years The oldest inhabitant of the institution had been admitted for paralysis 21 years ago while another patient would complete her 21 years in six months' time.

Feb 10th.

IRELAND

(FROM OUR OWN CORRESPONDENTS.)

Rotunda Hospital, Dublin

ON Feb 9th a large audience assembled at the Rotunda Hospital to witness the presentation to the hospital by Dr W J Smyly of a portrait of Miss Hampson, first lady superintendent of the institution. Sir Percy Grace Bart D L J.P, occupied the chair Mr O Brien Furlong, K.C, C B, one of the vice-presidents of the hospital, accepted the portrait on behalf of the board

Small-pox in Dublin

At the meeting of the North Dublin rural district council held on Feb. 4th the chairman called attention to the fact that a case of small pox had occurred in Church-street where many tenement houses were occupied by tramps who came and went constantly Mr Edgar Flinn, medical inspector under the Local Government Board, said that he attended that meeting in order to refer to the matter With regard to vaccination the Local Government Board desired him to state that the guardians should proceed against the numerous defaulters. Within the last month Mr O'Neill the clerk, had sent in a return from which it appeared that 70 or 80 people had recently left the locality not vaccinated and might be moving about from one part of the city to another It was a very serious matter and he thought that the board should require the medical officers to furnish a monthly return in order that defaulters might be traced. That course was decided upon. In reference to the isolation hospital question the medical inspector stated that the present arrangement was that the submarine station near the Pigeon House Fort would be utilised for any cases that might occur and that it was hoped the public health committee would have it ready for the reception of patients within a week or ten days In the meanwhile the state of things seems ominous for in addition to the three patients with small pox admitted to the Hardwicke Hospital another case from one of the large institutions of Dublin was reported on Feb. 10th as having been admitted to the same institution

The Royal University of Ireland

At a meeting of the Senate of the Royal University held on Feb. 6th the following appointments were made in the medical faculty for the year —Medical Fellows Dr Ambrose Birmingham Dr Joseph P Pye, Dr Johnson Symington, Dr. John J Charles, Dr D J Coffey, Dr John I. Lynham, Mr John S McArdle, and Dr Charles Y Pearson. Fellow in natural science Dr M. Hartog Examiners in natural science, Dr Michael Curran, Mr Gregg, and Mr Wilson, in medicine, Dr James A. Lindsay and Dr Joseph F O Carroll, in pathology Dr Edmund J M'Weeney and Professor J Lorrain Smith, in midwifery, Professor John W Byers and Dr Alfred J Smith, in medical jurisprudence, Mr Antony Roche and Dr Patrick T O Sullivan, in materia medica, Dr Martin Dempsey and Sir William Whitla, in ophthalmic surgery, Dr Arthur W Sandford and Mr Louis Werner, in physiology, Dr T H Milroy, in sanitary science, Sir Charles A. Cameron, in mental diseases Mr Conolly Norman and Dr George Revington. Extern examiners in surgery, Mr Charles Stonham, C M.G, in midwifery, Dr Henry Jellett, in pathology Dr. A. C O Sullivan, and in ophthalmology, Dr William G Sym

The Belfast Asylum

From the memorandum of inspection by Sir G P O Farrell, M.D Dub, laid before the board of management at a meeting held on Feb. 9th, I find that it is stated that nothing has as yet been done to provide suitable and sufficient hospital accommodation for cases needing special treatment owing to their mental or physical state, further the inspector protests against the new infectious diseases hospital being so close to the Purdysburn Asylum, especially the small pox block. The English Local Government Board requires that a small pox hospital should not, among other things be within half a mile, measured from boundary to boundary, of an institution such as at Purdysburn, where there will be a population in excess of 600 Now the small pox huts which have been erected at Purdysburn are within 285 yards of the asylum. The asylum is much overcrowded. As matters now stand there are 741 inmates at Grosvenor road, while there is a normal accommodation for only 440 It is evident that the asylum committee will have to create further accommodation at Purdysburn. The administration of the asylum by Dr W Graham (resident medical superintendent) is most favourably commented on by the inspector

Feb. 10th.

PARIS

(FROM OUR OWN CORRESPONDENT)

The Investigation of Microbes in Effused Fluids

AT the meeting of the Academy of Medicine held on Feb 3rd M. Jousset gave an account of a very original method for the investigation and detection of microbes in effused fluids—as, for instance, in pleurisy hydrarthrosis, and hydrocele. Hitherto microbes in these fluids have been difficult to detect and M. Jousset has devised the following method He collects some of the fluid and allows it to coagulate, during which process the microbes are imprisoned in the meshes of the clot The clot is then artificially digested and the resulting solution is centrifugated. M Jousset has been able by this method to demonstrate the bacillus of Koch in 24 out of 25 cases of pleurisy and also in certain cases of ascites which had been attributed to hepatic cirrhosis.

Tuberculosis in the French Army

M. Lemoine, Professor at Val de Grâce, basing his facts on an observation of 3000 cases, has shown that of soldiers reported as tuberculous after having joined their regiments 69 per cent had a history of tuberculosis previously to their joining their corps. They did not, therefore, contract their tuberculosis in the army and he draws the conclusion that greater strictness should be exercised at the time of enrolment.

Infant Life Protection

At a recent meeting of the Academy of Medicine M Porak read the report of the committee on the hygiene of infancy This report was at once an interesting commentary on the Loi Roussel and an inquiry into its method of working and its results. The efficacy of this Loi Roussel is to-day clearly shown. Everything goes to prove the correctness of this statement and of the generally expressed opinion of the medical profession. For instance, the infantile mortality in those departments which receive nurse children from Paris has decreased within the last 20 years, while within the last 50 years the mortality in foundling hospitals (*Service des Enfants Assistés*) has fallen from 60 per cent. to 21 per cent. All the same, within the period of from the end of the first month of life to the end of the first year the mortality among nurse children is still double that of the general mortality among infants of the same age. It would appear, then, that certain improvements might be made in the Loi Roussel, as for instance in the way of assuring gratuitous medical attendance for nurse-children and legal assistance for nurses, by reorganising medical inspection, by extending the provisions of the law to the children of nurses who have taken a place and who have handed over their own children to the care of a neighbour or to someone who takes them without payment, and, finally by regulating the delivery of certificates and the keeping of the registers of service. The committee was not unanimous as to the interpretation and scope of clause 8 of the Loi Roussel, which clause imposes upon nurses who have taken a place as wet nurse that they should undertake to suckle the child for seven months The committee says that an inquiry should be held into the advantages or disadvantages of this enactment. Recent statistics furnished by the Minister of the Interior show that 65 per cent. of the women confined in Paris cannot suckle their children, either on account of poverty, or because they have no milk, or for other reasons.

The Transmission of Syphilis made a Penal Offence

The tribunal of the Seine has just delivered an important judgment. By this judgment the transmission of syphilis by persons knowing themselves to be affected, even though they do not wish to transmit the disease, comes under the category of injury inflicted on another and gives the victim the right to an indemnity Already the law has condemned parents whose child infects a nurse with syphilis, but the direct transmission of syphilis through sexual relations considered as a wound for which an indemnity is payable comes under the purview of French law for the first time. The case in question was that of a man suffering from syphilis who had sexual intercourse with a girl, aged 16 years, who contracted the disease from him. She had previously been quite well and a virgin. The court condemned the man to pay 12,000 francs damages.

Feb 10th.

EGYPT

(FROM OUR OWN CORRESPONDENT)

Cholera and the Tourist Season

THERE is now no cholera in Egypt and it has been entirely absent for several weeks. I am obliged to mention this fact because the European papers have lately published a telegram stating that the French Government has now forbidden the annual pilgrimage to Mecca from Tunis because of the cholera in Egypt. This is obviously unnecessary, for most of the Tunisian pilgrims arrive at Port Said by sea and then go on to Jaffa through the Suez Canal. It is only a small proportion of them who laboriously walk along the North African coast or who elect to land from the sea at Alexandria. But we often notice that Egypt pays the penalty of her honest declaration of bulletins of any epidemic disease by being accused of suffering from that disease when it is no longer present. The season began badly and even now there are not so many visitors here as there usually are at the end of January But as some of the hotels are already full no one has a right to grumble The *Commonwealth*, belonging to the Dominion Line, has lately arrived with 100 Americans from Boston *via* Gibraltar, Genoa, and Naples

Dysentery

At the Medical Congress here Dr Kartulis of Alexandria was chosen to open a discussion on Dysentery with reference, of course, to its connexion with abscess of the liver He is a well known exponent of the amœbic theory and his experiments by injecting pus from a liver abscess into the rectum of healthy cats and thereby producing dysentery are recorded in all text-books. He still believes that amœbæ are the only cause of tropical dysentery, that tropical abscess of the liver is three times out of four caused by amœbic dysentery, and that non dysenteric abscess of the liver met with in the tropics is chiefly caused by intestinal lesions, a few exceptional cases only being pyæmic, also that alcohol and malaria produce hepatitis and thus predispose to abscess without being the direct cause Dr Kartulis quoted 1860 cases of dysentery reported from India by different observers, of which 420 had abscess of the liver, and he contrasted with them 1896 cases of epidemic dysentery reported from Europe, among which there were only 28 cases of abscess of the liver. His own figures, collected over many years, give 164 cases of abscess of which 95 had a previous history of dysentery, 17 others were alcoholic, 25 had some unknown cause two were caused by wounds of the liver, and the remainder had a history of vague enteritis some of which may have been dysenteric He pointed out that nobody knows yet the nature of pilgrim diarrhœa or of that of Indo-China, but that otherwise the dysentery of the world seemed to be divided into the tropical or amœbic form and into the epidemic variety characterised by the presence of the bacillus discovered in 1897 in Japan by Shiga and confirmed later by Kruse in Germany Dr Kartulis firmly believes that suppuration of the liver is produced not by the amœbæ, but by pyogenic microbes such as the staphylococcus albus or the staphylococcus aureus It is, of course, impossible to prevent as yet the occurrence of dysentery, but it seems possible to prevent a dysenteric case from developing later into hepatic abscess In hospital and private practice numerous instances are seen of treated dysentery not being followed in after years by hepatic abscess, and, on the other hand, cases of hepatic abscess that are met with are almost always due to dysentery neglected or improperly treated. Dr Kartulis denounces the so-called specific treatment by ipecacuanha or calomel and has but scanty faith in aperients He maintains that dysentery is a local disease and ought therefore to be treated locally Directly he is called to a patient he prescribes two tepid enemata of a watery solution of tannin (1 in 200) and this he believes to be the essential treatment for amœbic dysentery and to prevent the formation of hepatic abscess. Dr Legrand (Alexandria) read a paper on the merits of Kosam which he has used in 30 cases of dysentery during the last two years. It is a seed coming from a shrub of the family of Simarubaceæ discovered by Dr Mougeot, the prison medical officer at Saigon It must be given in large doses, is equally useful for the acute and chronic form, but is of no value for diarrhœa which is not truly dysenteric. In addition to kosam by the mouth enemata of antipyrin and laudanum are also given to overcome the tenesmus. Dr Métin (Director of the Pasteur Institute at Saigon) claimed to have discovered that the specific cause of dysentery in Cochin China is a cocco-bacillus which resembles most the microbe of plague. It is not reproduced by spores, a temperature of 140° F kills it in two hours, while at boiling point it dies in a few minutes , also antiseptics kill it with ease, and per chloride of mercury (1 in 2000) stops its growth. Rabbits are killed by it in 12 or 18 hours, their axillary and inguinal glands are swollen, and in the peritoneum and pericardium is found bloody serum which is practically a pure culture of the cocco-bacillus. The animal's intestines are red and distended by gas and by bloody fluid mixed with normal fæces. But there is apparently no ulceration of the intestines. The lungs and spleen are apparently healthy, the liver is hyperæmic but of normal size, while all the organs, specially the liver, contain hundreds of cocco-bacilli. Dr Métin has never found his bacillus in the air or in the soil, but he has often discovered it in the water, where it is most easily found during the dysentery season He ended his paper by stating that he had sent to Dr Roux of the Pasteur Institute in Paris cultures of the bacillus which he claims to have discovered in March, 1901 Professor Chantemesse (Paris) stated that in 1888 he and Dr Widal, while performing necropsies upon soldiers who had returned from Tonkin, had discovered a bacillus which he had now been able to identify with that now known by the name of Shiga's Dr Belleli (Port Said) read a paper recommending large enemata as the best treatment of dysentery The injection he prefers in acute dysentery is two pints of water containing from 25 to 40 drops of carbolic acid, while in chronic cases he uses the same injection with the addition of tannic acid and laudanum. Dr Pressat (Ismailia) also said that he believed chiefly in treatment by enemata and he recommended large injections with a solution of chloral of from 5 to 10 per 1000 He stated that this was sufficient to bring about recovery provided that the diet was carefully limited and he had never seen any symptoms of chloral poisoning

Cairo Feb 4th.

CANADA.

(FROM OUR OWN CORRESPONDENT)

National Sanatorium Association

THE annual meeting of the board of trustees of the National Sanatorium Association was held recently in Toronto, with the Vice-President, Sir William Meredith, Chief Justice of Ontario in the chair The annual report of the Muskoka Cottage Sanatorium was submitted by the physician in charge, Dr J H. Elliott. It showed that during the five years history of the institution 612 cases of consumption had been treated and that during the past official year 85 per cent. of the cases treated had been cured or the disease arrested. 90 cases were treated at the Free Hospital for Consumptives, Muskoka, during the first five months of its existence. Of the 90 patients 50 came from Toronto and the balance from other parts of the province of Ontario and the Dominion. The announcement was made by the secretary of the association that a fine site for a third institution was already purchased near Toronto and that a citizen of this city had promised to contribute $25,000 towards the erection of the buildings. The association also has in contemplation the establishing of a fourth sanatorium in the near future on the Pacific coast.

Annual Report of the Sick Children's Hospital, Toronto

The twenty seventh annual report of the Sick Children's Hospital, Toronto, shows that during the past official year 5373 patients were treated. Of these 749 were in patients and 4624 were out-patients Of the in patients 520 were free patients who were in the hospital 28,131 days, thus showing that 70 per cent of the entire number were unable to pay for hospital treatment There were 128 patients in residence at the beginning of the official year, 621 were received during the year, and 627 were discharged, leaving in the hospital on Sept 30th, the end of the official year, 122 patients The medical report shows that of the in patients 447 were cured and 209 were improved and greatly benefited. There were 471 operations performed during the year The cost of each patient per day was 88 11 cents This hospital was closed to the admission of patients during the year owing to an outbreak of scarlet fever and diphtheria.

Canada's Drink Bill

The annual report of the Canadian Inland Revenue Department shows that during the past official year 3,234 147 proof gallons, as compared with 2 652,708 proof gallons for the previous year, were produced in Canada. The people drank more spirits and beer than in the previous year, the quantity of spirits consumed being 0 796 gallon per head against 0 767 for the previous year Beer is represented by 5 102, as against 4 737 for the previous year, and wine by 0 090 as compared with 0 100 for 1901. The consumption of tobacco was the same as in 1901. The number of cigarettes consumed last year was 134 236,034, as against 121,383,584 in 1901.

Montreal Contagious Diseases Hospital Question

For over three years the city council of Montreal has had before it the question of the erection of a new hospital for cases of infectious and contagious disease. The trouble in failing to arrive at a definite plan for adoption during all that time has been that while certain members were in favour of one hospital there were others who considered that two hospitals, one for the Roman Catholic and one for the Protestant population, were desirable. It seems that a definite plan has at last been decided on. The council has proposed to the Notre Dame Hospital, representing the French element of the city, and to either the General Hospital or the Royal Victoria Hospital, representing the English portion of the population, that it would give $15,000 a year each to these institutions if they would care for the cases of contagious disease arising in the city, the contract to extend over a period of 25 years The board of governors of Notre Dame Hospital has accepted the offer for that institution, and it is understood that one of the two English hospitals will shortly follow suit.

The New Professor of Hygiene at McGill University Montreal.

The annual university lecture of McGill University was delivered on the afternoon of Jan 23rd by Dr T A. Starkey, the newly appointed professor of hygiene, who a few weeks ago came over from London University to succeed the late Dr Wyatt Johnston in the chair of hygiene. Professor Starkey in introducing the subject of his lecture "Hygiene" referred at some length to the work which the late professor had done both outside and in connexion with McGill University He spoke of the research which Dr Johnston had instituted in connexion with bacteria in milk and in water as well as of his work in connexion with medico-legal matters, his work on accident assurance—compensation and adjudication—being invaluable. Professor Starkey considers that social progress, general enlightenment and constitutional freedom have added a great deal to hygienic reform.

The Health of Victoria, British Columbia

The annual report of the medical officer of health of Victoria, British Columbia, shows that during the past 12 months that city has enjoyed good health At no time was there any tendency to an outbreak of any contagious or infectious disease. During the year there were 83 cases of diphtheria, with three deaths and 48 cases of scarlet fever, with no deaths There was only one case of small pox during the year Knowing that bubonic plague is present in San Francisco the medical officer of health of Victoria has taken every precaution to prevent its introduction into Victoria, and in this respect his efforts have been assisted by the strict quarantine system of the Canadian Government. In 1901 the death rate in Victoria was 12·33 per 1000 , last year it decreased to 10 09 per 1000

Feb. 4th

NEW YORK

(FROM OUR OWN CORRESPONDENT)

An Institution for the Study, Prevention, and Treatment of Tuberculosis in Philadelphia

THE announcement was made some three weeks ago that Mr Henry Phipps of New York intended to establish in Philadelphia an institute for the above purposes. It is proposed to erect buildings in the centre of the city, in the midst of the poor neighbourhood, at a cost of from $200,000 to $300 000 (from £40,000 to £60 000) An endowment of $1,000 000 (£200,000) will also be provided, yielding an annual income of $40,000 (£8000) The institute will be known as the Phipps Institute and is intended to be a centre for the distribution of knowledge concerning tuberculosis, with the object of checking its spread. There will be an administration building containing a Finsen light department, a hydro therapeutic department, with baths and electric appliances, and also pavilions with a capacity of 100 beds for the treatment of advanced cases of pulmonary tuberculosis There will be also a dispensary for the treatment of "walking cases" from which assistance will be given to poor tuberculous patients in their own homes and a general supervision will be kept over them for the purpose of instructing them in methods of preventing the spread of the disease It was intended to begin the work at once in a temporary building rented for the purpose, but an obstacle has arisen in a Pennsylvania law which restricts the erection of hospitals in certain parts of any city in that State. If the Bill for the repeal of the law is defeated in the Legislature the institution will be established in a poor district of New York city

The New Maternity Hospital in New York City

The Society of the Lying in Hospital of New York, which was presented with a magnificent new building some months ago by Mr J Pierpont Morgan, has recently issued its annual report. It is stated in this report that the hospital was opened for the admission of patients eight months ago, since which time 1278 women have applied for indoor treatment. Owing however, to lack of funds only one ward of 62 beds has been available for this purpose The building contains 186 beds, so that just one third of them are being used New York is badly supplied with accommodation for poor pregnant women, the total capacity of such institutions in the city being less than 600 beds For the year ending Sept 30th, 1902, the number of births in the borough of Manhattan, according to the official returns of the Health Department, amounted to 51,665, showing that on an average one child was born every 10 minutes The statistics of the society during the past year showed a large increase in the number of cases over those attended in the course of the preceding year, the applicants being 4815, an increase of 1058 Of this number 878 were admitted into the hospital The total amount of money expended was $78,659 (£15 731) The report calls attention to the fact that the number of cases treated in the out-door departments of the society was less than a year ago while the number of applicants was very much larger The report lays special stress upon the need of a sufficient endowment to enable the new hospital to perform a vast work of good among the destitute poor of New York city

Feb 4th

Obituary.

JOHN WEBB WATKINS, M.D EDIN, M R.C S ENG

DR. WATKINS of Kirkby, Newton le Willows, Lancashire, who died somewhat unexpectedly on Jan 30th, had at various times occupied important positions. He was born at Towcester, Northamptonshire, in May, 1833, and came of a medical family, his father, Mr Thomas Watkins, and his grandfather, Mr Timothy Watkins, having been surgeons practising in that place. He studied medicine at University College, London, and at Edinburgh University, becoming qualified as M R.C S Eng in 1855 and graduating as M D at Edinburgh in 1856 In the early part of his career, we have been informed, he was a prominent figure in an episode of the first interest in medical history While he was a student at Edinburgh the anæsthetic properties of chloroform were discovered by Sir James Simpson, and Dr Watkins, who offered himself for the purpose of the experiment, was the first person to whom he administered it. Dr Watkins took so much interest in the question that he chose Anæsthesia in Natural and Morbid Parturition as the subject of his graduation thesis On entering professional life he at first spent some time in Towcester, assisting his elder brother In 1857 he settled in Newton le Willows and practised there up to the time of his death. He held a variety of appointments, including those of medical officer of health, certifying factory surgeon, medical officer to the post-office, and several others In 1887–88 he was president of the Lancashire and Cheshire Branch of the British Medical Association. He was honorary surgeon to the local volunteer force, attained the rank of surgeon major, and on retiring after being 20 years with the battalion he received the volunteer decoration for long service. He took a great interest in educational and Church work and was for a long period a member of many Liverpool diocesan committees, from which he was selected by the late and present Bishops of Liverpool to be a representative in the House of Laymen in York Dr Watkins was a widower and has left a large family Three of the sons are following their father's profession. The funeral took place at Newton Cemetery on Feb 3rd.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS —The following gentlemen passed the First Examination of the Board at the January quarterly meeting of the examiners in the subjects indicated —

Part I Chemistry —William Seaforth Alderson Firth College, Sheffield and Bradford Technical College Robert Nicholas William Biddulph University College, Bristol John William Hintcliffe, Owens College, Manchester Charles Walter Gordon Bryan St Mary's Hospital Arthur Grey Heslrige Buckby Guy's Hospital Martin Binns Studer Button London Hospital Percy John Chissell Middlesex Hospital Howard Dennis Clapham Birkbeck Institute William Warner Cook and Maurice Mason Earle Guy's Hospital Gilbert Henry Dive, St. Bartholomew's Hospital Leonard Edwards London Hospital Robert Eyton-Jones University College Liverpool John Stewart Farnfield L.D S Eng Guy's Hospital Eric Worsley Gandy Cambridge University and Westminster Hospital Harold Gibson London Hospital Henry Granger St Thomas's Hospital Gilbert Egerton Green, University College Liverpool Stanley Gordon Greene St Bartholomew's Hospital Morrice Greer University College Liverpool John Gladstone Ivors Owens College Manchester Thomas Robert Lloyd Jones London Hospital Arthur Rieussett Littlejohn St. Mary's Hospital Thomas Fletcher Lumb Cambridge University and Polytechnic Institute Richard Hugh McGillycuddy University College London William Beare Martin Owens College, Manchester Claude Harry Mills Guy's Hospital John Morris Middlesex Hospital; Charles Henry Lambert Petch St. Thomas's Hospital John Lawson Rankine, Guy's Hospital James Stanley Robertson London Hospital James Anderson Somerville, Owens College Manchester Richard Easlington Stevens, University College London; Wilfred Percy Tindal Atkinson St. Thomas's Hospital Ernest Guy Treharne University College, *Cardiff* Harold Thomsett Treves, St Thomas's Hospital and Lancelot Craven Wilkinson St. Bartholomew's Hospital.

Part II Practical Pharmacy —James Armstrong University of New Zealand and University College London; John Aylen St. George's Hospital Herbert Owen Marsh Beadnell Guy's Hospital Ernest John Hamilton Bowen London Hospital James Richard Alexander Clark Hall and Armin Gascoigne Vavasaur Elder St George's Hospital Ralph Crompton Owens College Manchester Trevor Evans, Glasgow University and London Hospital Frank Forrest Owens College Manchester Lennard William Forsyth Cambridge University and Middlesex Hospital Edward Slade Goss University College Bristol Major Greenwood London Hospital William Edwin Haigh private study Reginald Henry Hardwick, St. Thomas's Hospital; Dudley Raymond Harris and James Clarence Ledeat Kingston Middlesex Hospital Frederick Field Lawrence How Edinburgh University and University College London Hector Lionel Howell Charing Cross Hospital William James Deacon Inness, St Mary's Hospital; John Speechly Le Fevre University of Sydney and London Hospital Frederick Boulton Lowe, Guy's Hospital John Macarthur St. Mary's Hospital; Philip Jauvrain Marett Westminster Hospital;

Edward Pigott Minett and John Orrett Musson Guy's Hospital Clayton Conyers Morrell University College Liverpool and London Hospital Joseph Clement Arthur Norman London Hospital Max Onslow Ford St Bartholomew's Hospital, Arthur Robert Phelps Cambridge University and St. Thomas's Hospital George Meredith Sanderson London Hospital Frank Montague Wilson South Westminster Hospital William Arthur Tatchell London Hospital Louis Clifford Thompson University College, London Frederick Herbert Wallace, Guy's Hospital and Howard Francis Warner London Hospital

Part III Elementary Biology—Edward Morison Adam, Charing Cross Hospital William Seaforth Alderson, Bradford Technical College Richard Clayton Allen Mason College, Birmingham Sealy Highmore Andrews B.A. Camb St Bartholomew's Hospital Allan Angell Guy's Hospital Raymond Ebenezer Apperly Middlesex Hospital Thomas Herbert Cecil Benians and Arthur James Brown London Hospital Josiah Browne and Gordon Comyn, King's College Hospital Joseph Aloysius Byrne Owens College Manchester William Warner Cook, Guy's Hospital Gilbert Henry Dive St. Bartholomew's Hospital Frederick Dunphy Westminster Hospital James Butler Fairclough Yorkshire College, Leeds Hugh Galloway Westminster Hospital James Randolph Gyllencreutz and Francis Bryan Hicks St. Thomas's Hospital Christian Frederick Louis Leipoldt Guy's Hospital Thomas Robert Lloyd Jones Walter Everard Lloyd and Ernest MacEwan, London Hospital Philip Walter Mathew Middlesex Hospital Mahmoud Maher Cairo and Guy's Hospital John Morris City of London College Lionel Alexander Burke Moore Guy's Hospital Reginald Mugliston London Hospital Rowland Mabbatt Peake Middlesex Hospital Charles Henry Lambert Petch St Thomas's Hospital William Joseph Petty University College Cardiff William Padget Pinder Yorkshire College, Leeds James Stanley Robertson London Hospital Richard William Starkie, Owens College Manchester Leslie St Vincent-Welch and Edward Leonard Taylor St Bartholomew's Hospital Wilfred Percy Tindal Atkinson St Thomas's Hospital and Aubrey Dean Vernon Taylor and John Nuthall Watson, Guy's Hospital.

Anatomy and Physiology—Evelyn Addison Wentworth Alleyne, St. Mary's Hospital Richard Dunlop Barron Otago University and Guy's Hospital Frederick John Chanter Blackmore, University College, Sheffield Stanley Leemore Brimblecombe St. Mary's Hospital John Frederick Broughton, University College, London Norman Huthnance Bye Durie Avery Chamberlain B.A. Camb. and Samuel Barrett Couper B.A. Camb. London Hospital Cecil Ernest Clay Yorkshire College, Leeds Thomas Bonnor Davies St. Bartholomew's Hospital Arthur Hubert Davies St. George's Hospital Robert Davies Colley B.A. Camb. Cambridge University Horace Charlton Devas St. Thomas's Hospital Leslie Doudney Guy's Hospital, Charles Horace John Fagan B.A. Camb St. George's Hospital John Eugène Forman London Hospital William Edward Lindsay Fowler St Bartholomew's Hospital Alexander Edward Gordon Fraser St. Mary's Hospital Henry Wyndham Gooden University College Bristol Frederick William Goonetilleke, Licentiate Ceylon Medical College King's College, London, Hugh Evelyn Gotelee St. Thomas's Hospital Alexander Savell Graham, Charing Cross Hospital Raymond Sydney Harper Guy's Hospital John Hyde Iles B.A Camb Cambridge University Edwin Clark Jones, St. Thomas's Hospital William Wilfred King University College Bristol Charles Noble Le Brocq B A. Camb., Cambridge University and St. Bartholomew's Hospital Malcolm Leckie Guy's Hospital, William Lennox, University College Bristol Thomas St. Leger Leyshon, London Hospital Albert Lawrence Loughborough, St. Thomas's Hospital Mahmoud Maher Cairo and Guy's Hospital Edward Cronin Lowe Herbert Cecil Malleson Brian Bentley Metcalfe Thomas Norman Edgar Lionel Robert Norton Guy's Hospital Carlos Bernabel Mara and Ernest William Mynall Paine St. Bartholomew's Hospital Henry Sandford Ollerhead, St Mary's Hospital Felix William Parfitt Guy's Hospital Benjamin James Phillips, University College, Cardiff Ernest Dudley Richardson, St. Mary's Hospital Thomas Rowland Roberts and Louis Philip Sanders, London Hospital James Edmund Smith St Bartholomew's Hospital Evelyn Charles Sprawson L D S R C S Eng and James Leonard Octavia Tilley L.D S Eng Charing Cross Hospital William Hugh Raymond Streathfield B A. Camb St. George's Hospital Arthur John Turner London Hospital John Grandison Watkins St. Bartholomew's Hospital Edward Denis Whittle University College, London Edward Wight Cambridge University, Henry Findon Wight Guy's Hospital Cyril Oswald Oxford Williams Everard Lister Wright, and Harold Nairne Wright, St Bartholomew's Hospital and Archibald Paterson Wright University College, Liverpool.

Anatomy only—Arthur Frank Palmer Cambridge University and Middlesex Hospital

Physiology only—Norman Henry Oliver Guy's Hospital.

CONJOINT EXAMINATIONS IN IRELAND BY THE ROYAL COLLEGE OF PHYSICIANS AND ROYAL COLLEGE OF SURGEONS IN IRELAND—At the examination for the Diploma in Public Health the following candidates passed —

W H. Hornibrook, L.R C P & S Irel. J M. Keegan M.A. M B B Ch R.U.I J McLiesh, M.B B Ch, R.U I.; J B. Stephenson M.D Durh.

TRINITY COLLEGE, DUBLIN—At examinations held recently the following candidates were successful —

PREVIOUS MEDICAL EXAMINATION

Anatomy and Institutes of Medicine.—Robert A. Askins, Cecil Scaife, and John B B Whelan

Physics and Chemistry—Henry H. A. Emerson, Joseph C A. Ridgway Joseph E. N Ryan, William E. M. Armstrong, Cyril H. M Comas and John Murdoch.

Botany and Zoology—Thomas P Dowley William M. Johnston, William H. Kennedy Charles Ff Rolleston, and James G M. Moloney

LITERARY INTELLIGENCE—His Majesty the King and His Royal Highness the Prince of Wales have graciously been pleased to accept copies of the first Prize Essay for the Erection of "The King Edward VII Sanatorium" for the Treatment of Tuberculosis, by Arthur Latham M A, M D Oxon, M.A Cantab. assistant physician at St George's Hospital and to the Brompton Hospital for Consumption, in association with A William West, architect. —A new edition of "The Uniform System of Accounts for Hospitals and Institutions," by Sir Henry Burdett, K.C.B, will shortly be issued by the Scientific Press, Limited

BIRMINGHAM GENERAL HOSPITAL.—A rare cause of death occurring from the administration of nitrous oxide gas happened at the above hospital on Jan. 28th to a man, aged 33 years. At the inquest it was stated that the patient had an enlarged gland in his neck which was probably connected with the presence of some bad teeth The gas was administered by the house surgeon from a cylinder in the ordinary way When the dentist had extracted one of three teeth the man became blue and asphyxiated and in spite of prompt treatment he never rallied His chest had been specially examined beforehand and his breathing was stated to have been quite clear. It is not a common result, fortunately, for such an event to occur and the confidence in the use of gas need not be unnecessarily shaken.

BOOKS, ETC, RECEIVED

ASSOCIATION OF AMERICAN PHYSICIANS (Dr Henry Hun, Secretary 149 Washington Avenue, Albany N Y)
Transactions of the Association of American Physicians Seventeenth session, held at Washington, D C April 29 and 30 1902. Volume xvii. Price not stated.

BAILLIÈRE, J B. et Fils, 19 Rue Hautefeuille, Paris.
Chirurgie Intestinale d'Urgence. Par Albert Mouchet Chef de Clinique Chirurgicale à la Faculte de Médicine de Paris. ("Actualités Médicales" series) Price 1 fr 50

BROWNE, T B LIMITED 163 Queen Victoria-street E.C
An Epitome of Useful Information relating to Trade Marks Letters Patent Designs Copyright and the Use of the Royal Arms. Price 2s 6d.

CASSELL AND CO LIMITED London, Paris New York and Melbourne.
Diseases of Women A Clinical Guide to their Diagnosis and Treatment. By George Ernest Herman M.B Lond. F R.C.P Obstetric Physician to and Lecturer on Midwifery at the London Hospital. Revised edition. Price 25s

GOVERNMENT PRINTING OFFICE, Washington.
Index Catalogue of the Library of the Surgeon-General's Office, United States Army Authors and Subjects Second series Vol. vii., Hernia–Inquiry Price not stated

JOHN BULL PRESS Limited, 5 Henrietta street Covent-garden, W C
John Bull's Year Book for 1903. A Merry Manual full of Facts and Fancies Grave and Gay Edited by Arthur à Beckett. Price 1s.

KIMPTON HENRY 13, Furnival-street Holborn E.C
A Text-book of Anatomy By American Authors Edited by Frederic Henry Gerrish, M D., Professor of Anatomy in the Medical School of Maine, Bowdoin College Second edition, revised and enlarged. Price 32s net

LIPPINCOTT J B COMPANY 5, Henrietta street Covent garden W C
International Clinics Edited by Henry W Cattell A.M. M.D Philadelphia, U.S.A. Vol. iv Twelfth series. 1903. Price not stated

LONGMANS GREEN AND CO 39 Paternoster-row E.C
Human Personality and its Survival of Bodily Death By Frederic W H. Myers. In two volumes. Price 42s. net.

MARLBOROUGH, E., AND CO 51, Old Bailey E C
Hindustani Grammar Self taught By Capt. C A. Thimm. Price 2s bound in cloth 2s 6d.

SCIENTIFIC PRESS LIMITED 28 and 29 Southampton-street Strand, W C
The Nurse in Hot Climates. Revised and reprinted from the *Hospital Journal*. By Edward Henderson, M.D F.R C S. Edin., late of Shanghai, China. Price 1s. net.

STOCK, ELLIOT, 62, Paternoster row E.C
What a Piece of Work is Man with Christian Evidences. By Frederick James Gant, F R.C.S Consulting Surgeon to the Royal Free Hospital. Price 2s 6d.

Stuber A. (C Kabitzsch) Würzburg
Die physikalisch-diätetische Therapie in der ärztlichen Praxis. Von Dr med Bernhard Presch Arzt in Hannover Lieferung IV Price M.3.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to The Lancet *Office, directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week, for publication in the next number*

Anderson William M.B B Ch has been appointed Second House Surgeon to the Royal London Ophthalmic Hospital

Awdry Walter Robert, M B Durh M R C S has been re-appointed Medical Officer to the Berkeley (Glos) Hospital.

Batten Rayner Winterbotham M D , F R C P Lond , M.R C S J P has been appointed Consulting Physician to the Berkeley (Glos) Hospital

Berkeley Augustus Frederick Millard, L R C P & S Edin. L F P S Glasg has been appointed Medical Officer for the Sixth District and Public Vaccinator for the Third Rural District by the Bath Board of Guardians vice Mr J A. M. Thomson resigned

Bonar Thomas Mitchell M B , C.M Glasg has been appointed Medical Officer for the Tregoney and Probus Districts by the Truro Board of Guardians

Bryan Frank, B C Cantab has been appointed House Physician to the Derbyshire Royal Infirmary

Campbell Colin A M D Toronto has been appointed Third House Surgeon to the Royal London Ophthalmic Hospital

Dow W B M D St And F R C S Edin has been appointed a Medical Referee under the Workmen s Compensation Act 1897 for the Sheriffdom of Fife and Kinross, to act for the district of Dunfermline with Kinross

Fraser C L F R C P F R C S Edin has been appointed Certifying Surgeon under the Factory Act for the Berwick-on Tweed District.

Hope C M. M B , Ch B Glasg has been appointed House Surgeon to the Derbyshire Royal Infirmary

Inman William S , M B Lond L S A. has been appointed Senior House Surgeon to the Royal London Ophthalmic Hospital

Myers A. A., L.R C P Lond M R.C S has been appointed Assistant House Sugeon to the Derbyshire Royal Infirmary

Osborn E C , L.R C P Lond has been appointed Medical Officer of the Union Schools at Mitcham

Savage G H M.D Lond. F R C P Lond., has been appointed Consulting Physician in Mental Diseases to Guy's Hospital

Targett J H M.S Lond F R C S Eng , has been appointed Obstetric Surgeon to Guy's Hospital.

Wallace Arthur J , M D Edin , has been appointed Surgeon to the Hospital for Women Liverpool

Wethered Ernest M.B Lond M R C S L R C P Lond. has been appointed House Surgeon to the Derbyshire Royal Infirmary

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

Auckland Rural District Council.—Medical Officer of Health. Salary £350 per annum

Birmingham Corporation Waterworks Hospital, Elan Valley, Radnorshire.—Resident Surgeon Salary £250 per annum with board and lodging Also Resident Medical Officer Salary £300 per annum with board lodging and drugs

Birmingham General Hospital.—Honorary Obstetric Officer

Bury Infirmary —Junior House Surgeon Salary £90, with board, residence, and attendance.

Cardiff University College.—Bacteriologist to the Joint Committee of the Glamorgan County Council and Cardiff Corporation and Lecturer in Bacteriology in the University College Cardiff Salary £300 a year

Devonshire Hospital, Buxton Derbyshire.—Assistant House Surgeon. Salary £70 per annum, with apartments board, lodging, and laundry

Dorset County Hospital, Dorchester —House Surgeon, unmarried. Salary £100 with board and residence.

East London Hospital for Children and Dispensary for Women, Shadwell, E —Medical Officer for the Casualty Department for six months renewable Salary at rate of £100 per annum, with luncheon Also House Surgeon for six months, with board and residence Honorarium of £25

Evelina Hospital for Sick Children, Southwark, S.E.—Two Physicians to Out-patients

Farnborough Urban District Council.—Medical Officer of Health Salary £60 per annum

Hospital for Sick Children Great Ormond-street London, W C.—Clinical Pathologist and Bacteriologist. Honorarium 50 guineas Also House Physician unmarried, for six months Salary £20 with board and residence

Ingham Infirmary and South Shields and Westoe Dispensary —Junior House Surgeon Salary £75 per annum with residence, board and washing

Kent County Asylum Barming heath, Maidstone —Fourth Assistant Medical Officer unmarried Salary £175 per annum rising to £200, with residence attendance &c

Manchester Owens College —Junior Demonstrator in Physiology Stipend £100 rising to £150 per annum

Middlesex Hospital Medical School.—Lecturer on Physiology

Newcastle on Tyne Dispensary —Two Visiting Medical Assistants Salary £160

National Hospital for the Paralysed and Epileptic Queen square Bloomsbury —House Physician Salary £100 with board and apartments

North Eastern Hospital for Children Hackney road, Bethnal Green N E —Assistant Physician

Rotherham Hospital and Dispensary —Senior House Surgeon. Salary £110 per annum, with rooms commons and washing

Royal Dental Hospital of London Leicester-square W C —Curatorship to the Pupils Mechanical Department Salary £200 per annum increasing to £300 Also two Demonstrators with salaries of £200 and £100 per annum respectively

Royal Surrey County Hospital, Guildford —Assistant House Surgeon Salary £75 with board residence and laundry

Stockport Infirmary —House Surgeon Salary at rate of £100 per annum, with board washing and residence

St Paul s Hospital for Skin and Genito-urinary Diseases Red Lion square W C —Honorary Assistant Surgeon.

Torquay Borough of —Medical Officer of Health. Salary £400 per annum rising to £500

West London Hospital Hammersmith road W —Assistant Surgeon.

Wolverhampton and Staffordshire General Hospital.—Assistant House Physician for six months Honorarium at rate of £75 per annum with board, lodging and washing

Births, Marriages, and Deaths.

BIRTHS

Barrett —On Feb 8th at Iver Bucks, the wife of E. Howard Barrett M B Durh. of a daughter

Crawshaw – The wife of J H Crawshaw L S.A Lond Midland View, Elsecar of a daughter (still born)

Turner.—On Feb 6th at Plympton House, Plympton, South Devon, the wife of Alfred Turner, M D Edin., of a daughter

MARRIAGE

Marshall—Higginson —On Feb 4th at St. Jude s Church South Kensington by the Rev Salter St. George John Hartley M.A., *vicar of Exton Rutland assisted* by the Rev William Millar M.A., vicar of Tillingham Essex and the Rev Prebendary Eardley Wilmot M A vicar of the parish Thomas Bingham Marshall M R C S , L.R C P of The Limes Tillingham Essex, elder son of the late Thomas Alexander Marshall, to Ruth Forbes, youngest daughter of Arthur Higginson of 46 Penywern road, South Kensington.

DEATHS

Brake.—On Feb 8th, at San Remo Craneswater-park, Southsea, Surgeon General Brake late I M S aged 75

Sharp —On Feb 9th at the Royal Victoria Hospital Hull, Ellen Mary Sharp M.B Lond , House Surgeon to the hospital, aged 28 years

Watkins.—On the 30th Jan. at Kirkby, Newton le-Willows suddenly, John Webb Watkins M D , aged 69

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths

Notes, Short Comments, and Answers to Correspondents.

THE MEDICAL MAN THE CORONER AND THE PATHOLOGIST

AT a recent inquest in circumstances which we have already described a censure was passed upon a medical man in his absence the absence having been explained to Mr Troutbeck in a letter which Mr Troutbeck, according to the reports in the press described as impertinent. The writer of the letter Mr Ernest R. Badcock says that this description of his letter may do him professional damage and asks us to publish it that his colleagues may judge of it Here it is —

SIR,—I cannot allow to pass without protest your misguided action towards me with regard to the inquest on the body of the child Harvey

Surely it is of importance in the interests of justice that the medical man who is first called to the case be called at the inquest.

It was a frequent question of your much respected predecessor the late Mr Braxton Hicks And *doctor what do you know of* the character of these people?" How is it possible that a stranger coming in can further the ends of justice in this way however much he may be able to teach the general medical practitioner about his work?

I must apologise for using this paper, *it is the only writing paper* I find available at the moment.

I am, Sir your obedient servant,

ERNEST R BADCOCK.

Mr Coroner Troutbeck Town Hall Wandsworth

We cannot see any impertinence in the above letter Mr Badcock, like ourselves considers Mr Troutbeck's procedures in the matter of medical evidence wrong Mr Badcock was *absent from the inquest* because he did not receive a subpœna and we think that he was quite right to absent *himself for that reason. If medical evidence is* required it should be obtained in the proper way Medical men must not give *medical evidence to a coroner s officer* for him to repeat probably incorrectly and certainly unintelligently to a jury That way leads to failure of justice. Nor should medical men be compelled to attend inquests without a subpœna so as to protect themselves from misrepresentation possibly of a damaging nature We have reason to know that Mr Troutbeck repudiates very strongly the idea that he is acting in opposition to or in a contemptuous way towards the medical profession We hope that he will tell his juries that no medical man *need attend an inquest unless he is properly summoned* and that no imputation rests on his character if he refuses to give medical *evidence save under subpœna.* Mr Badcock has, we think, been treated with distinct hardship

We continue to receive letters similar to the one that follows and we trust that the matter will be brought properly to the attention of the London County Council —

To the Editors of THE LANCET

SIRS —Regarding the innovation in procedure which has been sprung upon the medical profession and the general public by Mr Troutbeck will you allow me to draw attention to the fact that even eminent pathologists are not always able to account for death after opening and *examining a body?* The fullest proof of death from natural causes is afforded by the evidence of the medical attendant concerning the nature and symptoms of the illness as he has observed them before death *plus* the evidence of this same observer or another pathologist assisting him concerning what is found internally and externally after death Neither the one part of evidence nor the other can ever equal the two together A pathologist however eminent he *may* be, should never determine the natural cause of death *before* a jury *if* there has been a medical attendant in the case The latter should determine, being assisted by another pathologist when desirable whose only duty it should be to present *facts* and figures regarding what he finds

This innovation introduced by Mr Troutbeck, is one of very great importance to the medical profession and the general public, for other municipal councils may be induced to advocate the adoption of the same procedure

I am, Sirs yours faithfully

Surbiton Jan 31st 1903.

HAYDN BROWN

EMPLASTRUM BELLADONNÆ (?)

To the Editors of THE LANCET

SIRS —Some months *ago two cases* came to my notice where emplastrum belladonnæ (labeled as such) produced distinct blistering In one case I saw the blister *myself* and I would have said it was due to cantharides. In the other case I saw the pigmented scar and on inquiry I *found* that there had been marked blistering I had the curiosity to inquire who were the makers of the *plasters* and *I found* that both were made by the same firm but sold by different druggists. One of these to whom I mentioned the *matter wrote* to the makers and they replied that strong belladonna plaster sometimes produced blistering I have never seen anything more severe than slight irritation from the application of a belladonna plaster I would like to elicit any information as to whether other practitioners have had a similar experience. A blister 6 × 10 inches is rather an unpleasant result of the application of a belladonna plaster for the relief of pain in the back

I am Sirs yours faithfully,

Jan. 28th, 1903.

B. R

PATENT HYGIENIC UNDERWEAR

WE have received specimens of underclothing invented by a foreign medical man Dr Rasurel *The materials of* which the clothing is made are wool and peat fibre This fibre is very absorbent and possesses antiseptic properties. The clothing is supplied either in the *natural* greyish-brown colour or bleached It makes a warm and singularly light garment even in the thickest qualities. The seams are very carefully turned *so that there are no* rough edges, and from a personal trial we can say that the garments *are comfortable* and that *no shrinking is* apparent at least after one washing although no woollen fabric will stand the manipulations, or rather the machinations of a London washerwoman for long The clothing can be obtained by application to Mr H. Clauzier, 105–107 Wood-street London E C

THE FUNCTIONS OF A PARISH NURSE

WE *have received a circular dealing* with the appointment of a parish nurse for the parish of All Saints, Wyke Regis The nurse is apparently under the control of a benefit nursing club to which the medical adviser is stated to be Dr Moore. Among the rules of the nursing club as given in the circular the first one reads as follows —

The nurse will be qualified to attend *ordinary cases of* illness and confinements but must not attend infectious cases" Other *rules state that there will be no fees for* attendance except in the case of confinements and for the latter a fee of *7s 6d* is paid For *this charge* (says *Rule 4*) the nurse will *confine* the mother and attend her and the baby twice a day for 10 days Whenever necessary the nurse shall call in the doctor at the time of confinement In the case of the wives of labourers and artisans this *doctor s fee* will be paid by the nursing club" With regard to Rule 1 stating that the nurse will be qualified to attend *ordinary cases* of illness we wrote to the secretary to inquire whether or not the nurse had a registrable *medical qualification,* and we received the following answer The nurse attached to the Wyke Regis Benefit Nursing Club has a medical *qualification for nursing* We presume this means that the lady in question holds the certificate of the Obstetrical Society of London, which of course is no qualification of any kind We have no doubt that a parish nurse is a most useful official but we cannot think it right that any persons should be at liberty to apply for her services except with the leave and at the direct instigation of their medical attendant It seems to us that Rule 1—viz. The nurse will be qualified to attend *ordinary* cases of illness —simply means that the nurse is an unqualified medical practitioner and we shall be glad if the committee or the medical adviser to the club will inform us what are considered to be ordinary cases of illness and in what manner the nurse is qualified to attend such cases.

CITRATE OF CAFFEIN

To the Editors of THE LANCET

SIRS —I should be very much obliged if you or any of your readers would refer me to any reliable source of information concerning excessive indulgence in citrate of caffein I wish to ascertain whether the acquirement of a habit of taking this drug has often been met with and what the effects of long continuance of large *doses* are likely to be. With regard to effects can it be responsible directly for (*a*) polyuria, and (*b*) very obstinate *constipation?* And can it of itself lead to pigmentation of the skin? I must apologise for troubling you, but I have been unable to find any accounts on the subject.

I am Sirs yours faithfully

E T

LONGEVITY

IN THE LANCET of Sept 7th (p 343) and *21st* (p 427) *1878* and April 5th 1902 (p 979) reference was made to the case of a man named Michael Solis who in *1878* was *living* in Bogotà, Colombia, South America, and at that time claimed to be 184 years old Evidence, however was *forthcoming* to the effect that his age was in reality not much if at all over 90 A similar story is now being *repeated* the details as given in the *Liverpool Daily Post* of Jan 30th being to the effect that Manuel Del Valle, of Menlo-park, *California* has reached the age of 157 years. The certificate of his birth which he has always had in his possession was signed *by the then chief* magistrate of Zacatecas Mexico and shows that he was born there on Nov 24th 1745 This proof is *supplemented by the records* of the Mexican Customs Service in which he served 20 years while from 1814 to 1845 he *acted as supernumerary* in the *Franciscan* Mission at San Quentin in Lower California, the first mission building erected *on the Pacific coast. In 1845* when he was just 100 years of age, he went with some relatives to what is now San Francisco and has *occupied the house* in which he now lives ever since. He is naturally a dried up specimen of a man scarcely five feet in height and weighs *about* 90 pounds but he is still able to walk about without assistance and goes for a little stroll every day His *eyesight* is considerably impaired but he hears very well Naturally he does not take solid food and all his life he has abstained *from* tobacco and alcohol.

QUICK LUNCHES

To the Editors of THE LANCET

SIRS —Your paragraph recommending physicians to impress upon their patients the wickedness of quick lunching does us a great injustice which we feel sure you will be only too glad to remedy when the facts are put before you The whole matter lies in the misinterpretation of the words quick lunch What we mean by that is lunch quickly served We propose to serve our customers as nearly as humanly possible without waiting In nine-tenths of the restaurants and tea rooms at present in existence a customer has to wait too long for his food and this is a waste of his time which we hope to remedy but we certainly have no wish in any way to dictate as to what time he shall take in eating it. Our customers will be free to take any time they may please in partaking of their meals and we hope to command their custom by quick service cleanliness and the appetising nature of the dishes we expect to place before them Trusting you will give this the same prominence as you did the paragraph in question we remain,

Yours truly

THE BRITISH COFFEE AND QUICK LUNCH SYN LIMITED

Feb 7th 1902 (H ERNEST BLOKETT, Secretary)

THE CASE OF DR RAINSBURY

To the Editors of THE LANCET

SIRS —I am desired by the council of the Midland Medical Union and by Dr Rainsbury to acknowledge the receipt of further donations to the fund raised to assist Dr Rainsbury in discharging the judgment which was given against him at the last Nottingham Assizes and which was deemed to be a great hardship upon him The judgment was for £25 and the costs were taxed at £152 6s 2*d* making together the sum of £177 6s 2*d* Of this members of the profession have generously contributed £77 0s 9*d* I have to express Dr Rainsbury s gratitude to the contributors for their assistance and the thanks of the council for the liberal response which has been given to the appeal

I am Sirs yours faithfully

GEORGE S O ROBKE

Nottingham Feb 9th 1903 Secretary Midland Medical Union

	£	*s*	*d*		£	*s*	*d*
By contributions already acknowledged	71	15	9	Dr F R Cassidi Derby (second donation making £4 4s)	2	2	0
Mr J F O Meara Walsall	1	1	0	Dr E Vaudrey Derby	1	1	0
Dr M A. Ruffer Alexandria	1	1	0		£77	0	9

THE PROSTITUTION OF THE POST OFFICE

A CORRESPONDENT writes to us that he is extremely annoyed at receiving a money lender s circular He asks whether any steps can be taken to prevent a repetition of this gross insolence We are afraid that nothing can be done We have on previous occasions referred to the manner in which the post-office distributes money lenders circulars advertisements of quacks and other offensive literature, but apparently nobody—not even the Postmaster General—has any power to put a stop to the annoyance. Our correspondent may consider himself lucky that he does not get worse things than money lenders circulars and in open envelopes or on post-cards

SUGAR IN VEGETABLES

To the Editors of THE LANCET

SIRS,—Would you kindly tell me whether celery the white of asparagus and sea kale are all rich in sugar ?

I am Sirs yours faithfully

Feb 9th 1903 B

*** The following is the proportion of carbohydrates in the vegetables mentioned : asparagus 2 9 per cent sea kale 3 8 per cent sea kale cooked 0·3 per cent celery 3 3 per cent and celery cooked 0 8 per cent.—ED L

ARE YOU REQUIRING SPECTACLES ?

A CORRESPONDENT has sent us a paragraph thus headed extracted from the *Bradford Daily Telegraph* which is an advertisement of a firm of consulting eye specialists and ophthalmic opticians named Forshaw and Co F S M C A testimonial in the shape of a letter from Dr A. Ramage L R C P L R C S Edin is appended which says that it is not surprising that my friend Dr Charles Forshaw should be so singularly successful as an optician " &c. Such a letter from a qualified medical man to people of the class of Forshaw and Co seems to us surprising

QUALIFICATIONS FOR PRESCRIBING

To the Editors of THE LANCET

SIRS —Will you be kind enough to inform me if it is *illegal* in Britain for the possessor of a diploma (M D) from a highly reputable medical college in the United States to prescribe or give away a medicine which contains poison ?

I am, Sirs yours faithfully,

Feb 7th, 1903 OLYMONT

*** It is not illegal for anyone to prescribe or to give away a medicine containing a poison provided that the person so doing does not pretend or imply that he is a registered medical practitioner —ED L

THE TESTIMONIALS TO ODOL.

IN reference to our allusion to a testimonial apparently given by the late Dr Leonard Wilde to the Odol Company the original document has been produced to us There can be no doubt that the testimonial in question was printed in perfectly good faith by the Odol Company who believed that they were right in attributing it to Dr Leonard Wilde In regard to Dr A S Gubb s letter published in our issue of Jan 24th disclaiming the testimonial purporting to be given by him to the merits of odol" we are informed that the words occurred in a compilation made by him from foreign criticisms and that his name was attached to them in error The proprietors of odol" state that they have already apologised to Dr Gubb in a manner that at the time appeared quite satisfactory to that gentleman for their error in affixing his name to the words but they cannot allow the suggestion to remain uncontradicted that the testimonial is a fictitious one

SANATORIUMS FOR TUBERCULOUS CASES

To the Editors of THE LANCET

SIRS,—I have noticed from time to time inquiries in your columns as to what facilities there exist for giving the poorer classes the advantages of the open air treatment for pulmonary tuberculosis. I write to tell you that I and my colleague here Mr J B Chapman, have arranged for the reception of 12 early cases in a house near here where we are prepared to treat them for 17*s* a week per head The patients however must be genuine early cases The 17*s* just cover the cost of board and lodging There is no charge for professional attendance or *drugs &c. (The patients must of course be of the class unable to pay* for treatment at even the cheapest sanatoriums)

I am Sirs yours faithfully

NOEL D BARDSWELL, M D M R C.P Edin. &c.

Mundesley Norfolk Feb 6th 1903

◆

Rusticus —1 Our correspondent will find the answer to his first question in an annotation headed ' Ante-Natal Rigor Mortis " which appears at p 460 of this issue of THE LANCET 2. It is no doubt possible for meconium to be expelled soon after the death of a fœtus either in utero or after birth by peristaltic action of the intestine since such contractions persist for some little time or by the production of increased intra abdominal pressure due to putrefaction Its expulsion is however much more commonly due to pressure on the abdomen of the child alive or dead during birth or to excessive peristaltic action of the bowel at the time of death

Country Practitioner —The community are perfectly right to make a representation to the Local Government Board if they can produce real evidence of jobbery The Local Government Board would certainly consider such a petition but a petition claiming the post for a particular candidate on the ground of his diploma or his residence would not have much weight.

M B Camb has not inclosed his name and address

ERRATA —Dr William Hunter requests us to insert the following with regard to his paper on Pernicious Anæmia which was concluded in THE LANCET of Feb 7th 1. Page 368 column 1 under *Summary* A spontaneous origin without clear etiology is the rule " should read is the exception 2 Page 369 column 2 top paragraph ' the past 25 years, should read ' the past 15 years."

Medical Diary for the ensuing Week.

OPERATIONS

METROPOLITAN HOSPITALS

MONDAY (16th) —London (2 P M) St Bartholomew s (1 30 P.M) St. Thomas s (3 30 P M) St George s (2 P M) St. Mary s (2.30 P.M) Middlesex (1 30 P M) Westminster (2 P M) Chelsea (2 P.M) Samaritan (Gynæcological by Physicians 2 P M) Soho-square (2 P M), Royal Orthopædic (2 P M) City Orthopædic (4 P.M) Gt. Northern Central (2 30 P M) West London (2 30 P.M), London Throat (9 30 A.M) Royal Free (2 P M) Guy s (1 30 P M)

TUESDAY (17th) —London (2 P M) St. Bartholomew's (1 30 P M), St. Thomas s (3 30 P M) Guy s (1 30 P M), Middlesex (1.30 P M) Westminster (2 P M) West London (2.30 P.M) University College (2 P M) St George s (1 P M) St. Mary s (1 P M), St. Mark's (2.30 P.M) Cancer (2 P.M.) Metropolitan (2.30 P M) London Throat (9.30 A.M) Royal Ear (3 P M) Samaritan (9 30 A M and 2.30 P.M.) Throat Golden-square (9 30 A.M) Soho-square (2 P M)

WEDNESDAY (18th) —St Bartholomew's (1.30 P M) University College (2 P M) Royal Free (2 P M) Middlesex (1 30 P M) Charing Cross (3 P M) St. Thomas's (2 P M), London (2 P.M) King s College (2 P.M), St. George s (Ophthalmic, 1 P M) St. Mary's (2 P.M) National Orthopædic (10 A.M.) St Peter's (2 P M) Samaritan (9 30 A M and 2.30 P M) Gt Ormond-street (9 30 A.M) Gt. Northern Central (2.30 P M), Westminster (2 P.M) Metropolitan (2.30 P.M) London Throat (9.30 A M.), Cancer (2 P.M) Throat Golden square (9 30 A.M) Guy's (1.30 P M)

THURSDAY (19th) —St. Bartholomew's (1 30 P M) St. Thomas s (3.30 P.M.) University College (2 P M) Charing Cross (3 P M) St George s (1 P M), London (2 P M) King's College (2 P M) Middlesex (1.30 P M) St Mary s (2.30 P M), Soho-square (2 P M) North West London (2 P M) Chelsea (2 P.M) Gt. Northern Central (Gynæcological, 2.30 P M) Metropolitan (2.30 P.M) London Throat (9.30 A.M) St. Mark's (2 P M) Samaritan (9.30 A.M and 2.30 P M) Throat Golden-square (9 30 A.M.) Guy's (1.30 P.M.)

FRIDAY (20th)—London (2 P.M.) St Bartholomew's (1.30 P.M.) St Thomas's (3.30 P.M.) Guy's (1.30 P.M.) Middlesex (1.30 P.M.) Charing Cross (3 P.M.) St George's (1 P.M.) King's College (2 P.M.) St. Mary's (2 P.M.) Ophthalmic (10 A.M.) Cancer (2 P.M.) Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.) London Throat (9 30 A.M.) Samaritan (9.30 A.M. and 2.30 P.M.) Throat Golden-square (9.30 A.M.) City Orthopædic (2.30 P.M.) Soho-square (2 P.M.)

SATURDAY (21st)—Royal Free (9 A.M.) London (2 P.M.) Middlesex (1.30 P.M.) St. Thomas's (2 P.M.) University College (9 15 A.M.) Charing Cross (2 P.M.) St George's (1 P.M.) St. Mary's (10 P.M.) Throat Golden-square (9.30 A.M.) Guy's (1.30 P.M.)

At the Royal Eye Hospital (2 P.M.) the Royal London Ophthalmic (10 A.M.) the Royal Westminster Ophthalmic (1.30 P.M.) and the Central London Ophthalmic Hospitals operations are performed daily

SOCIETIES

MONDAY (16th)—MEDICAL SOCIETY OF LONDON (11 Chandos-street Cavendish square, W)—9 P.M. Dr H. Radcliffe Crocker The Conditions which Modify the Characters of Inflammations of the Skin and their Influence on Treatment Lecture I—Introductory (Lettsomian Lecture.)

TUESDAY (17th)—THERAPEUTICAL SOCIETY (Apothecaries Hall, Water lane, Blackfriars)—3.30 P.M. Council Meeting 4 P.M. Election of Council and Officers of the Society Papers—Dr Hutchison The Use of Acid Sodium Phosphate in Alcalinity of the Urine.—Dr Burnet (Edinburgh) Ichthyol in the Treatment of Pulmonic Disease.

PATHOLOGICAL SOCIETY OF LONDON (20, Hanover square, W).—8.30 P.M. Card Specimen Dr Bainbridge. Papers—Mr Barnard Trauma and Infection at the Epiphysial Line.—Dr O Grünbaum Membranous Gastritis—Dr Churton: Chronic Pancreatitis with Calculi.—Dr B Shaw and Mr T W P Lawrence: Abscess of Septum Auricularum Stenosis of Superior Vena Cava and of Right Pulmonary Veins.

WEDNESDAY (18th).—ROYAL MICROSCOPICAL SOCIETY (20 Hanover-square, W)—8 P.M. Dr A. W Rowe Demonstration on the Photomicrography of Opaque Objects as applied to the Delineation of the Minute Structure of Chalk Fossils.

THURSDAY (19th)—HARVEIAN SOCIETY OF LONDON (Stafford Rooms Titchborne-street, Edgware-road, W).—8.30 P.M. Clinical Evening Cases will be shown by Dr E Cautley Mr F Jaffrey and others.

FRIDAY (20th)—SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN (11, Chandos-street, Cavendish square W)—5.30 P.M. Clinical Cases by Mr H. J Curtis Dr G A. Sutherland, Dr J Taylor Dr A. Morison and Dr L. Guthrie. Paper—Dr G Carpenter On Cases of Uncomplicated Myocarditis.

LECTURES, ADDRESSES DEMONSTRATIONS &c

MONDAY (16th)—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof C B Ball: Adenoma and Adeno-Carcinoma of the Rectum. (Erasmus Wilson Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street W C)—4 P.M. Dr A. Whitfield: Clinique. (Skin.) 5.15 P.M. Mr D Drew: Diseases of the Breast

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W)—5 P.M. Dr Davis Affections of the Lungs and Pleura.

TUESDAY (17th)—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W C)—4 P.M. Sir W H. Broadbent: Clinique. (Medical.) 5.15 P.M. Mr E. Clarke Defects of Refraction. II.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W)—5 P.M. Mr Bidwell: Plaster of Paris Splints.

UNIVERSITY OF LONDON (Physiological Laboratory)—5 P.M. Dr W D Halliburton On the Chemistry of Muscle and Nerve. (Lecture on Advanced Physiology)

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen square, Bloomsbury)—3.30 P.M. Dr Ferrier: Cerebral Tumours

WEDNESDAY (18th)—ROYAL COLLEGE OF SURGEONS OF ENGLAND—5 P.M. Prof. C B Ball Adenoma and Adeno-Carcinoma of the Rectum. (Erasmus Wilson Lecture.)

MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22, Chenies-street W C)—4 P.M. Mr H. Marsh Clinique. (Surgical.) 5.15 P.M. Dr G H Savage: Insanity of Development

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W)—5 P.M. Dr Robinson Pelvic Pain

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton)—4 P.M. Dr P Kidd Cases of Laryngeal Tuberculosis.

THURSDAY (19th)—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W C)—4 P.M. Clinique. (Surgical.) 5.15 P.M. Mr J J Clarke Tuberculous Disease of the Spine.

POST GRADUATE COLLEGE (West *London* Hospital, Hammersmith road, W)—5 P.M. Mr Baldwin Treatment of Some Injuries and Emergencies.

UNIVERSITY OF LONDON (Physiological Laboratory)—5 P.M. Dr T G Brodie: On the Circulation (Lecture on Advanced Physiology)

CHARING CROSS HOSPITAL.—4 P.M. Dr Murray: *Demonstration of Medical Cases.* (Post Graduate Course.)

THE HOSPITAL FOR SICK CHILDREN (Gt Ormond-street, W C)—4 P.M. Mr Collier Demonstration of Selected Cases.

NORTH EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital N)—4 P.M. Clinical Lecture—Mr H. W Carson: Some Remarks on Hernia.

FRIDAY (20th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof C B Ball: Adenoma and Adeno-Carcinoma of the Rectum. (Erasmus Wilson Lecture)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W C.)—4 P.M. Mr E. Clarke: Clinique. (Eye.) 5.15 P.M. Dr H. L Barnard: Acute Appendicitis.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W)—5 P.M. Dr Reece: Shellfish Culture in Relation to Disease.

UNIVERSITY OF LONDON (Physiological Laboratory)—5 P.M. Dr A. D Waller: On the Action of Anæsthetics and Narcotics. (Lecture on Advanced Physiology)

EDITORIAL NOTICES

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* 'TO THE EDITORS,' and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest or which it is desirable to bring under the notice of the profession, may be sent direct to this office

Lectures, original articles and reports should be written on one side of the paper only AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters whether intended for insertion or for private information must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners

Local papers containing reports or news paragraphs should be marked and addressed 'To the Sub-Editor"

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager*

We cannot undertake to return MSS not used

MANAGER'S NOTICES.

THE INDEX TO THE LANCET

THE Index to Vol. II. of 1902, which was completed with the issue of Dec 27th, and the Title-page to the Volume, were given in THE LANCET of Jan. 3rd.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1902 are now ready Bound in cloth, gilt lettered, price 18*s*, carriage extra.

Cases for binding the half-year's numbers are also ready Cloth, gilt lettered, price 2*s*. by post 2*s* 3*d*.

To be obtained on application to the Manager, accompanied by remittance.

TO SUBSCRIBERS

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices 423, Strand, W C are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c. should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices

Subscribers, by sending their subscriptions direct to THE LANCET Offices will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

METEOROLOGICAL READINGS

(Taken daily at 8.30 a.m. by Steward's Instruments)

THE LANCET Office Feb. 12th, 1903.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Rain-fall	Solar Radia in Vacuo	Maximum Temp. Shade	Min. Temp	Wet Bulb	Dry Bulb	Remarks 8.30 a.m.
Feb. 6	30·07	S	...	77	52	41	41	42	Fine
7	30·04	S.	...	65	54	42	49	51	Overcast.
8	30·03	S.W	0·01	60	55	51	50	51	Cloudy
9	30·33	W	...	76	53	51	51	53	Overcast
10	30·59	S.W	...	77	56	51	50	51	Overcast
11	30·49	S W	...	77	56	46	46	47	Overcast.
12	30·29	N.N.W	...	75	53	40	45	47	Fine

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The Lettsomian Lectures

ON

THE CONDITIONS WHICH MODIFY THE CHARACTERS OF INFLAMMATIONS OF THE SKIN, AND THEIR INFLUENCE ON TREATMENT

Delivered before the Medical Society of London

BY H RADCLIFFE CROCKER, M D, F R C P LOND,
PHYSICIAN TO THE SKIN DEPARTMENT UNIVERSITY COLLEGE HOSPITAL.

LECTURE I[1]

Delivered on Feb 16th 1903

MR. PRESIDENT AND FELLOWS,—Let me first thank you for the honour you have done me in electing me your Lettsomian Lecturer, though when I looked down the list of my distinguished predecessors I can only say that my temerity in accepting the responsibility has weighed upon me ever since I assented to do so, and all the more so, because the time afforded for the preparation of the lectures has been much curtailed by the unexpected prolongation of a previous task.

It is just about a century ago that Dr Robert Willan was issuing in parts his work on inflammations of the skin which was published in its complete form in 1808 He was a distinguished member of this society and was the second recipient of the Fothergillian gold medal in 1790 for the outline of his plan for the arrangement and description of cutaneous diseases. Although there had been previous attempts by Lorry, Plenck, and Alibert to present the study of skin diseases in an intelligible form it is not too much to say that Willan's treatise was so far in advance of its predecessors that he may be regarded as the father of modern dermatology and that his work, from its practical character, gave the study of skin diseases an impetus which it has never lost, and it will not, I trust, therefore, be a waste of time to glance briefly at his views before I show you how the subject may be regarded at the present day Willan looked at the matter entirely from its clinical aspect and divided inflammations of the skin into papular, scaly, vesicular bullous and pustular forms, the divisions depending on the most prominent clinical feature of the disease, although he was well aware that some diseases might pass from one phase to another—as papular into scaly and vesicular into pustular For many forms of inflammation his knowledge was not sufficient to connect different phases of the same disease together and so they were given a different name which our improved knowledge has shown to be unnecessary Willan was, in fact, the Linnæus of dermatology, and although his classification was artificial it was a very practical one, and even now we consciously or unconsciously often adopt the same division in our minds in the diagnosis of any particular case. For instance, if we have before us a vesicular eruption if we do not at once recognise it we go over all the vesicular diseases we know of and endeavour to fit the particular case into some known category I do not intend to prolong the accounts of Willan's early efforts, but it was the first real attempt to analyse carefully and to arrange the skin diseases he met with according to their clinical features, and so far as actual clinical description is concerned it was so accurate that it holds good now and ever will do so The analytical method also has been continued even to the present time, and to a more limited extent is still going on. Thus during the last ten years more than a dozen distinct clinical forms of disease have been differentiated and necessarily labeled and though they are for the most part very rare affections there can be no question that they are really separate forms of disease and that some, like acanthosis nigricans, which is often associated with visceral cancer, or the so-called bronze diabetes or the morbus cœruleus and chloroma, are intimately connected with general medicine.

It is not, however, these new forms of disease to which I desire to draw your attention in these lectures, but to present the other side of the picture—to show the progress which has been made in the last century and is still going on in what I may call the synthesis of disease and how our increased clinical and pathological knowledge is grouping diseases together which we had not known to be connected, and how certain processes, either separate or combined, modify the clinical features and are modified by other conditions of the individual attacked, and I shall endeavour to show that the knowledge of those processes and conditions exercises a decided influence in the successful treatment of many eruptions

In selecting the subject of inflammations of the skin I have also been influenced by the fact that they include more than half of all skin diseases, six out of every ten patients with skin eruptions having some form of inflammation, therefore every medical man must have many cases come before him for diagnosis and treatment. In 10,000 of my hospital cases nearly 6000 were inflammations and over two-thirds of these were included under three diseases—eczema, psoriasis, and impetigo contagiosa—while five-sixths were comprised in these diseases and three others, lichen planus, erythema, and urticaria. In my private practice the total was nearly the same, but the components were in different proportions As might be anticipated, the number of cases of contagious impetigo was small Eczema and psoriasis still headed the list in not quite so large a proportion. Lichen planus was more than twice as frequent, while the disfiguring acnes were nearly three times the number of the hospital cases, and the erythemata and urticarias were in nearly the same proportion

Let us first consider inflammation of the skin set up by irritants either in the course of the occupation of the individual or applied intentionally, or unintentionally, in various circumstances. Irritants, judged by the kind of dermatitis which they set up, may be divided into two classes—those which are so strong that they set up a violent inflammation in any skin exposed to their action and those of a milder character which only excite inflammation in a comparatively small number of those exposed to them, and in whom, therefore, there must be a special vulnerability, either natural or acquired. The first class are usually distinctive in so far that a practised eye can tell at once that it is an irritant dermatitis that has been present, and in many cases the actual irritant is demonstrated. Take, for instance, this drawing[2] It is at once obvious that these vesicles all over the palm are due to an irritant The yellow colour is due to aurantia, a yellow dye whose chemical name is hexa-nitro-phenyl amine. It is much used for cheap yellow shoes and other leather goods Apart from the colour, the abundant uniform sized vesicles, thickly crowded but without any arrangement, stamp this as an artificial eruption quite different from any form of what may be called natural dermatitis Contrast it, for example with the similar lesions of a chronic vesicular and pustular sweat eruption of the palm or of acute pompholyx, where the large and variable size of the lesions is so different. Here, again, is a bullous and erythematous inflammation excited artificially by a girl, aged 12 years, with a strong caustic applied with a broad brush, presumably from a morbid desire to excite sympathy The direction of the lesions the brush marks being distinctly visible, sloping from without inwards, enables its character to be easily recognised. Then I show three burns which are quite distinctive in their characters, produced by Roentgen rays, which have this awkward peculiarity, that they produce no visible or sensory effect at the time and the inflammation may not set in for days or even two or three weeks, after the last exposure This is a great drawback to their therapeutic employment in which it is often necessary to go on until there is a slight visible redness which may become a sudden severe dermatitis a week or two later In these three cases, the exposures were for radiographic diagnosis of the kidney and prolonged beyond what is necessary nowadays with improved apparatus All the lesions were in the centre of the abdomen. Case 1 was due to an hour's exposure, and although there was some redness the next day the severer inflammation set in six days later It took two months to heal. In the second case there were several long exposures, and the dry black slough remained for months without alteration or separation In the third case, healing has not been more complete than the drawing shows in six years, and this network of dilated vessels marks the original area of inflammation. The slowness of healing and this telangiectasic condition are characteristic of Roentgen ray burns and I have even seen telangiectasis produced without any antecedent inflammation. As regards the effects of milder irritatants the diagnosis in the absence of a history of exposure to such irritant may be, and often is, impossible, but if there have been repeated apparently causeless attacks, their primary effect being always on an exposed part may afford some clue. Perhaps one of the most frequent puzzles of this kind arises when amateur horticulturists get a severe dermatitis from exposure to some irritant plant of which the pretty primula obconica is the most frequent offender I have met with several cases in which pemphigus or acute eczema has been diagnosed and internal treatment and a rigid dietary have been enjoined, of course without effect

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[1] Lectures II and III. will be delivered on March 2nd and 16th, 1903 respectively

[2] In the lecture drawings and plates were shown in illustration

The vulnerability of the patient, whether natural or acquired, very often increases after each attack until a sensitiveness almost incredible may be acquired Iodoform dermatitis, to which some surgeons as well as their patients are liable, is a familiar example and Dr A J Hall of Sheffield relates a case of an analytical chemist who acquired an idiosyncrasy with regard to phenyl hydrazin hypochloride to such an extent that the primary local inflammation not only became general in a few hours but the minute quantity of vapour conveyed in the clothes of an assistant who visited him at his own house to report on his work on this substance was enough to excite an outbreak.

There is quite a large class of trade eczemas, either from dry or wet substances, such as those seen in bricklayers, bakers, grocers, barmaids, or French polishers, of which baker's eczema is sufficient as an example, and the point I wish to emphasise is that not only is there inflammation of the part exposed but in many of these patients a symmetrical eruption in distant parts may develop in a few days, or even hours, absolutely indistinguishable from the so-called idiopathic eczema. The outbreak is often too sudden, too widespread, and too symmetrical for the inflammation to have extended from without, and we must assume either that it is a reflex nerve disturbance of a vaso motor character or that it is due to micro organisms multiplying first at the site of the dermatitis, then absorbed into the circulation, or that some toxin is developed and so absorbed and distributed At all events, the result is that this inflammation of external origin cannot be logically separated by its external aspect from one primarily generated from within, and very often in the course it subsequently runs, though local inflammations which do not afterwards become general are, as a rule, readily amenable to treatment Restricting for the moment eczema to its papulo-vesicular type we have a strange confession to make—that though eczema in its varying manifestations is the commonest of all skin diseases, constituting about one third of all forms of eruption, and has been closely studied by physicians, both general and special, for the last 100 years, yet we are still as far from agreement as to its pathology as ever In the discussions on eczema at the Paris Congress of 1900 the consensus of opinion undoubtedly was that in the papulo-vesicular inflammations of the skin which are universally included under eczema no specific organism could be considered as its cause and certainly not the morococcus of Unna which was generally considered to be a modification of the common staphylococcus pyogenes albus, which is universally present in the skin and under ordinary conditions is a harmless organism. Moreover, some of the best bacteriologists showed that eczema vesicles could and did exist in which the fluid contents were absolutely free from organisms, though, on the other hand, Galloway showed that the universal staphylococcus pyogenes albus might exist in uncomplicated and early lesions of papulo vesicular eczema, as, indeed, it exists in the normal skin also We must therefore conclude that these organisms are not of themselves sufficient to produce a papulo vesicular dermatitis, but it is highly probable that given certain conditions, such as gouty or other cause of faulty assimilation, the action of an irritant on the skin in a predisposed person, a nerve shock, either purely mental, such as a great grief, worry, or anxiety, or a physical shock, such as a fall or strain, that these usually harmless organisms may become pathogenic and give rise to one of those forms of dermatitis to which we universally accord the name of eczema.

To the questions, therefore, Is eczema parasitic? Is it a blood dyscrasia? Or is it a neurosis? not only cannot an absolute answer be given as regards any one of these factors, but I believe it is not only the most cautious attitude but the one which will lead to the soundest and most successful practice if instead of tying our hands by adhering to any one theory we allow that all these factors may, and often do, have some share and that our endeavour should be to estimate what proportion these several factors may play in any particular case If we try to do this intelligently we shall have to recognise that our patient is not a mere test tube in which we have only to neutralise the uric acid in order to cure his eczema, or that if we kill the hypothetical germ that the inflammation will forthwith cease, and still less shall we rely upon arsenic as the panacea for all cutaneous woes and find too often that while the skin irritation is as rampant as ever, we have set up a gastric irritation which may give some trouble to subdue.

While, then, it cannot be shown that any special organism can of itself produce this papulo-vesicular type of dermatitis, yet when once the process is started pus cocci, whether the staphylococcus aureus or the streptococcus pyogenes, can and do modify the form of inflammation presented to us, though it may still be included under the name of eczema. In some cases their presence is probably due to the cultivation into virulence of previously harmless organisms, in others by secondary invasion It is this microbic influence I now propose to consider If we compare a vesicular discharging eczema of the face and arm with a pustular form of the same regions the differences are very striking and all the superadded crusting is entirely due to the pus cocci invasion. Impetiginous eczema, as it was formerly called, was regarded as of a severe and formidable character, and it may be so if neglected, while, on the other hand, if its nature is understood it is readily amenable to treatment planned to destroy the pus cocci, by which the inflammation may be reduced to its simpler uncomplicated character and the whole inflammatory process will sometimes be subdued All that is necessary is to soften and to remove the crusts with carbolised oil, alkaline compresses, or boric acid starch poultices, and then to apply some such ointment as iodoform ten grains and unguentum zinci oxidi one ounce, which is only an example of a whole legion of similar applications There is, on the other hand, a large class of inflammations of the skin and its appendages entirely due to pus cocci, with or without other organisms, of which the following is a list in tabular form according to the most modern views

Staphylococcus aureus, albus citreus	Boils
	Carbuncles
	Coccogenic sycosis
	Lupoid sycosis
	Impetigo of Bockhardt and secondarily in other forms
	Quinquaud's folliculitis decalvans
	Dermatitis papillaris capillitii and probably other forms of pustular folliculitis
	Pemphigus neonatorum
	Pemphigus contagiosus
	Cutaneous abscesses
	Superficial whitlows
	Erysipelas
	Granuloma pyogenicum and other papillary growths
	Acne varioliformis seu necrotica
Streptococcus pyogenes of Fehleisen	Impetigo contagiosa and its varieties, including ecthyma but excepting Bockhardt's
	Erysipelas
	Erysipeloid
	Superficial whitlows

It is not to be inferred that this table covers the whole ground of pustular inflammations, for there are other organisms which can excite pustular lesions without the intervention of pus cocci, such as the trichophyton megalosporon, blastomyces, the tubercle bacillus, &c It will also be observed that erysipelas may be produced by either streptococci or staphylococci, but the streptococcus of Fehleisen is the usual organism. Further, it is contended that some lesions are produced by a mixture of the staphylococcus and streptococcus. Thus it is said that impetigo contagiosa due to the streptococcus pyogenes of Fehleisen may be invaded and modified by the staphylococcus aureus, but this is still a controverted assertion and the point is of academic interest, as the line of treatment would be unaltered even if the statement is true Many of these follicular pustules are the affection which is known as the impetigo of Bockhardt who was among the earliest to identify staphylococcus aureus as its cause. It differs from ordinary impetigo contagiosa in being always pustular from the first and in being a folliculitis connected with the hairs, most commonly of the scalp, where it may come on either as a crop of follicular pustules or it may attack primarily or secondarily the neck, face, back, buttocks, or thighs. I have gone out of my way to describe this condition because, according to Sabouraud, it is always the precursor of boils, sometimes leads to abscesses, and secondarily invades the streptococcal form of impetigo contagiosa. Although I think Sabouraud is too sweeping in his assertions that this form of impetigo always precedes boils it is certainly a frequent concomitant and it is of great importance that it should be cured as soon as possible. As a warning not to let pustular affections alone I have seen a streptococcal impetigo following vaccination which was allowed to go on with inadequate treatment lead to a rapidly spreading erysipelas over a great part of the body, which endangered the child's life and gave as much anxiety to the medical attendant as it did to the parent.

In all these diseases the realisation of the fact that pus organisms are the *fons et origo mali* is essential to successful treatment. The local destruction as soon as possible of these organisms is the key to stopping boils and carbuncles not only at the moment by preventing their further development, but still more in stopping the supply of future boils. Thus subcutaneous injection of a 1 in 30 solution of carbolic acid round a carbuncle will stop its extension, while in the case of boils, if each boil is at once opened and disinfected with 1 in 40 carbolic solution, not only do the lesions heal more rapidly but in a short time fresh boils cease to appear. Consider for a moment what an immense practical gain this is. There is a definite aim in the treatment, a known organism which can be fought successfully even when the liability to boils has been going on for months or years. But to do this the lesions must be attacked at the earliest possible stage, as the pus cocci may have spread beyond the site of a fully-developed boil before it is opened. Every pustule, however small or however superficial, should be at once opened, thoroughly disinfected, and in the case of these small lesions the patient can often be instructed what to do for himself, as time is important and 24 hours' delay may cause the failure of prophylactic treatment as far as that particular boil is concerned.

I propose only to draw attention to two other of these primary pus cocci affections before I pass on to another form of dermatitis. One of these is pemphigus neonatorum. This, as its name implies, is an affection which attacks newly born infants in the first week or two of life. It occurs in the form of blebs from one-eighth to half an inch in diameter, usually with pellucid contents, and very frequently begins about the genitals and spreads slowly or rapidly over a large area. It is sometimes mistaken for a syphilide, but it is not pustular from the first, does not especially attack the hands and feet, and the child is not as a rule cachectic; moreover if properly treated it is benign and short in its course. For several years past Pernet, Nabarro and others from cases in my clinique have obtained pure cultures of staphylococcus aureus both in solid and liquid media, but the streptococcus has also been found by some observers. These cases are specially frequent among the poor, where defective drains and similar unhygienic conditions prevail, and the disease was often endemic in lying-in institutions before modern antisepticism was practised. All that is usually required is to remove the child from bad surroundings and dust on freely a powder of boric acid 10 per cent. with zinc and starch. But in neglected cases or where the affection is derived from the mother who is suffering from puerperal fever a general and fatal septicæmia may result.

Another class of pus organism diseases which are not yet generally so recognised are the fungating papillary growths which are apt to form in all chronic suppurative surfaces and after some acute suppurations. They are all varieties of pyogenic granuloma, but have received different names according to the underlying conditions on which they develop. Thus there may be a papillary growth on a chronic ulcerating syphilide or a similar development on a scrofulous sore, usually called lupus papillomatosus. Another form occurs in the folds of the axillæ and groins in pemphigus vegetans. The fungation, sometimes seen in coccogenic sycosis, is entirely due, in my opinion, to pus cocci. Of late years a supposed new disease has been described and called botryomycosis hominis; veterinary surgeons first gave the name to a fungating granuloma seen after castrating various animals and it was wrongly thought to be a botryomycosis. As it occurs in man, it is usually seen after suppuration on the palmar surface of the hand and is now pretty generally acknowledged to be due to pus cocci infection and only a pedicled tumour-like exaggeration of what used to be called proud flesh. Ligature and iodoform speedily cures it, and all the conditions I have mentioned, to which may be added the granuloma inguinale tropicum and its home imitators, may also be cured on similar principles. Finally, I would add that, in my opinion, although I cannot give definite proof, hypertrophic scars such as follow burns, vaccination sometimes and other slow healing sores, are also the result of pus cocci invasion, and that if these organisms were excluded during the healing process no such scar thickening would result.

Thus we find the same organisms producing such divers lesions as bullæ, superficial and deep pustules, boils, carbuncles, fungating granulations and keloidal thickening of scars, and various forms of folliculitis—a very important generalisation therefore which should exercise a strong influence on our practice. Note, too, how far it takes us from Willan's morphological classification founded on primary lesions. The shape the lesions take depends on the anatomical position of these pus organisms in the skin, not on the nature of the organism itself; and even pus which is present in nearly all lesions is absent in pemphigus neonatorum. The recognition of their common origin therefore is entirely due to modern pathological research and holds out promise of still more fruit to be garnered by similar investigations in other directions.

I have shown how a local irritant on a predisposed person may excite an eczema and how the invasion of pus cocci on the dermatitis may modify it, and if they are conveyed and inoculated on to other parts of the skin the numerous and even dangerous conditions they may arouse. I wish now to direct attention to the modifications a dermatitis may undergo if it is excited on what may be called a seborrhœic basis. These are generally admitted to be of bacillary origin, but the term seborrhœa requires a little explanation as there has been a good deal of controversy about it of late years. As all know, its primary meaning is an increase of the secretion of sebaceous glands and according to the strictest interpretation only cases with an excess of oiliness of the scalp or skin come under this term, and even of this Unna and his school say that the oiliness comes from the sweat glands rather than from the sebaceous glands. This view has been strongly combated and is losing ground. Sabouraud states that seborrhœa oleosa is due to the presence of his special seborrhœic micro-bacillus in the sebaceous glands and that it is also the cause of the comedo which is a cystic formation round these micro-bacilli producing the familiar primitive fatty plug. But in addition to this excess of oiliness, which may be seen both on the face and scalp and is a source of great annoyance to the patient, a still more common condition is to see the scalp covered, more or less with a firm fatty incrustation, varying from soft yellow wax to a scaliness of a more or less greasy character. This has also hitherto been included under the term seborrhœa and it is convenient clinically, though not quite correct to do so still. When it is scraped off the skin beneath is perfectly white, and it may go on for years without clinical signs of inflammation; nevertheless microscopically there is a dry catarrh of the skin and the firm secretion is really a mixture of fat with epithelial cells derived chiefly if not entirely, from the horny layers of the epidermis. It is therefore a fatty pityriasis of the scalp due it is said, to Malassez's bottle bacillus. Unna's 'morococcus' is in his opinion, the cause of both seborrhœa in its most extended sense and also of the various obviously inflammatory affections which spring from it, while Sabouraud, more correctly, I think, regards the seborrhœic micro-bacillus as the primary cause of the true seborrhœa oleosa, and considers the fatty pityriasis to be due to the combination of the bottle and seborrhœic micro-bacillus, while the secondary invasion of staphylococcus aureus or a grey coloured coccus produces various inflammations which may be included under the convenient term 'seborrhœides.' We need not decide whether this view is rigidly correct, the important point to remember is that the 'seborrhœas' both oily and firm, are affections due to one or more micro-organisms and are not the trivial conditions they appear to be to most persons. For unless there is an active dermatitis either on the scalp or glabrous skin the patient rarely comes complaining of an oily or scurfy head, but only of the hair coming out, so that he is threatened with baldness, and in nine cases out of ten this defluvium capillorum is the result of seborrhœa. It is not my intention to go minutely into this subject, which would require a lecture to itself, but to point out the principles of treatment which a more intelligent knowledge of the subject has suggested and of which experience has confirmed the value. In former days, not very long removed from the best of us and still existing in many medical minds, the one idea was that falling of the hair was due to debility and feeble nutrition and the universal practice was to give tonics and apply cantharides and other stimulants locally to improve the circulation. Of course there are cases after fevers and other serious illnesses which require, or, at all events, do well with, such treatment, but they form a very small proportion of the cases, and the recognition of the microbic origin of the disease, while it should not make us neglect the investigation of the general health, should lead to the use of microbicide applications for if the microbes are destroyed the chief obstruction to the growth of the hair is removed and the hair grows readily enough unless the follicles and papillæ are too much damaged to recover. Preliminary to this is the removal of the oily or fatty layer by means of soft-soap applications which may be combined with antiseptics such as thymol or carbolic acid. Afterwards the application of such microbicides as resorcin, sulphur, mercurials, iodine, &c. are usually successful. These are only examples of the kind of application experience has taught to be most efficacious in destroying the seborrhœic micro-bacillus, and these or similar drugs were used long before Sabouraud's observations gave a more lucid explanation of the process than had previously been afforded by Malassez's, Elliot's, or even Unna's observations.

In addition to stopping the fall of the hair and paving the way to its restoration the cure of seborrhœa takes away what I have been insisting on as a strongly predisposing factor in the production of active inflammation of the skin, either by its own microbe taking on increased pathogenic activity or by its offering a favourable nidus for the cultivation of other germs, especially staphylococci and streptococci. This is all the more important if the patient has had previous attacks of dermatitis either of this type or other types, as one of the places of least resistance is thus removed.

Let me give an instance, as illustrated in this plate.[3] This woman, aged 50 years, had had seborrhœic pityriasis capitis for years, with no other symptoms beyond occasional slight itching and a gradual defluvium capillorum which had left very little hair. One day she learnt that her husband, whom she imagined to be in prosperous circumstances, was a bankrupt and as one consequence a very active inflammation of the scalp supervened which is depicted here on the scalp, but her hands were also inflamed very much as in the plate, though, as a matter of fact, the drawing was not taken from her hand; further, the matrix of the nails became involved and the nails themselves became discoloured, deformed, and hypertrophied, leading to the enormous overgrowth shown in the drawing and in every way her condition for a long time was a very unhappy one.

The seborrhœides are of two classes: (1) those which are the direct outcome of seborrhœa; and (2) those which are indirectly due to it. The direct ones imitate forms of non-seborrhœic dermatitis, but with distinct differences. One imitates eczema, but usually in a dry form, in patches which have well defined borders, have frequently a rounded outline, sometimes definitely circular, and have especial seats of election, such as the neck, the centre of the chest and back, and the axillæ and groins, though no place can be said to be exempt. When very extensive—and it may affect nearly the whole body—it presents appearances closely resembling the pre-mycotic stage of mycosis fungoides, a formidable and fatal disease in which in the latter stages fungating tumours develop. In the early stage of this form there are always gaps of healthy skin, surrounded by a dry, finely scaly dermatitis with raised, well-defined borders, so that the normal skin has the appearance of being sunk below the general surface, though, of course, it is due to the morbid tissue being raised. The resemblance is so close that many cases of mycosis fungoides in the early stage have been diagnosed by good observers as seborrhœides, but the converse is not likely to happen, as mycosis fungoides is rare and unlikely to be thought of when an innocent looking inflammation of a not very rare kind is apparently presented, and its absolute intractability to treatment may be the first circumstance to raise doubts as to the correctness of the diagnosis. The second or papular form is generally easily recognised by its localisation to the centre and upper part of the trunk, back and front, though occasionally it goes beyond these limits. It forms small circles of closely aggregated papules with a fawn coloured centre and by coalescence of the component circles a very characteristic, gyrately outlined patch with brownish yellow centre may be produced in the interscapular region. This form is interesting because it was the first inflammatory disease which was recognised by Duhring to be constantly associated with seborrhœa capitis and called by him seborrhœa corporis long before Unna's important generalisation gave a more extended application to seborrhœic dermatitis. Though easily recognised it is often difficult to cure because while removeable for a time it has a strong tendency to recur, especially if the seborrhœa capitis is not efficiently treated, so that recrudescences should be looked out for and promptly dealt with. The third or psoriasiform seborrhœide is a fairly close imitation of psoriasis but differs in its seat of election by attacking chiefly the axillæ and trunk instead of the limbs. The patches are as a rule less definitely circular, less scaly, the scales being more often fatty and opaque instead of dry and silvery, and while both diseases attack the scalp, true psoriasis has very little effect on the hair growth, while the seborrhœide produces considerable loss of hair, associated as it always is with a general seborrhœa capitis. These patches are very little influenced by arsenic and generally yield best to a mercurial application such as the yellow oxide or ammoniated mercury ointment or to resorcin and sulphur from 10 to 20 grains to the ounce. According to Unna, psoriasis itself is a final link in the seborrhœic chain, but most dermatologists do not follow him so far as that and think that he has been led by parental fondness for the family he has done so much to create to bring too many strangers into kinship with it.

The indirectly related affections to seborrhœa are, according to Sabouraud, mixed infections—the pustular eruptions, acne varioliformis, acneic furunculosis, chronic furunculosis of the neck, sycosis, acne keloid, and *dermatitis papillaris capillitii*. These are all, he says, due to the secondary invasion of the staphylococcus aureus on the seborrhœic basis. Although this is not absolutely proved it may be accepted provisionally and if correct it is a nearly as important generalisation as Unna's with regard to the direct scaly seborrhœides and just as we find the pus cocci on an ordinary eczematous dermatitis profoundly modify the form of inflammation, so here the same organisms on a seborrhœic basis exercise a no less important modification of character and give rise to absolutely new forms of disease. It therefore opens to us new doors for investigation as to the clinical changes produced in other directions either as regards the primary conditions or the secondary invasion. Even if this compound origin is not absolutely true it is indisputable that pus organisms play an important rôle in these diseases and our aim in treatment must be to get rid of them.

THE LOCAL ORIGIN OF SOME GENERAL AND SYMMETRICAL ERUPTIONS.

It is obvious that when we have to do with a general and symmetrical eruption that this symmetry combined with a wide extent is a sign of its distribution having occurred from within outwards, while in diseases admittedly due to external parasites, such as impetigo contagiosa from pus cocci or ringworm from the trichophyton, their asymmetry, and what we may call their haphazard distribution, are important features in their diagnosis. In certain diseases, however, it can be shown, sometimes with strong probability, sometimes with certainty, that while in the latter stage or in their recurrences they are widespread and symmetrical, in the primary invasion this is not the case and that they may commence on one side and remain so for a considerable time and then generalise symmetrically more or less rapidly from that. This mode of development is from a primary patch.

The primary patch.—There is a disease called pityriasis rosea to which I would call attention for a few moments. It is noteworthy because it is not very rare, but it is a disease little known to those who do not study dermatology. It may cover the whole trunk and greater part of the limbs and in cases which develop rapidly it may be accompanied with enlarged post-sterno-mastoid glands, slight congestion of the fauces, and a slight rise of temperature, while the eruption is in many cases like the early papulo-scaly syphilide. It usually runs a course of from three to six weeks and then disappears spontaneously, but occasionally it lasts from three to four months. Its mode of development is very important, Brocq, a French dermatologist, first pointed out that it began as a single circular patch on some part of the trunk which slowly increased in size up to a shilling or rather larger, and in about ten days from its first appearance began to generalise and would often cover a large area, or even the whole body, in a few days The explanation I would offer is that there is at first a local multiplication of microbes and then absorption takes place and rapid multiplication in the blood I have traced the same mode of development in more chronic diseases especially in their first attack, but not in recurrences. Thus in the first attack of psoriasis it will be observed that there are often only one or two patches on one limb, these will enlarge peripherally, generally very slowly, and may remain for weeks or months, and in some cases for years, with very little change and then gradually or rapidly the patches increase in number When the increase is gradual the patches multiply asymmetrically and often on the same side as the original patch and on any part of the limb but when it is rapid the multiplication is bilateral and symmetrical and in the usual seats of selection—elbows knees and extensor aspects generally This suggests that in the gradual multiplication fresh patches are formed by implantation of micro-organisms from without, while in the generalised cases multiplication comes from within, the microbes or their toxins from the original patches being absorbed into the circulation. In the recurrences symmetrical and often widespread attacks occur at once and no primary patch is observed, but patients suffering from psoriasis very often have remanets from former attacks which do not trouble them and which they therefore allow to remain untreated and from these a fresh outbreak often starts. In lichen planus a similar phenomenon can often be traced. In many cases a few chronic patches have been present for months or years and then generalisation takes place

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[3] Author's Atlas, Plate lxxx.

With regard to eczema the evidence is not quite so definite, but, as I have already pointed out, there are many instances in which a dermatitis originated by a local irritant became general in the form of a typical acute eczema. It is obvious from this that it is very important to treat the beginning of skin diseases, and it is highly probable that in those diseases which have a primary patch that not only would a generalised outbreak be prevented but in a recurrent disease like psoriasis the complete removal of the early patches before the general system was infected might be the means of a real cure, so that recurrence would be prevented. Further, it shows the importance of impressing upon the patient that every fragment of disease should be removed, even in the recurrences, as it affords the best chance of preventing future attacks

If I have been able to carry you along with me in the discussion of these various forms of dermatitis you will now perceive that in spite of their varied morphology there are large groups with a central pathological core, so to speak, in each group which show that the same micro-organism may produce most diverse effects according to its mode and depth of implantation and still more according to the soil in which it is planted, and whether it is on healthy or what may be called virgin soil, or whether it is superimposed on ground which has been ploughed and harrowed by antecedent morbid conditions whether produced or not by previous micro-organisms of a different character While each different form of disease necessarily has a separate name, so that it may be docketed and arranged from a clinical point of view, the new conception of the relationship of these diseases founded on their pathology gives us a breadth of view that goes far beyond mere nomenclature and will help to acquit dermatology in its modern aspects of being a mere farrago of outlandish names. It is partly for this reason that, while pointing out illustrations of many forms of diseases more or less closely allied, I have used as few names as possible, as I wish to emphasise the importance of processes rather than names, and that the same process might in different circumstances produce very different clinical results, which seen from a correct pathological standpoint were recognisable as closely related members of the same family which required the same principles of treatment, though possibly with modifications in each case to secure the full amount of efficiency

In the directly seborrhœic inflammations such as the papular eczemiform or psoriasiform eruptions, sulphur, resorcin, ichthyol, and thymol play an important part, but in small quantities such as 1 per cent. in the oleates or zinc or lead ointments or a mild form of mercury such as the ammoniated or yellow oxide, 2 to 4 per cent, either singly or combined, may be rubbed in more or less vigorously according to the degree of the inflammation. When the inflammation is more intense the treatment at first is the same as for acute vesicular eczema, but one of the drugs previously mentioned can be advantageously added at a comparatively early stage If the inflammation is one of those in which there is a good reason to believe that pus cocci are superadded to the seborrhœic micro-bacillus then means for their destruction must be adopted, but while the principles and the drugs may be the same as in pus cocci invasion or ordinary eczema we find in practice that it is more difficult to produce their complete extirpation and that the closest following up of the treatment is required to prevent recrudescences of a disease which we have often scotched but not killed. Since they are often intra follicular probably the pus cocci invasion goes deeper when the way has been prepared by the seborrhœic micro bacillus and it is therefore more difficult to produce their complete destruction, though frequently the removal of all the more superficially situated organisms will produce quiescence for weeks or months or even longer This quiescence of germs when they are shut off from the air occurs in many diseases, and while it serves to account for many apparently causeless recurrences it is not always intelligible why this dormancy should sometimes last so long, as the epidermic cells are supposed to be always tending to work to the surface.

Although I have hitherto spoken only of certain external conditions affecting the skin and their treatment I do not wish it to be supposed that because modern research has revealed various micro-organisms and partially unravelled their mode of origin invasion, and effects, we have simply to treat all these conditions by the external application of microbicides and the skin will be restored *ad integrum*—in short, that the microbe is everything and the man nothing While I have hitherto confined my attention to this aspect or the case, I hope in my next lecture to discuss some of the conditions of the patient which influence disease and show how they may be combated.

The Harveian Lectures

ON

FIBROIDS OF THE UTERUS AND ITS LIGAMENTS CONSIDERED FROM A CLINICAL AND SURGICAL STANDPOINT

Delivered before the Harveian Society of London on Nov 6th, 13th and 20th, 1902,

BY ALBAN H G DORAN, F R C S ENG,
SURGEON TO THE SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN MARYLEBONE ROAD N W

LECTURE III.[1]

Delivered on Nov 20th, 1902

THE MANAGEMENT OF CAPSULES

MR. PRESIDENT AND GENTLEMEN,—When a burrowing fibroid is shelled out of its capsule of broad ligament the tissues usually shrink so that little or no trimming is needed. Vessels have always to be secured on the inner or parametric surface of the capsule. Some operators allow the capsule to remain open and to drop down into Douglas's pouch after ligature of its vessels, the oozing being absorbed by the peritoneum. Mr Knowsley Thornton[2] observes "I have never been able to understand the great trouble taken by most abdominal surgeons to shut off stumps and raw surfaces from the peritoneum. All experience shows that if the operation be aseptic effusions of blood are much more rapidly and harmlessly absorbed by the peritoneum than by torn and cut cellular tissue and experience likewise teaches that adhesions to any raw surface left free on the peritoneum are very rare Damaged surfaces, on which peritoneum remains, much more frequently adhere. If asepticity be not quite assured, it is easy to drain with a glass tube. In my opinion, it is infinitely more dangerous to shut up cut and torn tissues."

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[1] Lectures I and II were published in THE LANCET of Feb 7th (p 350) and 14th (p 415) 1903 respectively

[2] Allbutt and Playfair's System of Gynæcology article Hysterectomy" p. 627

Thus spoke a surgeon of high authority on abdominal surgery, a witness of the good as well as of the evil in methods of operating and treatment now considered effete A younger British operator teaches opposite principles and practice. Dr William Duncan[3] wrote two years ago "In the cases in which the tumour grows between the layers of the broad ligament, after it has been shelled out a raw cavity is left. This cavity is best treated by whipping the walls securely together from below upwards (after hæmorrhage has been stopped) by means of a continuous silk suture, and thus the necessity for drainage by a tube or by iodoform gauze is obviated" Dr Howard Kelly[4] differs a little from Dr Duncan. He directs that the peritoneal flaps should be sewn together over the stump after the turning in of the pedicles of the ovarian vessels, but adds that "if there is a large space left in the cellular tissue it will be best to unite the peritoneum with interrupted or mattress sutures, so that any blood which escapes from capillaries will run into the peritoneum and be absorbed instead of forming a hæmatocele"

I am not surprised to find that three operators of experience differ in their management of capsules, and I believe that the last word has not been said on the matter, or rather I do not see that any rule can apply to every case When there is not likely to be any effusion, as in cases where the enucleation is not extensive and the capsule, consisting of little more than the two flaps of the opened up broad ligament, shrinks to very small proportions, the turning in of everything that can be pushed under the flaps is in the highest degree advisable Whenever I have adopted the practice, under the conditions just stated be it understood, I have noted that all went well, pulse, temperature, excretion of urine, passage of flatus, and general condition included But this neat and surgical tucking in practice is unsuited to cases where the capsule is deep, forming a big cavity below the two flaps of peritoneum. We know from experience that it is not very difficult to avoid mischief on the peritoneal side of the flaps whilst it is not easy to insure the patient against complications caused by prejudicial changes in the parametrium under the flaps, complications specially probable when the enucleation has been extensive The principles of the three writers already quoted are less at variance than they appear to be at first sight Mr Thornton is right in teaching that the peritoneum is a better absorber of blood than the parametrium It follows that Dr Howard Kelly is also right in applying sutures to the flap in such a manner that the oozing blood may run out of the parametrium into the peritoneal cavity As the surgeon in the process of enucleation makes a parametric cavity, an unnatural space, Dr Duncan is right in his principles of closing it His precise line of practice may, on the other hand, lead to complications

Let us deliberately consider this question of the flaps We may put aside all thoughts about the stump of the cervix and assume that it has been either cut away or else so treated as to secure it from hæmorrhage without risk of sloughing from unskilful application of ligatures We have to consider at present the treatment of a big cavity left in the parametrium after enucleation The peritoneum tolerates a great deal of handling and ligatures, though when it is damaged beyond its powers of endurance the patient is placed in great and immediate peril The parametrium is less tolerant. It is inevitably bruised during an enucleation, and it does not bear bruising well It tolerates foreign bodies very badly, now after hysterectomy it often has to hold clot, which is pathologically a foreign body, and it must of necessity contain ligatures which more literally come under that denomination. Hence certain complications are apt to follow hysterectomy and panhysterectomy where there has been extensive enucleation, complications seldom deadly like septic peritonitis but often chronic and intractable, tormenting to the patient, and discreditable to the surgeon and to the operation itself These late complications do not always appear in statistical tables Owing to the reparative powers of the serous membrane the peritoneal flaps seldom fail to unite. Their edges begin to adhere in a few hours like the margins of the serous layer of an abdominal wound The dangers of septic infection of the peritoneum are soon averted, usually never to return as far as the capsule is concerned, sloughing of the stump may cause it, but that complication is not under consideration. Later trouble arises from the extra peritoneal or subperitoneal relations of the capsule The patient often does well for a week, a month, or longer after the healing of the peritoneal wound. Then comes trouble which is usually manifested not so much by local pain as by rise of temperature The pulse, though quick, is usually not weak and the constitutional symptoms are not so marked as the condition of the pelvic organs found on examination might lead an inexperienced observer to expect In short, all the familiar symptoms of parametritis or pelvic cellulitis are present. The cause of the parametritis is suppuration of a hæmatocele or a phlegmon developed around an infected ligature. I have said nothing about the early bursting of a hæmatocele into the peritoneum, as that accident is rare and comes surgically under the same category as slipping of a ligature. The hæmatocele formed by the pent-up blood oozing into the parametrium tends to undergo the usual pathological changes even when big enough to rise above the pelvic brim Soft at first, it becomes hard Then it may be, and generally is, absorbed Unfortunately infection is always possible during this retrogressive change, then comes fresh softening, that is to say, abscess heralded by the earlier signs of parametritis. Suppuration is also the result of infection of a ligature This accident leads at once to parametric deposit. Hard at first, it becomes soft, but the softening sets in much earlier than in a mild case of parametritis after labour so that fluctuation can soon be detected

Thus suppuration occurs from two causes, themselves the effect of infection The germ must in many cases come from the intestine When a large tumour is enucleated from the posterior layer of the mesometrium its base is often in close contact with the rectum, as I explained when I demonstrated the surgical anatomy of the broad ligament Thus after enucleation and closure of the flaps clot and ligatures lie in damaged parametric tissue close to the bowel, perhaps on it The abscess will burst. We know the directions in which a parametric abscess may travel before it points. As a rule it bursts into the vagina, not rarely it opens into the rectum Rupture above the groin, common in puerperal parametritis, is unusual in these cases Fortunately the bladder is not often involved in abscess We know that ligatures, ugly things to get into any part of the urinary canal, seem specially prone to make their way into the vesical cavity From what I have observed, however, this objectionable complication is usually, when it follows hysterectomy, the result of inclusion of a piece of the bladder itself in the sutures passed through the anterior flap Hence it is, as a rule, associated with simple cases where there is no enucleation and the flaps are cut thin and too short. When extensive enucleation is necessary the flaps are big and the bladder is not likely to be transfixed by the suture needle. It is ligature silk deep down, far from the bladder and near intestine, that sets up abscess, and it is often discharged with the pus when the abscess bursts into the rectum or vagina. These suppurative changes may develop long after an uninterrupted recovery and then prove very distressing, especially if the patient be upon her travels or away from those who know the nature of the case

I have dwelt designedly on these complications, for I cannot see how the most careful closing of a big gap in the parametrium can guarantee the patient against distant infection Ligatures occasionally set up trouble after the simplest hysterectomy or after an uncomplicated panhysterectomy for fibroid, as in a case done abroad which I examined a few years ago After extensive enucleation such an accident is far more probable. A continuous silk suture applied to the flaps in a simple case may work its way into the vagina, we cannot, therefore, always trust a similar suture fixing together the opposed inner or parametric surfaces of a deep capsule. Besides, in these cases, numerous ligatures have to be applied to the mouths of blood vessels.

Of suppuration and discharging ligatures I have seen many cases which have naturally been registered as "recoveries." In one of my own patients I enucleated and closed a large capsule after carefully securing a number of vessels with

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[3] The Modern Treatment of Uterine Fibroids &c THE LANCET April 21st 1900 p 1109

[4] Operative Gynæcology vol ii p 373

No. 1 silk. I checked oozing as much as possible by keeping several sponges pressed down in the capsule whilst other parts of the field of operation were being attended to The pelvic connective tissue was opened up posteriorly as far as the rectum. Parametritis set in early during the third week and an abscess burst into the vagina discharging a ligature and a small piece of sloughing tissue. In a second case I had to enucleate a fibroid outgrowth from the vesico-uterine connective tissue. Two years later two pieces of ligature which I had applied to vessels in the interior of the capsule came away—through bursting of a small abscess into the vagina I know of similar results in the experience of others and I may here repeat that the complication may be met with after panhysterectomy when there has been free enucleation just as it is seen after supracervical hysterectomy I am therefore inclined to think that in cases where the capsule is deep, extending far below the flaps of broad ligament, it may be better surgery to drain it than to close up the flaps. In two recent cases I thought it best to revert to this old practice, excellent when not abused. The results were satisfactory, there was no trace of parametric exudation, and the patient enjoyed perfect comfort after convalescence. There are objections to drainage, no doubt, but the practice is as under rated at the present time as it was once, within our own memory and experience over rated and abused. I am not speaking of peritoneal drainage. Olshausen[5] is not far wrong when he asserts that the routine drainage of Douglas s pouch through the abdominal wound is a "fond delusion." Dr Howard Kelly in his 'Operative Gynæcology' records experiments which show at least that while the tube may possibly help germs out it certainly lets them in With a deep capsule it is otherwise. Its edge can easily be sutured to the lower end of the abdominal wound, so that its cavity is cut off from that of the peritoneum. Then it can be drained so as to be relieved of effusions which it is ill adapted to absorb, whilst there is no danger of infection of the peritoneum. I believe that drainage is beneficial in some cases of deeply burrowing broad ligament and ovarian cysts. A bad case of fæcal fistula came under my care a few years since, it followed about two years after an enucleation by a skilful operator, whilst in a similar case in my own practice where the burrowing cyst had suppurated a sinus developed nearly a year after the operation and gave some trouble.[6] Neither case had been drained. If for any reason drainage of the capsule through the abdominal wound should appear inadvisable, a tube might be passed into the cavity through an incision made from the vagina or gauze introduced the same way But abdominal and vaginal drainage differ surgically and therapeutically in many respects, I cannot here discuss their relative merits.

In conclusion, I beg to remind you that I am no enthusiast about drainage, having seen too much of the results of its abuse. Nor is the drainage of a capacious capsule a practice which can afford the operator much satisfaction. The tissues of the capsule often come away in sloughy fragments and the lower end of the wound is liable to become the seat of hernia. But I know from experience that these evils which (except hernia) mostly appear whilst the patient is still under the operator s care are far less than those which not rarely make themselves manifest many months later in an undrained case, when the operation has been registered as a success and the patient has very likely passed under the care of another medical attendant. Only last June a surgeon practising in New Zealand told me that he attended in January, 1902, a patient who suffered from a sinus in the abdominal walls whence he extracted a loop of stout silk which had been applied over ten years before in the course of an abdominal operation performed by a distinguished operator now deceased I admit that the material of the ligature ought to be considered, but time forbids me to discuss the trustworthiness of sterilised catgut and other substances

ADHESIONS.

Fortunately for the patient and the operator adhesions are remarkably rare in uterine fibroid disease I know no explanation of the fact. The smoothness of the surface of the myoma is not necessarily the reason Smooth it generally is and adhesions are usually absent, but a simple ovarian cyst is smooth, yet adhesions often develop within a few months quite independently of complications such as torsion of the pedicle or peritonitis. Relative mobility has no evident share in causing adhesions, for women often go about for years with freely moveable fibroids, heavy or light, bulky or small, yet when an operation is undertaken not a trace of adhesion may be found. Out of all the series of 44 cases in my after histories already discussed, adhesions were only met with in six, but in one of these, which I will relate, the adhesion, very serious in nature, was due to an exploratory incision and in one the fibroid outgrowth was necrotic and anomalous in form In two fatal cases I encountered very dense adhesions, but in one oöphorectomy had been performed and one had undergone an exploratory operation. Out of the six successful cases, the fibroid was pedunculated and freely moveable in one only, in that instance there was ascites as well, a complication not observed in any of the other five, or, indeed, in any other case in my series of hysterectomies Relative fixity has no distinct relation to adhesions In none of the above cases was there impaction in the pelvis and in several cases where that complication existed old or recent, I found no trace of adhesions In one of the six the tumour was practically fixed owing to partial opening up of the broad ligaments. But in no other uterine fibroid fixed by broad pelvic connexions did I encounter adhesions, nor did I find any in the cases of fibroid of the broad ligament independent of the uterus where I operated. Let me note here that in one of the cases of this form of fibroid the tumour was of enormous size, whilst in another it was a small heavy mass like a cricket-ball lying in the left mesometrium under a large multilocular ovarian cyst

The word "cyst turns our attention to cystic uterine fibroids. As ovarian cysts are often complicated by adhesions, we might expect, going by logic instead of by observation, that adhesions are frequent in cystic uterine fibroids, but this is contrary to my experience A fibroid, by the way, is not truly cystic unless it includes a big cavity containing at least half a pint of fluid. The pathological dilatations of lymphatics which resemble cysts on section are not true cysts and if two or three pints of serum drain away from such a tumour after removal and section the growth is in no sense cystic, but œdematous if not necrotic. I may add here that œdema in itself is no promoter of adhesions Of my own cases of true cystic myoma one held 25 pints of serum and weighed 10 pounds 6 ounces,[7] there was no evidence of sepsis but the patient was overworked and emaciated and had recently suffered from severe abdominal pains. Had the tumour been ovarian adhesions would almost certainly have existed. In another case the contents of the cyst were two pints of turbid red septic fluid and the patient had been laid up for two months with severe abdominal pains. Yet I did not find one single adhesion. The serre-nœud was used in both these cases

The fact that intestinal adhesions are relatively rare is most important for us to remember and most fortunate for the patient who undergoes operation. Small intestine adhesions in a case of a large ovarian cyst are a distinct source of danger A dense adhesion of the ileum is so serious a matter that it is often best to resect the adherent piece of gut. Intestinal adhesions to malignant ovarian tumours are specially perilous But ovariotomy is imperative in a case of ovarian tumour Experience shows on the other hand, that this dangerous complication, intestinal adhesion, is rare in uterine fibroid disease, a much less certainly fatal malady than ovarian tumour, a fact to be considered in the estimation of the risks of hysterectomy for fibroids Most assuredly a very strong factor in the good results of that operation is the rarity of this dangerous form of adhesion. Operators who report their cases should distinguish between true adhesions of the peritoneal surfaces of the intestine and tumour and the adhesion of an extra peritoneal part of the large intestine to the surface of part of a tumour which burrows under and behind the pelvic peritoneum. The rectum is sometimes united to the tumour in this way, then it is not always easy to recognise and its longitudinal bands simulate the ureter or may be taken for strands of fibrous tissue belonging to the tumour • Great care is necessary in enucleating the base of a fibroid which burrows deeply After dividing the pelvic peritoneum too rapid or rough use of the sponge or the finger may result in damage to the rectum, whilst that portion of intestine may be badly torn if the base of the tumour be too smartly pulled up out of the pelvis This accident is not unknown

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[5] Die Drainage in der Bauchchirurgie eine arge Tauschung ist Veit s Handbuch der Gynäkologie vol. ii. p. 710

[6] Mr Harrison Cripps agrees that such capsules may be drained, but he objects to fixing them to the abdominal wound See Abdominal Section for Ovariotomy St. Bartholomew s Hospital Reports vol. xxix p. 13. My comments on this practice will be found in a communication on the Management of True and False Capsules in Ovariotomy Transactions of the Obstetrical Society vol. xxxix. 1897 p. 255. Suppuration around a ligature has been known to follow the practice of letting the ovarian capsule drop

[7] Large Cystic Myoma of the Uterus of over Twelve Years Duration removed by Enucleation Recovery with notes on Cystic Fibroids Transactions of the Royal Medical and Chirurgical Society vol. lxxvi., 1894

Parietal adhesions the most frequent in ovarian cystic disease, are relatively very rare in cases of uterine fibroid. So much is this the fact that when the operator finds a connexion between the parietes and the tumour he must be very careful and should extend the incision higher till he finds that he can explore the upper limits of the tumour from the peritoneal cavity For what he thinks is a dense parietal peritoneal adhesion is more likely a direct connexion between the abdominal parietes and the tumour, which lies in front of the parietal peritoneum. In this case the fibroid has burrowed under the anterior layer of the mesometrium, as I explained in my first lecture The bladder lies drawn up on the front of the fibroid The consequence of mistaking such a condition for an adhesion to parietal peritoneum is tearing of the bladder, an accident once pretty frequent Fortunately, the use of the serre nœud, otherwise objectionable, had at least one advantage, it taught us to look out for the bladder In so doing we discovered and took into account these displacements of the parietal peritoneum The omentum is the structure most usually adherent When it has long been attached to the fibroid its vessels become enormously enlarged. At the same time its connective tissue often atrophies, so that two or three dilated veins and arteries run almost bare from the non adherent upper part of the omentum on to the surface of the fibroid. I have seen a pulsating vessel one eighth of an inch broad running for quite three inches in this manner, it formed a big loop between two points where it adhered to the surface of the tumour These bare vessels, after all, are mainly curiosities as regards the disappearance of the connective tissue around them. The fact of their dilatation is a more serious matter The omentum should be tied some distance above the adhesion and divided with great care The mouths of the divided vessels should be carefully ligatured with No 1 silk. Thrombosis of omental veins is not unknown, especially when the omentum is fat and thick ligatures are used In one case of ovariotomy where the veins of adherent fat omentum were dilated I suspect this complication occurred, there were severe pain and rise of temperature about the second week and a tender, hard, moveable mass could be felt in the position of the omentum. All the objective and subjective symptoms subsided and the patient recovered

Adhesions of fat omentum associated with a big omental epiplocele are very dangerous The surgeon has to perform radical cure of hernia, formidable in the circumstances, as well as the hysterectomy In a stout woman, aged 49 years, I had great trouble in separating the omentum from the sac and from the fundus of the fibroid as well, the vessels were very big The tumour weighed 15 pounds 3 ounces, it was removed after application of the serre nœud The more modern operation would have been better but the patient did well and is now alive, seven years after the operation.

The worst case of adhesion which I ever encountered was in a case where an exploratory incision had been made just four years before I operated From what I could make out removal of the ovaries was intended but was found impracticable. The flooding continued and the tumour at last grew very rapidly Mr W H. Chamberlain of Northampton sent the patient on to me I found that the cicatrix adhered very firmly to the fibroid Much omentum had first to be separated, it had become firmly incorporated with the parietes, the wall of the uterus, and the cicatricial tissue between them Unfortunately two coils of ileum were involved in the cicatrix. I took every precaution, but both coils were unavoidably torn through all their coats. The rent was longitudinal and about an inch long in both coils. I succeeded in closing the lacerations, using a continuous No 1 silk for the muscular coat and interrupted Lembert sutures of the same material for the peritoneum. Then I removed the tumour and observed before closing the abdominal wound that air passed freely along the repaired coils The operation was rather severe as after the repair of the gut I was obliged to enucleate a big subserous fibroid from the anterior part of the cervix before I could remove the main tumour As there was a considerable amount of shock I ordered a quarter of a grain of sparteine to be administered in a beef tea enema every three hours. There was but little sickness and flatus began to pass naturally 30 hours after the operation. Urine was secreted freely and in 48 hours the sparteine was discontinued, as the pulse became distinctly intermittent, and strychnine and digitalis were given instead There was no trouble with the bowels and when I last heard from the patient, 15 months after the hysterectomy, she was free from any signs of intestinal obstruction. The troublesome complication and the consequent prolonging of the operation caused me all the more anxiety as the patient had a weak circulation and was subject to attacks of fainting during the period, even before much blood had been expelled The sparteine seemed to act well, but I watched its action, as I know from experience that it is apt after a time to cause intermittence of the pulse

In conclusion, it is certain that adhesions are rare in fibroid disease, that when they occur they are not specially associated with any particular variety of that form of tumour or with any other complication to which it is subject, that, on the other hand, they are sometimes a manifest result of previous incomplete or exploratory operations, and that they more often involve the omentum or intestines than the parietal peritoneum

POST OPERATIVE ILEUS.

Most writers experienced in hysterectomy record instances of this fatal complication and one has occurred in my own practice. Sometimes it is simple in character A band of lymph connects the intestine to the stump of the uterus, the stump being in a normal condition so far as healing is concerned, then obstruction occurs, purely mechanical. Still, though Olshausen reports two such cases in his own practice,[8] I suspect that as a rule, obstruction is more often connected with septic changes I will not dwell on the "raw surface" question The dangers of a raw surface on a thick ovarian pedicle have been exaggerated The practice of sewing the edges of the pedicle over the surface with continuous or interrupted sutures is in itself not without danger The foreign bodies used as sutures may be sources of sepsis or other evils and the distal part of the stump may slough after this process of suturing Nor, when it does occur, is obstruction necessarily due to adhesion to the raw surface. Dangerous adhesions may be contracted by the thinnest ovarian pedicle with a very narrow raw surface, and in cases of adhesion the intestine has been found fixed to the side of the pedicle and not to its raw extremity, as in Spencer Wells's classical example.[9]

In retro-peritoneal hysterectomy there is no transfixion and therefore no distal part of the stump as in the ovarian pedicle. I must note in drawing this distinction that some operators, such as Penrose and Howard Kelly,[10] treat the ovarian pedicle without transfixion, they tie the ovarian and uterine vessels separately, leaving the membranous interval free I believe that this practice is in many cases excellent, but it is not quite safe when the pedicle is large. In retro peritoneal hysterectomy, I repeat, there is no distal end and in panhysterectomy there is no stump at all, but ligatures are applied to the peritoneum and to the upper part of the vagina. Obstruction is rare after both these operations for removal of the uterus. Under unfavourable conditions, however, inflammatory changes may render adhesion of intestine very possible. The uterine stump must be handled as little as possible and ligatured as little as possible, whilst the serous coat must be lightly sutured over the muscular tissue This practice is correct for a uterine stump which cannot shrink so rapidly as an ovarian pedicle and is not transfixed by a ligature. Distal ends do not bear foreign bodies, but as I have just observed there is no distal side of a uterine stump As to other considerations about the suture of the peritoneal layer of the flaps, I have referred to them in speaking of the management of capsules

At all events, to return to our subject, experience shows that the ligatured and sutured hysterectomy stump fares well as a rule if the sutures and ligatures be carefully and gently applied But Zweifel warns us that clumsy ligaturing and rough handling of the stump greatly increase the risks of exudation and consequent intestinal adhesion.[11] Unfortunately, certain stumps cannot bear the most gentle handling, whilst the patient's reparative powers are often at a low ebb owing to anæmia from hæmorrhage or visceral complications Hence a certain amount of parametritis is observed in many cases after the removal of a big bleeding fibroid from a sickly woman and exudation not easy to define by clinical research, probably occurs in such cases along the line of peritoneal suture. Such changes favour adhesions

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[8] Die Abdominalen Myoma Operationen Veit: Handbuch der Gynäkologie vol ii p 759 Olshausen adds two interesting cases of ileus after ovariotomy (pp 760 761)

[9] Ovarian and Uterine Tumours 1882, pp 426 427 The coil of intestine almost surrounded the sides of the pedicle

[10] Gynæcological Surgery vol ii, pp 24 25

I will now record the only instance in my own experience of ileus after hysterectomy and the observations which I have just made will serve to explain how it developed.

The patient was a single woman, aged 36 years, subject to great pain in the left iliac fossa for over a year There had been no hæmorrhages but her health was very feeble. The pain was caused by the presence of a large fibroid which filled the left side of the pelvis, extending a little above the brim. The growth sprang from the cervix, pushing up the uterus, the sigmoid flexure ran on its surface. There were other fibroid outgrowths, including one in the ovarian ligament, described elsewhere. Enucleation proved difficult as the cervical growth was bilobed and one lobe lay deep down in the parametrium. The capsule, made up of the left broad ligament, required many ligatures as did the thick uterine stump The right appendages were left behind This operation was performed on Dec. 10th, 1901. Evidence of sepsis, of uncertain origin, set in within a few days and obstruction came on gradually The point of importance and interest in the after history of this case was the difficulty of diagnosis of pseudo-ileus from true intestinal obstruction. The pulse grew very rapid and weak, and yet flatus passed freely I feared, however, bacillus coli infection where flatus often passes even when the patient is moribund[12] On the ninth day a great quantity of liquid fæces was brought away by the aid of turpentine enemata and the distension subsided. Within 24 hours, however, vomiting set in and I found that it was distinctly fæcal. Without delay I performed an abdominal section on Dec 19th Notwithstanding the septic symptoms and the feebleness of the patient the abdominal wound was firmly united. The obstruction was far above the sigmoid flexure, it consisted of a volvulus of the small intestine and immediately below it a knuckle of ileum adhered to the right side of the stump of the uterus The small intestine was deeply congested, its coils adhered, and there was turbid red serum in the peritoneal cavity I flushed out the peritoneal cavity with saline solution after setting free the adherent ileum. Unfortunately, the patient never rallied from the shock of the operation and died two hours after being returned to bed. There was a sloughy appearance about the stump of the cervix at the point of adhesion. This accounted for certain unfavourable symptoms seen during the first week—bad pulse, high temperature, and an unfavourable aspect. Pseudo ileus is a common complication of septicæmia and so I was deceived by the manifest septic symptoms The vomiting, fæcal from the first, came on late I operated immediately after detecting it, but the patient was by that time in a very unfavourable condition

In uncomplicated acute mechanical obstruction, as in Olshausen's cases, the symptoms are as a rule quite clear The more or less acute pain and the characteristic vomiting accompanied by quick pulse but no elevation of temperature, are very different from the combination of symptoms characteristic of the pseudo-ileus of septicæmia and septic peritonitis. The surgeon is not likely to delay opening the abdomen in an acute case. On the other hand, the more I see of complicated cases the less sure do I feel about pseudo-ileus and about the prophylaxis of intestinal obstruction in general. Secondary operations for obstruction where there is fever and where passive distension has been distinct before vomiting sets in are highly unsuccessful. Treatment by turpentine enemata, nutrient enemata, the wearing of the rectal tube for about 20 minutes before each enema, and judicious stimulation have saved numerous cases of passive distension with irregular vomiting and fever When, as in my case, this condition masks distinct mechanical obstruction it is often very hard for the surgeon to decide what to do Promptness in operating is the essential in acute obstruction. Deliberation and certain therapeutic appliances are the essentials in pseudo-ileus But we may be much embarrassed by a mixed case. Lastly, there is no absolute prophylaxis against mechanical obstruction The ovarian stump the uterine stump, and the ligatured ridge of peritoneum left in the floor of the pelvis after panhysterectomy may all be the seat of adhesion Even when unnatural prominences may be reduced by surgical ingenuity to a minimum, which we have certainly not yet attained, still the danger of acute obstruction will not even then be passed. Irritated serous surfaces and above all omentum always tend to adhere to what is next to them, and occasionally they fix themselves in such a way as to insure trouble with adjacent intestine In one case of fatal obstruction after removal of inflamed appendages I found a coil of ileum twisted tightly around a tense cord of omentum which adhered to the fundus of the uterus. The appendages had been removed a week previously In opening the abdomen in cases where others have already operated I have repeatedly found omentum adherent in all directions and not rarely full of holes, and I have come across small intestine hanging from the parietes, sometimes with a little diverticulum due to dragging on the adhesion. Yet in these cases there was no history of obstruction. What I have seen, others I find have observed also, and when we say that obstruction is remarkable it is really its rarity that is the feature most worthy of remark After hysterectomy obstruction seems relatively rarer than after ovariotomy, but statistics are not quite clear as to this point Oöphorectomy for inflammatory disease is more liable to be followed by this complication owing, I suspect, to the unhealthiness of the stump, it being never free from inflammatory elements Removal of normal ovaries for checking the growth or bleeding of fibroids is said to be often followed by obstruction, as the stump of the pedicle projects from the surface of a firm fibroid tumour usually more or less fixed and thus may lie in contact with the same coil of intestine for days This theoretical explanation is plausible, yet though we very often performed this operation at the Samaritan Hospital ten years ago, and not always with perfect success as to its aim, I cannot trace one case where obstruction occurred I know of one instance of acute obstruction following several months after retro-peritoneal hysterectomy and it was successfully relieved by the original operator But it seems certain that this grave complication is rare after hysterectomy The stump sinks down into the pelvis and undergoes atrophy After an ovariotomy the uterus drags on the stump of the pedicle which stands up in the middle of the pelvis in a position more favourable for contracting adhesions

RUPTURE AND HERNIA OF THE ABDOMINAL WOUND

One of the disadvantages of extra peritoneal hysterectomy with the application of the serre-nœud was the frequency of infection of the abdominal wound The process of cicatrisation was thereby much impeded and yielding of the wound followed by prolapse of coils of intestine was not rare. This complication is even more dangerous than it is inconvenient in such circumstances. When sepsis has played no share in the accident it is otherwise, for when a weak but uninfected wound yields intestine may come out and even lie in folds of dirty underlinen for hours before reduction without fatal results[13] In the retro-peritoneal operation and in panhysterectomy rupture of the wound from septic influences is almost unknown. So many of us perform hysterectomies and are obliged to make long incisions, often in subjects weakened by anæmia, that we must think about the strength of the cicatrix and the risks of the development of hernia. Experience shows that the cicatrix is usually strong enough not to yield and to allow the bowels to prolapse, provided that the sutures if meant to be removed are not taken away too early, or if left are strong enough to hold the structures around the wound firmly till the cicatricial tissue is enough organised to do so The constitution and the habits of the patient are two ever uncertain factors I cannot dwell on the relative merits of a single row of interrupted sutures including all layers of parietes and of sunken sutures absorbable or unabsorbable. continuous or interrupted, uniting the layers separately Different surgeons of like authority and experience are by no means agreed about this question. In some cases I find that very bad hernial protrusions follow the older and simpler method, but as I pointed out many years ago the complication is often the result of taking up too much of the peritoneum so that two opposed layers of serous membrane project forwards between the more superficial structures, effectually preventing their union. A hernial pouch is easily developed in this manner

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[11] Referate über die Behandlung der Myome Centralblatt für Gynäkologie 1899 p 613

[12] See Vautrin's valuable article on Colibacillary Infection after Hysterectomy Revue de Gynecologie et de Chirurgie Abdominale, November-December 1901

[13] Cestan Quatre cas d'Eviscération Post-opératoire Spontanée Toulouse Medical Nov 1st 1900 p 249 A case where prolapse of a foot of small intestine through a gauze drainage-track occurred on the ninth day with no evil results is recorded in my article on Chronic Serous Perimetritis simulating Cyst of the Ovary &c., *Journal of Obstetrics and Gynæcology of the British Empire* vol. i. p 265.

On the other hand, hernia of the cicatrix is by no means unknown after suture of the parietes in layers More than one operator of experience has found out that truth Septic changes may occur around a sunken unabsorbable ligature, the patient feels a little pain some time after the operation, and an abscess forms, leaving a weak spot. I have observed this complication twice in cases where I had been the operator and another instance is recorded where a patient was admitted into hospital for a stitch abscess a year after ovariotomy by a distinguished authority[14] There is, on the other hand, evidence that catgut is too soon absorbed to allow of firm union, excepting some samples of chromicised gut which are very slowly absorbed and thus have the disadvantages of wire and silkworm gut. My suspicions are confirmed by three cases recently reported by M Recours of Bordeaux in an instructive thesis based on 62 cases of rupture of the wound and prolapse of intestine[15] Three cases are included where rupture occurred in the practice of one surgeon and they are worth considering for a minute or two, since where three wounds yield during convalescence and allow intestine to prolapse, many more sutured in the same manner must be so weak as to become inevitably the seat of rupture In all three cases catgut was applied to the muscular layer and horsehair to the integuments The first patient was a man, aged 58 years, he underwent pyloro gastrectomy for cancer The wound yielded on the ninth day, but healed after it was sutured again, as happened in the two other cases The second patient was a man, aged 50 years, with chronic catarrh, the wound gave way on the twelfth day after gastrostomy The third case directly concerns us. The patient was a woman, aged 50 years, subject to uterine fibroid. She was cachectic, presumably from anæmia. Panhysterectomy was performed, the wound gave way, apparently without any violent effort, on the tenth day Thus Recours rightly concludes that catgut, which is absorbed, or at least becomes practically useless within a week, will not allow time when the patient is feeble for the development of cicatricial tissue strong enough to bear by itself abdominal pressure increased by coughing or voluntary muscular efforts.

Into the statistics of hernia of the abdominal wound after hysterectomy I do not propose to enter, as I know not of any on which we may rely In the operative results of one surgeon the latest cases fare nearly always the best, as he was most experienced when he performed his later operations and a life saved is a clear success directly after fair and evident convalescence. But it is otherwise when the strength of the cicatrix has alone to be taken into account In 100 successful abdominal sections performed within 12 months there may be no case of hernia of the cicatrix, or rather no case where that complication has become advanced enough to be detected by the patient. But three years later there will assuredly be more than one hernia in the series

CANCER OF THE STUMP OF THE CERVIX, THE ALLEGED MALIGNANT FIBROID

Most of the subjects discussed in this lecture are illustrated by cases in my own experience. I am glad to say that I have never observed cancerous degeneration of the stump after retro-peritoneal hysterectomy in my own practice. Thus I am compelled to depart from the rule which I have endeavoured to maintain in respect to other matters of interest pertaining to uterine fibroids and their treatment. On the other hand, whilst I have refrained from speaking of subjects which happen never to have come under my personal observation, I feel bound to make an exception in regard to malignant changes in the cervix. Whilst I advocate a certain operation I am not justified in turning my back on the fact that others have shown that it is sometimes followed by evil results Therefore, in respect to cancer of the cervix I feel bound to review the experience of others. In the first case we must make sure of the nature of these degenerations of the cervix Is the "cancerous" stump always carcinomatous? On looking into the literature of the subject I find that sarcoma of the stump has been mixed up with carcinoma. This is a grave error In speaking about fibroids, as I have already endeavoured to explain, pathology need not trouble us much, as we take it for granted that the tumour is a fibro-myoma When there is a question of malignancy the case is completely altered. Sarcoma of the cervix is a very rare disease, so is sarcoma of the uterus, but it is not always easy to recognise sarcomatous degeneration of the uterus, so that sarcoma of the stump after hysterectomy may imply that there were sarcomatous elements in the entire uterus when it was amputated. Cancer of the cervix is very common and if it develops after hysterectomy can we be always certain that the germs of the disease were not present before the operation? Can we be certain that the operation caused the cancerous degeneration? Lastly, may not any method of operating which insures as much as possible the maintenance of the nutrition of the stump favour, on that very account, the development of cancer? Or does the truth lie in the opposite direction—that is to say, may not a method which insures ultimate atrophy of the stump favour malignant degeneration?

I will first dispose of the cases of sarcoma of the stump which have been mixed up with the carcinomas. I have found three distinct cases, but in the first let it be remembered that the uterus was removed by the old extra peritoneal operation It is recorded by Wehmer[16] The tumour was a fibro myoma weighing 16 pounds and the patient was 44 years of age Now let us mark that sarcoma developed a few months later in the *scar* and rapidly diffused itself over the peritoneum. It is not clear how far the cervix was involved and the malignant disease might well have originated in the parietes adjacent to the stump The second case is reported by Menge[17] Sarcoma developed in the stump after removal of a cystic fibro-myoma of the uterus 11 pounds in weight But he admits that the uterine tumour was registered as an "innocent" fibroid on the strength of its naked eye appearances ("*grossanatomisches Aussehen*") Hence Menge had his doubts. The third case of sarcoma of the stump was related by Dr Stone of Washington in a discussion to which I shall presently refer The sarcoma was discovered in time before the patient left hospital, this fact is sufficient to show that the uterine tumour was in all probability sarcomatous The cervix was subsequently removed with success.

Thus there are three fairly reliable cases of "cancer" of the stump which were really sarcomata. We cannot feel sure that others described as "cancer" were not also sarcomata In one of the three cases actually recognised as sarcoma the modern retro peritoneal operation was not performed and the sarcoma may have originated in the parietes, in the second there was no microscopic examination of the uterus when it was removed, whilst in the third the probability that the uterus itself was sarcomatous is extremely strong We cannot dismiss these cases of sarcoma without dwelling a little on malignant degeneration of fibroids, though a full discussion of that grave subject would here be quite out of place. Continental authorities claim to have discovered that sarcomatous change in a fibroid is not rare, but they rely much more on microscopical appearances than on clinical histories. Thus as long ago as in 1888 Martin detected four cases in a series of 205 operations for the removal of fibroids of the body of the uterus[18] As recently as last March Ulesko-Stroganowa declared that she found that ten out of 100 cases of fibroid examined by her were malignant, a proportion utterly at variance with clinical experience.[19] She makes out that this "malignant" fibroid is a true leiomyoma, like any other fibroid, the muscle cells altering their form until they become polymorphic, yet in all cases the polymorphic cells can be traced back to plain muscle. The tumour which I described in 1889 was probably of this class[20] Never since that date

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[14] Transactions of the Obstetrical Society vol. xliv 1902, p 183

[15] De l'Éviscération Post-opératoire Spontanée Thèse de Bordeaux 1901 See cases 55, 56, and 57, p 68

[16] Beitrag zur Myomotomie und Castration bei Fibromen Zeitschrift für Geburtshülfe und Gynäkologie, vol xiv p 106, Case 17

[17] Ueber zwei Fälle von Myosarcoma *Uteri* Lymphangiecticum Centralblatt für Gynäkologie, 1895 p 453

[18] Centralblatt für Gynäkologie 1888 p 389

[19] Ueber bösartiges Myom der Gebärmutter in *report of a meeting* of the Russian Obstetrical and Gynæcological Society Monatsschrift für Geburtshülfe und Gynäkologie, September 1902, p 427 and October p 826

[20] Myoma of the Uterus becoming Sarcomatous Transactions of the Pathological Society vol xli 1890 p 206 My conclusions (*Ibid* p 212) practically signify that the tumour in question was a malignant myoma developed from the elements of plain muscle cells which had never advanced beyond their embryonic stage

have I come across a true malignant fibroid and I regret to say that I was unable to trace the patient in that solitary case after her convalescence. I cannot find many records of malignant fibroid in the United Kingdom, though the attention of the medical world has been so much turned towards uterine tumours of late years. Nor do the foreign observers furnish us with after histories of their cases. It seems clear that in most instances the tumours of the kind described by Ulesko-Stroganowa are clinically innocent and that the changes in the muscle cells, formidable in appearance, are not malignant after all. Many of her colleagues were of that opinion when she discussed her researches before a society.[21] Dr. Lockyer, to whom I am indebted for his careful examination and preparation of many of the specimens which illustrate these lectures, has recently turned my attention to an example of "malignant fibroid" which he intends to report in full. Most unfortunately the patient died after the operation, which was performed by an experienced surgeon. Two points of interest must be noted in respect to this case. Firstly, the tumour consists of large well circumscribed growths, purely sarcomatous in the midst of a pure myoma, so that it is not certain that it corresponds with Ulesko-Stroganowa's cases. Secondly, what is yet more important for our purpose, I cannot see how the operator could have taken the fibroid for a malignant growth. Had the patient lived of course malignancy would soon have been manifest in the remains of the cervix. But then the case would have been an argument, I admit, in favour of panhysterectomy, but not an example of malignant disease developing in a stump of which the tissues were healthy at the date of the hysterectomy. I turned attention to this source of fallacy in relating Menge and Stone's case. The same must be said of Dr. Herbert Spencer's cases read at the Manchester meeting of the British Medical Association last August.[22] In two cases of retro-peritoneal hysterectomy the tumours were indistinguishable from fibroids and were not known to be sarcomata until some months after removal; the patients ultimately died with secondary masses in the pelvis. This experience is no doubt a plea in favour of panhysterectomy but there was no sarcomatous degeneration of the stump of a previously healthy cervix. It is remarkable that one operator should have had two cases of so rare a disease as sarcoma of the uterus with full clinical proof of malignancy within a very few years.

Thus there is such a thing as malignant fibroid and it must be taken into account in association with degeneration of the stump. We must further grant that a malignant fibroid is a sarcoma. Cancer of the fibroid uterus means carcinoma of the uterus coincident with a myoma, a grave complication to be duly borne in mind in association with the carcinoma of the stump which we must now consider, but a 'cancerous fibroid' is not clinically any more than pathologically the same thing as a true sarcoma of the uterus developed from muscle cells or their elements.

Having duly weighed all these considerations about sarcoma, we are at length free to discuss cancer of the stump of the cervix, true carcinoma, which has undoubtedly been observed after retro-peritoneal hysterectomy. The most interesting summaries of clinical evidence which have recently appeared are to be found in Thumim's monograph on the operative surgery of the gravid uterus[23] and in a discussion held this year at the annual meeting of the American Gynæcological Society on the Relative Advantages of Complete and Partial Hysterectomy.[24] Thumim considers that the 15 reported cases of malignant degeneration of the stump are arguments against retro-peritoneal hysterectomy and favour panhysterectomy. But he includes the two sarcomas (Wehmer and Menge) which we have put aside and candidly admits that in two of the cases of carcinoma malignant degeneration of the cervix possibly existed when the uterus was removed. One of the doubtful cases was in Freund's practice; the second was reported by von Erlach in a discussion on Savor's case, to which I shall presently refer. Von Erlach, like Menge in his report on the sarcoma, was not sure that there was not cancer at the time of the hysterectomy; the uterine tumour was necrotic and was not carefully examined. I think that another case, included in Thumim's series of 15, is more than doubtful in the same respect. Schenk[25] is the reporter. The patient, I find on referring to the original report, was 57 years of age, and the uterus, as big as a fist through the growth of a tumour, was removed on account of bleeding for two months, with pain and emaciation. The operation was performed in December, 1897; sanious discharge was soon observed and in April, 1898, the stump of the cervix was found to be cancerous. The patient died four months later. Comment would be superfluous on such a case. Savor's case[26] is nearly as suspicious. The patient was 48 years of age when the uterus was amputated and the cancerous stump was taken away when she was 52 years old. The germs of cancer very probably existed at the time when this elderly patient underwent the operation. Thumim quite justly turns his reader's attention to a case where Landau removed a fibroid uterus by panhysterectomy from a woman, aged 44 years. When the uterus was examined after the operation cancer of the cervix was detected, a complication which had not been previously recognised. Had the cervix been left blame would have been attached to the "incomplete operation." All these cases show that statistics are misleading and when the disease develops in the cervix after the operation there is no clear evidence that the operation was the cause of the cancer. I speak elsewhere of a case in Martin's statistics where cancer of the cervix developed after double ovariotomy for tumours of an innocent type. Nobody would consider that the ovariotomy caused the cancer of the cervix.

The discussion in America to which I referred is worth attention. Noble, Cushing, and Janvrin considered that malignant degeneration was very rare. Cushing distinctly stated that the cervix has a certain physiological function of its own that is of value and on that account it should not be removed when hysterectomy is performed on a young woman. This consideration is much more important, in Cushing's opinion, than the ultimate chance of cancer developing in the stump. His theory appears related to Abel-Zweifel's which I took into consideration when speaking of the treatment of the ovaries in hysterectomy, but the German authorities insist on a retention of a piece of the uterine mucosa above the level of the os internum. Cushing is silent about this qualification and as I have already stated American operators amputate the cervix below the os. Noble of Philadelphia has observed cancer of the cervix in only one out of 300 hysterectomies in his own practice and in that case it was present before the operation. The case of sarcoma of the cervix recorded by Dr. Stone of Washington has been already mentioned. It is clear that when part of the cervix is left that part may become cancerous, but this complication is rare and there is no evidence that the operation causes it. So far the advocates of panhysterectomy may make use of the complication in question, but there are other considerations which favour the supra-cervical operation. On these, however, it is not to the point for me to dwell.

The last consideration relative to malignant changes in the stump is of considerable interest. Such changes, it is evident, occur occasionally. May not any method of operating devised to maintain the nutrition of the stump favour on that very account the development of cancer? I refer, of course, to the preservation of the ovaries in hysterectomy, a subject which I have already discussed at considerable length. Or does the truth lie in the opposite direction? That is to say, does an atrophic stump of the cervix tend to become carcinomatous just as cancer usually develops in the cervix when the uterus is becoming sexually aged? The truth remains unknown. The maintenance or the limitation of the nutrition of the stump must play a part in the development of cancer, but as to which condition favours, and which tends to avert, malignant changes we know nothing. We saw that there is great uncertainty as to the effect of removing or leaving the ovaries in any one case of hysterectomy. We also saw that observers do not agree as to the effect of leaving or removing part of the uterine body as well as the cervix In short, we are far too ignorant about essential points to be able to solve this question There must be a solution, but at present we lack even bare clinical evidence. We know that the preservation of the ovaries in hysterectomy, as a rule at least, favours the continuation of a modified menstruation and as a rule softens the artificial menopause. Unfortunately I find that in the records of carcinoma of the stump the treatment of the ovaries is seldom if ever noted. None of the authors lay any stress on the matter I have only succeeded in obtaining evidence about the ovaries in two cases, both recorded this year by M. R Condamin of Lyons.[27] That writer, like his predecessors, makes no mention of the ovaries, but he kindly took the trouble to reply to a letter which I wrote to him asking for the necessary information. He stated that at the time when he operated on the two patients he always left at least one ovary The evidence of two cases, however, is insufficient, especially in one instance, for the first patient was 58 years old and malignant disease appeared as a bleeding fungous mass in the stump a year after the hysterectomy It might well have existed at the time of the operation The second patient was 40 years of age and the malignant changes in the stump were detected by accident four years after the hysterectomy during an operation for hernia of the abdominal cicatrix. Pain, hæmorrhages, and fatal cachexia quickly followed Thus it is clear that we want more light thrown on this question Let all operators faithfully record the treatment of the ovaries and the nature of the uterine flaps in every case of hysterectomy for fibroid disease. If there be clearly any distinct advantage in one line of treatment—I mean clear evidence of relative immunity from malignant changes—let us adopt that treatment, for there is great weight in Cushing s argument in favour of retaining the stump of the cervix, but if no method of treatment secures the cervix from degeneration, and if better evidence than is at present at our disposal can establish a causal relation of the preservation of the cervix to its malignant degeneration, then we may seriously think about adopting panhysterectomy to the exclusion of the less complete operation.

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[21] Loc. cit., October, p. [illegible]. Fenomenoff considered her percentage of malignant cases too high. Levinovitch remarked that young plain muscle cell was hard to distinguish from connective tissue new growth. Redlich was of a similar opinion. Raschinsky remarked that in one case reported by Ulesko-Stroganowa as malignant there was no evidence of malignancy outside microscopical appearances. See also discussion in the Transactions of the Obstetrical Society of London, vol. xli., 1899, p. 369.

[22] Total Abdominal Hysterectomy (especially by Doyen's Method) for Fibro-Myoma Uteri, Brit. Med. Jour., Oct. 11th, 1902, p. 1131.

[23] Chirurgische Eingriffe bei Myomen der Gebärmutter und Schwangerschaft und Geburt, Archiv für Gynäkologie, vol. lxiv., p. 457.

[24] American Journal of Obstetrics, August, [illegible]

[25] Lesser Dauererfolge nach Myomotomie, Archiv für Gynäkologie, vol. lxiii., p. 450 (Case 17).

[26] Carcinoma cervicis nach Laparo-myomektomie, Centralblatt für [illegible]

Danger of pushing a Fibroid out of the Pelvis

Pushing up an impacted fibroid is never a thoroughly safe proceeding It is specially dangerous during pregnancy, and we must remember that that condition may be overlooked in a young woman where metrorrhagia is present and simulates menstruation. The impacted fibroid is usually firmer than the gravid part of the uterus and not rarely very much harder, the danger of pushing a hard against a soft mass is evident. I exhibit a very instructive preparation, it was a fibroid uterus which I removed during pregnancy Some of you have seen it before, the full history is published in The Lancet[28] and there is a fine engraving of it in the forty third volume of the Transactions of the Obstetrical Society (p 178) I watched the development of the pregnancy for over six weeks The lower mass became fixed in the pelvis Reduction would have been very dangerous. Observe the soft uterus, once containing a fair amount of liquor amnii. The mass beneath it is extremely hard, the growth above it is at least much harder than its own tissue It lies like an orange between two stones. As the impacted mass caused pressure symptoms, so that it was inadvisable to wait till term and do a Cæsarean section, I removed the uterus

I know that a hard mass in the pelvis associated with a pregnant uterus is naturally supposed to be a fibroid and when impaction is threatened many practitioners try to push the mass out of the pelvis Experience, however, teaches us that a small tense ovarian cyst pressed down into the pelvis may feel very hard when the hand contrasts it with the soft pregnant uterus This fact must be remembered, as rupture of an ovarian cyst in pregnancy is serious. I exhibit a cyst from a case in point which I recorded in full[29] last spring Before the pregnancy the patient had noticed no symptoms of any tumour, attacks of severe pain set in during the fourth month, and on examination a mass was found occupying Douglas s pouch and the left fornix. It seemed absolutely fixed and was very firm, but owing to its position under and behind the pregnant uterus satisfactory bimanual palpation was not practicable, even under an anæsthetic. Gentle attempts to push it up were made under chloroform Several of my colleagues at the Samaritan Hospital examined the patient with me on that occasion and we all agreed that the firm tumour was probably ovarian, yet possibly might be a fibroid, as in the other case. We were certainly prudent in avoiding firm or continuous pressure I made an exploratory incision and found on raising the uterus out of the abdominal wound that the tumour was a small pyriform cyst of the right ovary displaced backwards and entirely to the left. It was jammed in the pelvis behind the uterus. Its pedicle, twisted two turns, was stretched tightly across the back of the uterus The left ovary lay both above its fellow and above the pelvic brim The cyst was removed with the greatest ease, I operated in the fifth month and the pregnancy went on to term. I think that these two specimens are a good object lesson, teaching us the perils of trying to push a firm tumour out of the pelvis during pregnancy I was careful about handling the pelvic swellings and so the patients were preserved as well as the specimens.

In concluding these remarks about pushing up pelvic tumours during pregnancy I must once more insist on the difficulty of diagnosis in these cases where the tumour can seldom be explored bimanually A swelling resembling a cystic fibroid might prove to be a hydatid cyst. Franta, who has written a valuable monograph on hydatid cysts in pregnancy, labour, and the puerperium,[30] notes that only in one recorded case could the cyst be successfully pushed up above the pelvis during labour I doubt if anybody would care to push up a hydatid cyst, if he had diagnosed it, in any circumstances. Great care must also be taken when attempts are made to push up a fibroid even when the uterus is evidently not gravid. The fact of impaction is only certain when the operator knows on very reliable evidence that the mass fixed in the pelvis was recently free and moveable Pushing a broad ligament fibroid might entail serious consequences

In conclusion, Mr President and Gentlemen, I must heartily thank you for the patience with which you have listened to me I have endeavoured to turn attention to several unsolved factors relating to fibroid disease and have dwelt on two themes which many of us believed to be defunct until it was shown last summer that they were only in a state of suspended animation You will now understand why I have avoided disquisitions on the innocence of fibroids, the necessity for surgical interference, and the best kind of operation These matters have been freely discussed of late by able advocates and opponents, so freely that I understand that the profession is getting tired of discussions which are not likely to lead to any solution I must specially thank my friend and colleague, Dr Cuthbert Lockyer, for the pains which he has taken to prepare a number of specimens which I have used during these lectures for purposes of demonstration.

SOME THOUGHTS AND OBSERVATIONS REGARDING APPENDICITIS, ESPECIALLY WHEN APPEARING IN ITS ACUTEST FORMS

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Age—the process of growing old—has many notable disadvantages but it has also its compensations, one of which is that in clinical work one can contrast a somewhat distant past with the vivid present and take note of any changes that may have occurred in the vital manifestations of disease And that they do, and indeed must, arise, I have no manner of doubt for as many diseases depend largely upon environment and social states for their development, and as permanency in these conditions is rare, so must changes arise in the maladies they promote

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[27] De la Transformation Néoplasique du Moignon Uterin après l Hystérectomie Subtotale Lyon Médical vol. xcviii p 561 (April 1902)

[28] A Case of Hysterectomy for Fibroid in the Fifth Month of Pregnancy The Lancet March 2nd 1901 p. 621

[29] Ovarian Tumours and Ovariotomy during and after Pregnancy The Lancet Feb 8th 1902, p 356

[30] The complete essay Kystes Hydatiques pendant la Grossesse, l Accouchement et les Suites de Couches " is published in the Bohemian language (Prague 1901) with a summary in French The clinical reports were published in the Annales de Gynécologie et d Obstétrique, March 1902.

Appendicitis is no new disease, but that it is a disease largely on the increase, both as regards the number of its victims and its severity, is my conviction. And here are some of the reasons for this belief. 30 years ago and more, when I was a student in Edinburgh, one saw from time to time cases of typhlitis and perityphlitis, marked by the signs and symptoms of a localised peritonitis, and above all by the presence of a tender tumour in the right iliac fossa. Occasionally the tumour underwent the process of suppuration—the abscess was opened and as a general rule convalescence followed None of these patients died and the very able physician whose clinical clerk I then was, the late Dr Warburton Begbie, said of them, "They don't die" This early and happy experience was supplemented by nine years of arduous work in a manufacturing town, in which the population was largely composed of those whose age predisposed them to trouble in the appendix, and here, again although the disease was ever and anon before me, recovery was the rule—*I met with no fatality Moreover, I did not* meet with the cases of fatal so-called idiopathic peritonitis which are now believed by many to have hidden errors in diagnosis,[1] although one or two patients who died from intestinal obstruction very possibly as I shall endeavour to show later, really perished through trouble in or around the appendix. It was not until 1887 that I met with lethal appendicitis, and then, strangely enough, within a very limited time I saw four cases, all of which were quickly fatal. Two of these patients I operated upon, in both foreign bodies were present a gall stone in one and an orange pip in the other in both the appendix was perforated, and the cavity of the peritoneum contained much pus This naturally drew my attention very forcibly to this morbid condition, and as the years have run this interest has not diminished, for I have seen a steadily increasing number of cases and also a very notable increase in their severity And mine is no singular experience. Following the publication of the last Cavendish Lecture by Sir Frederick Treves in THE LANCET[2] there appeared in its columns some valuable correspondence bearing upon appendicitis and among other letters was one from Sir William T. Gairdner,[3] who is universally recognised as one of the ablest and most accurate of clinical physicians, both as regards his facts and his statement of them, and here is something of what he wrote "The first point that appears to require notice in view of more recent researches is that the case in 1884 was absolutely the first case that I could find in my own records of a fatal result of perityphlitis during the 10 years in which the Western Infirmary had been open A careful inspection of the records of the pathological department discovered two more such cases, as well as two others which had been sent in from without for examination On the whole, and speaking with such diffidence as is necessary to allow for lapses of memory I am inclined to think that this was the very first fatal case that had occurred to myself personally either in hospital or consulting practice" Five fatal cases occurred in a great institution in the course of 10 years while during last year alone (as the medical superintendent, Dr D J Mackintosh, M.V O, courteously informs me) there occurred in the same institution 64 cases of appendicitis which demanded operation, and of these nine were fatal. Again, in the correspondence referred to is a communication from a well known practitioner, Dr W J Tyson[4] of Folkestone in which he says "I was at Guy's Hospital some 25 years ago and during my stay there of six years I never saw a case of appendicitis operated upon"[5] The experience of the students of Guy's Hospital must be very different to-day My friend Dr W Jeffrey of Jedburgh, a very able and observant physician, writing to me on this very matter, says "I know that in the old days, 35 to 40 years ago, when I sat at the feet of Warburton Begbie, whereas these cases of 'limited peritonitis' (as they were then called) gave one no anxiety—one looked forward to them one and all doing well—it is now very different. Every one of them makes me anxious and frequently, as the event proves, with all too great reason" These are, however, only individual experiences and we know how these may vary, but the same story is told and, as would be expected, even more emphatically, by the records of some great hospitals Take, for instance, those of St. Bartholomew's Hospital, and in order to avoid a very large mass of statistics I have selected for comparison the three oldest hospital reports which to me are available and the three latest. How they work out is shown in the following paragraph.

In none of the surgical reports for 1882, 1883, and 1884 is there any reference to typhlitis or perityphlitis or to operations in connexion with either condition. It is true that under the heading of "Abdominal Section" in 1883 four operations were performed unsuccessfully in early life (in two of which cases the patients were under five years of age) and it is possible that harm in the appendix may have played a part in some of them but there is no certain indication on this point. That under the title of 'Abscess (Diseases of Connective Tissue)' a certain number of cases may be concealed is very probable, but here, again there is no sure light. Turning to the medical reports the following is the result During the three years under consideration there are recorded under the title of Perityphlitis" 41 cases with two deaths and of Acute Peritonitis" 38 cases with 21 deaths The analysis of these deaths is interesting for in 1882 of the five patients who died only one was under the age of 30 years and while this in no wise excludes the possibility of some of the others having suffered from trouble in the appendix in the absence of all definite knowledge the fact is worthy of notice. In 1883, of the 13 cases of peritonitis which proved fatal only two were found to be due to appendicitis while in 1884 of the three patients who died only one had assuredly this association The gross results thus are 41 cases of perityphlitis with two deaths and 38 of acute peritonitis with 21 deaths only two of which were certainly associated with lesion of the appendix while it is possible that six others may have been. Add to these a fatal case occurring in 1884 under the title 'Perforation,' in which an opening in the appendix was found and we have a mortality of 11 in a total of 79 cases.[6] The 15 years that elapse between 1884 and 1899 bring a new recognition of the importance and of the treatment of appendicitis In this period it has become a malady with which the surgeon has more or less to deal. The term typhlitis' disappears from the nomenclature and under the terms 'appendicitis' and 'perityphlitis" is the disease recognised. Its magnitude is further marked by divisions which increase in number as its various pathological and clinical manifestations are acknowledged We find acute and chronic appendicitis without external suppuration and this in surgical as in medical wards is a comparatively mild malady but when the acute form is attended by suppuration, when it is in association with the occurrence of gangrene and with perforation of the organ its gravity grows great. In 1899 there were in the medical and surgical wards 97 cases in all, with a gross mortality of 10 but 54 of these demanded operation In 1900 there are tabulated in the medical and surgical departments 102 cases with 16 deaths, and in these 102 cases operation was necessary 80 times In 1901 we find that there is the increasing number of 122 cases, that of these 12 patients died and that it was necessary to operate on 83 patients

In the first three years that have been considered there were 79 cases (typhlitis *and peritonitis*) with 41 deaths, a considerable number of which may, however, have been unconnected with the appendix, while in the later years there were 321 cases (perityphlitis and appendicitis) with 38 deaths. The thought, however arises that in the increased number of the sick attending the hospital may be found the explanation of this apparent increase, but that this is not so is indicated by the fact that while in 1882 there were 4249 patients and only 16 cases of perityphlitis and 20 of peritonitis, in 1901 with 6331 patients there occurred 122 cases of perityphlitis alone.

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[1] Regarding this point I have heard it frequently asserted that the term peritonitis" not only covered in other years the fatality of appendicitis but that it had its origin almost invariably in lesions of that organ That this may be a very erroneous estimate of pathological possibilities such facts as the following will show In 1883 there died in St. Bartholomew's Hospital 13 patients the subjects of peritonitis and this is what necropsies in nine of the cases revealed—two were due to ulceration of the appendix, one to stricture of the colon one to obturator hernia, one to bursting of a renal abscess one to chronic dysenteric ulceration, one probably to pyæmia, one to carcinoma, and one to fibroma of the uterus and again in a collection of 21 cases of perforative peritonitis collected by Jantz and quoted by Dr W Hale White seven followed perforation of the appendix five perforation of a gastric ulcer three perforation of a typhoid ulcer two hernia, one a rupture of the stomach one a rupture of the intestine one the rupture of a duodenal ulcer and one the rupture of a perimetric abscess.

[2] THE LANCET June 28th 1902, p. 1815.

[3] THE LANCET July 12th 1902, p 103.

[4] THE LANCET July 19th, 1902, p. 183.

[5] Of interest in connexion with this statement is the following by Dr Hilton Fagge: Even when typhlitis presents itself clinically under the guise of intestinal obstruction or of diffuse acute peritonitis I believe that it scarcely ever destroys life if judiciously treated. There may be cases in which a considerable part of the appendix sloughs away and in which death is inevitable But I only know of one fatal case as having occurred within the last five years at Guy's Hospital if I may exclude cases in which death took place a few hours after admission and in which purgatives had been given freely" (Fagge's Principles and Practice of Medicine 1886 vol ii p 175.)

[6] As there is at this period in the reports not the same clear definition that is observable in the latest ones I have classed together peritonitis and typhlitis and their issues, so as to avoid the chance of unwittingly diminishing either the number of cases of appendicitis or their fatality

Two other points in relation to increase in frequency and in severity seem worthy of note. The first is the greatly increased frequency of relapse I can recall a good many cases seen early in my professional life which have since then escaped all similar trouble, but it has not been so with those met with in later years—relapse, if not the rule, has at least become far from exceptional, and it is this tendency and the surgical interference that it demands that make the number of operations on the appendix so much more numerous. The second is the notable way in which in certain families the malady is found As I write this, and without any great effort of memory, I can remember several family groups which illustrate this In one both the father and the mother suffered from the disease, two daughters out of four also suffered and so severely that in one case suppuration occurred and in the other gangrene, in another group the mother was the first attacked, and out of a family of three—two sons and a daughter—two have been its subjects the son requiring operation. Again two brothers in a family of five were attacked, one of whom died rapidly in his second attack, two sisters in a family of four sisters were attacked, one requiring operation and the other remaining now under watchful observation, and in one family of two, a sister and a brother, the sister had one mild attack, the primary one in the case of the brother demanding operation All these having come under my own observation within the last few years can hardly be regarded as fortuitous, and the interest attaching to them is the greater because inquiry affords no evidence of a tendency to gastro-intestinal ailments, or any mortality from such in the immediately preceding generation Even in the sufferers themselves with the exception of one or two of the girls who had been subject to constipation, there was no story of those nervous symptoms of those circulatory disturbances, or of that vicious metabolism to which some writers attach importance as hereditary exciting causes of this disease

With these recorded facts, which I incline to regard as proofs that the disease is an increasing one and that its severity is apt to be greater than it was in other years, my attitude, like that of many others well known to me, has undergone considerable change as regards the larger necessity for operation in cases of appendicitis but I am still absolutely averse to the assertion that the diagnosis of the malady carries with it inevitable surgical interference In the very large majority of cases, the prognosis when the case is under careful medical supervision is a favourable one, but there are certain exceptional examples in which the possible recovery of the patient rests largely with the surgeon To the observant practitioner who has had a fairly large experience of appendicitis such cases are not difficult to recognise—the stamp they bear is a very clearly cut one—but to the man of average experience who has seen many cases get well and who only knows through the teaching of others how tragically some can die there are few more difficult or anxious considerations than the decision as to their management. It is with the endeavour of rendering this difficulty, which was at one time a very personal one and which I know is still a puzzle to others, somewhat easier that I venture to record some of the lessons that have come to me on this point, and as our power of recognising the gravity of a disease when some of its most notable features are absent depends largely upon our acquaintance with it in its truest developments, I detail two concrete characteristic examples of ultra acute appendicitis

CASE 1.—A patient of Dr J W Campbell of Mentone, a man in early middle life had, some six months before the illness in which I saw him and while resident in London, a sudden severe attack of abdominal pain He was seen by one of the best known of English physicians and by an able surgeon their joint diagnosis being one of gall stone colic. Early in the morning of a certain Saturday while in bed he was again attacked by the old pain the character and the situation of which he quickly recognised, and he was seen in the course of a few hours by Dr Campbell. The patient was then suffering severely and a dose of morphia was given him, which brought so much relief that for many hours he was comparatively easy On the Sunday morning the pain returned with increased violence, he vomited, became cold and depressed, and was obviously very ill. Dr S M Rendall, who then saw him with Dr Campbell, agreed with the latter that he had an acute appendicitis and that surgical interference was necessary The same evening at his bedside I met these gentlemen, when his condition was typical of what had befallen him He had an anxious, drawn, pained look, and complained much of abdominal suffering, he had rather quick costal breathing, a slow and very small pulse of 84 a subnormal temperature of 97° F, and a flat, board like, non tender abdomen but one which did not permit of a deep inspiration being taken and the nervous, anxious attitude of a man who felt himself to be gravely ill On opening the abdomen a quantity of milky looking pus made its escape, and when the cæcum was drawn up it was evident that the cavity of the pelvis was full of the same fluid The appendix, enlarged, inflamed, and thickened, presented a large perforation on the inner aspect of its lower third and its mucous membrane was extensively ulcerated Sponges with a strong solution of biniodide of mercury (1 in 2000) were used to cleanse the parts, and a large drainage-tube was placed in the recto vesical pouch Although it was some days before the tube could with safety be removed he made a good recovery

CASE 2.—The patient, a girl, aged 16 years, had in the month of June what was recognised as a threatening of inflammation of the appendix which was alone marked by a single act of vomiting and some tenderness on pressure in the right iliac region, for she had no fever and made no complaint of pain until examination of the abdomen revealed the tender area For this she was most carefully treated by absolute rest and careful dieting and in the course of a week or two she seemed quite well Examined three months later there was not a shadow of evidence of her former slight illness to be detected. In the early hours of a morning at the end of September she awoke with abdominal pain, not very acute in its character for it was much relieved by a hot application, but she shivered, became hot, and felt very ill Seen by a medical man in the morning she was found to have a temperature of 102° F, a quick, peculiarly small pulse, a flushed face, a flat abdomen, with rigidity and dulness over the cæcal region, but with no tenderness and no muscular rigidity beyond this area. As there was a history of some constipation her medical attendant regarded the case as a typhlitis due to a packed cæcum, the apparent dulness supporting this opinion An enema was ordered which acted freely and well, but so comparatively mild was the pain in the abdomen that opium was not thought necessary In the evening the general condition was not improved for the temperature was higher (104°) and the pulse quicker (130), but the patient expressed herself as feeling easier A small dose of opium was given at bedtime and a fairly good night followed. On the succeeding morning the temperature had risen to 105°, the pulse to 150, the previously dull right iliac region had become clear and the muscular wall soft, while there was increase in the area of abdominal tenderness In the late afternoon I saw the patient. She was bright and happy looking, even cheerful when roused, but she was somewhat somnolent—somnolent from that state of euthanasia which happily marks some acute septic processes. Her pulse was fully 150, her temperature was 105° (it had been higher earlier in the afternoon), and the abdomen, not full and not markedly tender, was still moving easily with respiration—indeed, she could take, when asked to do so a nearly full inspiration She made little complaint of suffering had never vomited and the most careful examination failed to give any evidence of intra abdominal effusion Despite the absence of many indications which in the presence of an acute peritonitis are sure guides, there could be no doubt as to the diagnosis here and the abdomen was opened Red distended, lymph-coated intestine and a much infiltrated omental edge at once showed themselves and when the appendix was exposed its colour told the story of its condition. The mesenteriolum cut under the ligature as cheese would cut and the surfaces left were as dry, for every vessel in the mesentery was plugged The appendix when drawn upon separated at its insertion into the cæcum—for it was a gangrenous mass—and left a considerable aperture in the wall of the bowel. This was closed by a double row of Lembert's stitches, the parts were carefully cleansed with swabs, and two drainage-tubes passing into the floor of the pouch of Douglas were so arranged with reference to the aperture in the cæcum that they would command any leakage from the viscus Within 36 hours of the operation her temperature was normal, the drainage tubes, allowed to remain for ten days, were expelled by the process of granulation, and her recovery was uninterrupted

But one cannot always expect to have the picture so unmistakeably drawn as it was in these two cases, at times it is by fewer and less notable indications that we must be guided and, as these vary in intensity but never in importance, let us regard them somewhat in detail.

It may be accepted as a fairly safe rule that the acuter the initial symptoms the greater is the gravity of the case, and this will be emphasised—so far as experience carries me—if a rigor occurs accompanying or *immediately* preceding the acute abdominal pain. Each time I have met with its occurrence it has been associated with the gangrenous form of the disease, and I therefore regard it as of great prognostic and, indeed, diagnostic, value. The pain which attends the ultra acute form of appendicitis is, as a rule, of great severity but it may begin remote from the region in which it has its origin and in this way may lead to error. I have known it, from its early situation in the sacral region, mistaken for dysmenorrhœa, and its appearance in the left iliac region as due to a perimetritis. After a time, however, it is generally referred to the right iliac region, where, as a rule, it is attended by muscular rigidity which may be persistent or it may somewhat quickly pass away The pronounced character of this local muscular rigidity and the dulness on percussion which it is capable of giving rise to lead at times to the belief that the case is one of stercoral typhlitis, and the treatment may be disastrous. As a result of the morbid process within the abdominal walls they become more or less quickly involved in the rigidity and we find developed the hard flat, board like abdomen—an indication of such grave significance. But this valuable sign is not always present. There may be a perforated appendix or cæcum, or it may be an acutely gangrenous process at work, and the abdominal walls may be soft and yielding to the touch—unmarked by much tenderness and playing their part more or less freely in the act of respiration. To watch them regarding this last point is of importance, for from time to time it will be noted that a soft and slightly tender abdominal wall does not move in respiration, and that if a full inspiration be attempted it will be cut short ere it reaches its height. After a time abdominal fulness characterises most cases and measurements taken above and below the umbilicus are better guides to its increase or its diminution than mere visual recollection, but for its proper estimation two matters require consideration—the giving or the not giving of opium and the open or locked state of the bowels. As the opium tends to produce distension the occurrence of a stool may lessen the girth by a couple of inches and this in the presence of severe peritonitis. With the value of the pulse as a guide all are familiar and if its features were constant they would be of higher value, but they vary and they must be read in close connexion with all the others, especially the temperature. A quick *small* pulse—for its character is of greater value than its rapidity—with a high, or worse still, with a low temperature should attract immediate attention and in closely watching its behaviour—its tendency to quicken or to become slower, to become feebler or to gain in force—we find the surest of helps but it must be borne in mind that a suppurative peritonitis may be in progress with a fairly good pulse and a normal temperature. Very high temperature in the beginning with a rapid small pulse and notable although it may be not very acute *local* conditions, portend a state demanding quick interference, and although in many such cases this may count for little as regards the result, still such sufferers may and do, recover and their one chance lies in an early laparotomy To watch and to record every few hours the pulse and temperature ratio is a *sine quâ non* in all cases of appendicitis for in some with a normal temperature a quickening pulse may tell the true story and a pulse of 120 should as a rule be regarded as a very ominous sign. I recall one case in which an hour after the perforation of the appendix had occurred the pulse and temperature were normal, at the end of 12 hours the one was more than 130 and the other was 102° F and laparotomy saved the patient's life, while in another of gastric ulcer the pulse when the case was first seen was under 90 in a short time was nearly 120 and here again prompt interference carried with it success.[1]

Vomiting, common in many acute cases, is not always present in the ultra acute, but when it exists, when it is severe and continuous, or when having appeared early it disappears for a time and then returns and if the vomited matter be porraceous, spinach like, in character its prognostic value must not be overlooked.

In thus dealing with leading indications we may have begun in a wrong way, for after all ere we hear the patient's story, ere we feel his pulse or enter upon the consideration of his general state, we have seen his face and his attitude, and we have learnt much. The face '*grippe* —the face pourtrayed by Laennec—with the furrowed forehead and the *drawing upwards* of the features at once strikes us, and in some cases with due consideration given to all else may really determine for *operative interference*. It is most marked in perforation cases where suffering is severe, but it is present in many septic states where pain is not so prominent a feature. A facial aspect such as that referred to with restlessness and marked vital prostration may indicate in the malady we are contemplating as it may in other states a gravity unnoted in any other way Diarrhœa, infrequent in acute cases may be present in the very severe ones having its probable origin in some infective condition of the intestinal mucous membrane and pointing to the existence of a toxæmia. In the proper examination of such sufferers respiratory action will not escape observation, and decided costal respiration especially in the case of male subjects, is an indication of much prognostic value.

To some it may seem odd that no mention is made of the presence of the tumour in the right iliac fossa which is as characteristic of the majority of cases of acute appendicitis as is the sausage-shaped lump in intussusception, but in the form of the disease with which we are more particularly concerned it is not present because it either has not had time to form or more probably owing to the existing vital condition, would never form at all. To me—and in this attitude I differ with deference from the opinion of many others—its presence would not of necessity indicate interference, for I cannot accept the dictum that it is always significant of the presence of suppuration. Many such lumps have I seen disappear, as a perimetric mass disappears, and this so completely that an operation being performed in the quiescent condition small trace of their previous existence was discovered, certainly there was no pus Given, then, in an acute case a combination of the conditions we have considered—or it may be a notable development of two or three of them—rigor intensely severe abdominal pain, vomiting a quick small pulse—or a slow feeble one—a temperature very much raised or very much depressed, a hard contracted tender abdomen with its point of maximum tenderness within the right iliac sphere or one marked by the same local conditions with spreading tenderness getting quickly full, short costal respiration, and a drawn face, then will safety surely lie in immediate operation And with such conditions in the young or in the old the greater is the urgency as it is also in the case of a pregnant woman

Before finishing the consideration of diagnosis and its bearing upon operative interference it behoves that something be said regarding that "period of repose' which may occur in the manifestation of acute appendicitis and which, if unregarded may lead to serious error I take it that this is not confined to cases of severe appendicitis, for it is common to all perforative lesions of the abdominal viscera and its *raison d'être* is difficult of explanation Gangrene of the appendix with destruction of its nerves will not always explain it, for I have known it appear after a rupture of the intestine and in the case of a burst bladder and it is more probably due to some toxic or paralysing influence exerted on the nervous apparatus of the peritoneum itself, at all events, we recognise it in the cessation for a time of the most marked and disquieting phenomena in a grave case and the medical man and patient may alike be deceived by it And yet so far as my own experience carries *me*, there has generally been found in *local* conditions that which was sufficient to guide one aright. Pain, vomiting rapidity of pulse (this least of all) rise in temperature and the general feeling of distress may everyone of them be subsiding, but the local presence of tenderness, of abdominal retraction, of rigidity,' or of fulness (and any of these may be slight)—will keep awake the sense of anxiety and lead to safe action.[8] The absence of peristalsis as ascertained by the use of the stethoscope may prove of high value, and the estimation by a frequent blood count of increase in leucocytosis, especially as regards the polymorphonuclear cells, may be of great assistance. Unhappily in the case of fulminating appendicitis when a sufferer is too feeble to react to the toxæmia this last test may fail us, but in these cases we are not so much dependent upon it as in certain others where the question of suppuration becomes pre eminent.

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[1] A case in which with high temperature there is a slow pulse is by some held as little likely to demand the help of the surgeon, but this is not always so for a year or two ago I had under my care a female patient whose pulse never rose much over 80 with a temperature of 102° to 104° F and in whom pus was evacuated with success on the fourth day of her illness.

Mr W H. Battle has in a valuable paper in THE LANCET[9] drawn attention to the great value attaching to the presence of effusion in the peritoneum as significant of early peritonitis, and where by percussion—or better, by flicking with the finger in the region of the flanks—dulness or thrill can be elicited, operation should be once performed Unfortunately, in a very considerable proportion of the most acute cases it is impossible to demonstrate the presence of any effusion and when the peritoneum is opened the state of dryness of the field of operation is very notable.

Rectal touch is of the highest value in the examination of cases of peritoneal inflammation and in appendicitis it should never be neglected It may confirm the diagnosis where the inflamed organ lies in the pelvis, it may demonstrate an acutely tender mass high up in the iliac fossa, it will certainly show an inflamed peritoneum when external abdominal tenderness may be slightly marked, and it may lead to the recognition of certain conditions that will alter entirely our original belief regarding the case.

Striking as are the phenomena that indicate a lethal appendicitis, it is still possible to misread them, and as the best way to avoid mistakes is to be aware of the possibilities of the errors we are likely to make, here are some that are feasible

Colic of the appendix—a condition the existence of which is denied by one of our best and ablest authorities—may, when severe, prevent the signs that usually attend a perforation or a rapidly destructive lesion, as witness the following story A Frenchman, aged 30 years, who never previously had had any abdominal trouble, was while dressing in the morning conscious of some uneasiness in the lower abdomen on the right side. Jokingly he told his wife that he had an "*appendicite,*" but as the crampy feeling quickly passed away so did his thought concerning it An hour after his midday meal, while walking in the street, he was seized with such intense abdominal pain that he became rapidly collapsed. Seen by his French physician the gravity of his case and its probable cause were at once recognised and in the afternoon, three or four hours after his seizure, I had the opportunity of examining him. He was suffering greatly, as evidenced by his complaints, by the pale, clammy state of his skin, by his anxious, drawn face, by his quick, feeble pulse, and by the intense rigidity of the muscles over the right iliac fossa. The diagnosis of a ruptured appendix seemed fairly clear, but as it was possible that a severe intestinal colic might explain his condition a full dose of morphia was given him. Means were taken to rally him from his state of shock and it was arranged that I should see him a few hours later On an evening visit—six hours from the time of his primary attack—he was found still collapsed, but his medical attendant, who had remained with him, stated that the morphia quieted him, that he had comparative ease, and that his general state had correspondingly improved A short time before my arrival the intense pain had returned, to be quickly succeeded by great vital depression So notable was this and so enduring that one of the two other physicians summoned by the family was opposed to operation not because he did not think it necessary but because he believed that the patient could not survive it. When the abdomen was opened and the appendix was found this was quite normal in appearance, as were the parts in its neighbourhood Its proximal third was, however, harder thicker and firmer than the rest of the organ but it bore on its surface no evidence of any notable lesion Search was then made for harm elsewhere, but as nothing was found to upset the diagnosis the appendix was removed. On further examination when the hardness and tenseness were much less evident it was discovered that a grain of barley still incased in its hard outer husk was lying transversely to the axis of the appendix with its sharp and pointed extremity buried in the submucous and muscular tissue and stretching—without perforation—the peritoneal covering of the organ.

In the absence of all naked-eye evidence of inflammation or ulceration externally or internally and in the passing *state of rigidity in the area of the appendix corresponding* to the position of the foreign body, I regard this as a true case of appendicular colic and although the pointed character of the barleycorn may have been able to inflict more irritation than a pointless body would, it is difficult to believe that by its presence any foreign body might not give rise to corresponding although less pronounced phenomena[10]

Renal and hepatic colic have proved sources of error in the recognition of acute appendicitis and I remember one case in which the mass formed round an inflamed appendix was in such close relationship with the liver that it was no matter for surprise that in the opening days of the illness the patient's sufferings were thought to be due to the passage of a gall stone

Under the conditions which mark some intestinal obstructions may be hidden the morbid changes associated with an ultra acute appendicitis, for the peritonitis thus provoked may, by its effects upon the neighbouring coils of intestine, give rise to such clinical phenomena as are inseparable from those of mechanical obstruction and yet with care it is possible to differentiate between them. Here is an instance in point. A young German woman in the best of health, who had suffered no abdominal symptoms of any kind, was in the early hours one morning seized with a severe pain in the abdomen accompanied by vomiting The French physician under whose care she was asked me to see her with him in the forenoon of the second day of her illness, when her state was as follows She had a temperature of 101° F, a fairly good pulse of 90, a flushed face, a rather full but in no wise tender abdomen unmarked by muscular rigidity but in which one observer thought coiling was visible, and constant, forcible vomiting She was constipated and there was little passage of flatus It appeared to me that such complaint of pain as could be elicited by examination was greatest in the right iliac region, but to abdominal pressure she was strangely tolerant. On the evening of the same day she was admitted to the British Hospital under my care, when it was found that her condition was worse, for her abdomen was fuller and the vomiting was quite stercoraceous in character, but she still had a raised temperature of 102° and the impression remained with me, largely on that account, that the obstruction was inflammatory—probably perityphlitic—and not mechanical in its nature In deference to the strongly expressed opinion of her own capable medical attendant, with whom the diagnosis of intestinal strangulation abode, a median section was performed and the intestine in the right iliac fossa was found to be much distended with its walls highly injected and as one neared the cæcum spots of lymph became visible upon its surface. Then there appeared what at first sight was taken for a loop of intestine—for it was nearly as large—a hugely dilated and distended appendix with plum coloured walls upon which at several points gangrenous areas were present When this was removed—and at its proximal end the dilatation was much less—it was found to contain three stercoliths, each of the size of a large olive, and so resembling those berries in colour and form as to be easily mistaken for that fruit The congested intestinal surfaces and the area in which the appendix lay were mopped with a strong mercurial solution a large drain was placed in the pouch of Douglas, and the wound was closed Despite the occurrence of a stitch abscess and the necessity for breaking up more or less the abdominal wound the patient made a good recovery for all the indications of obstruction disappeared with the operation and she quickly regained her health.

Among the many cases of severe appendicitis I have met with this is the only one in which the symptoms of intestinal obstruction were an early marked feature, and its story makes me question whether some of the fatal cases of obstruction which one encountered in earlier years were not due to a peritonitis of appendicular origin and the true cause of the fatality passed unrecognised.[11] In the absence of rise of temperature or other indication of inflammatory ill an error such as this is easily committed.

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[8] For clear full, and valuable teaching on this point see a lecture by Mr Charters J Symonds delivered before the Hunterian Society in 1899; and a paper in THE LANCET of May 10th 1902, p 1305 by Mr A. E. Tubby on the Quiescent or Latent Period in the Course of Grave Abdominal Inflammations

[9] THE LANCET June 16th 1902, p 1679

[10] That the personal element in this case had much to do with its apparent gravity was after the operation suspected and since then the medical attendant of the patient has told me that while he was suffering from a nephritic colic his condition was very similar to but much less acute than that which led to the removal of his appendix

The close anatomical relationship of the appendix with the right adnexa of the uterus leads occasionally to errors in diagnosis, for an acute inflammatory lesion starting in the area of the right iliac fossa may possibly owe its origin to a suppurating tube and not to an appendicitis. As a rule, however, the onset in the former is not so severe (the pain may be most acute in the *left* side) and examination by the rectum or vagina will in a very large majority of cases lead to a recognition of the true state of affairs. But simulation may arise in another way, as witness the following case. A young English woman, aged 20 years, was admitted into the British Hospital with a diagnosis of acute appendicitis The story of her medical attendant was that he had seen her on the previous evening, when he had found her with a history of sudden and severe abdominal pain having its origin in the right iliac fossa, with a tender and rigid lower abdomen, with a quick pulse, and with a temperature of 102° F On the following morning this condition had not much changed, she had passed a restless night. She still complained of much abdominal suffering and was still feverish, the temperature being 101° and the pulse 110 The abdomen was full its muscular walls were rigid, it was tender over the whole of the lower third, but especially tender on the right side and in the middle line Rectal examination revealed the pouch of Douglas distended and boggy, evidently with effused blood. Inquiry then elicited the fact that having barely ceased menstruating she had taken a cold bath, immediately subsequently to which the acute pain made its appearance. As she was a virgin and there was nothing in her case to suggest the possible existence of an ectopic gestation it was believed that some distended ovarian or Fallopian vein had given way under the vascular strain produced by the cold bath, and that her symptoms of peritonism owed their origin to the intra peritoneal hæmorrhage. She was treated accordingly and with steady diminution in the effusion she was quickly restored to well being

Pelvic peritonitis associated with gonorrhœa in the female I have seen simulate very closely appendicular inflammation, for it had its most acute manifestation on the right side, but here again rectal, followed by vaginal, examination and the recognition of the state of the right fornix made the case clear And in young men a peritonitis of similar origin should not be forgotten, for although it is rare to find it unassociated with an epididymitis or the presence of a gonorrhœal discharge, it may occur independently of them and by the condition of the vesiculæ seminales as ascertained by rectal examination will the diagnosis be made sure. The intense pain in the inguino-scrotal and iliac region, the severe and repeated vomiting the high fever, the rigid lower abdomen, the facies, and the general condition fill in the picture of appendicitis

With our attention so strongly directed to the appendix as the probable source of all evil in the region of the abdomen in which it is situated we are apt to forget that in the cæcum itself there may arise pathological conditions the acute vital manifestations of which may be indistinguishable from those arising within or around its attached neighbour Here is a case in point A woman in middle life, with a strongly marked history of gout, consulted me regarding some abdominal pain from which she had suffered for a good many months. It was spasmodic in character, sometimes occurred at night did not return very often, and was closely associated, in her thinking with the taking of animal food. She suffered much from constipation but there had been no vomiting On examining her there was nothing in the abdomen to attract especial attention except that in the region of the cæcum the percussion note seemed to be duller than usual, and when firm pressure was made here and slight tenderness elicited there rose under the hand a soft cylindrical mass which quickly disappeared. While this was tangible she was conscious of the presence of the pain which formed her great complaint. That this was a thickened cæcum thrown into contraction by pressure, on its surface was evident and I made very careful search for any evidence of growth or obstruction in the colon, but with a negative result. When obtained her motions were natural, she had never passed blood or mucus at stool and was not subject to diarrhœa. A few days afterwards I was hurriedly sent for as she had been seized with sudden severe pain in the right iliac fossa and she then presented the conditions which usually characterise an acute perityphlitis She had, however, a good and not too rapid pulse and her temperature was 101° F There had been no vomiting, there was no marked fulness of the abdomen, but it was tender over the right lower area, and there was in that situation notable muscular rigidity With my previous knowledge of her I believed that some ulcerative process connected with the diseased cæcum was the most likely cause of her acute suffering In the evening she was easier, the pain and the local evidences of it were less marked, the pulse, a little over 100, was of good force, the temperature was 102°, and the abdomen, albeit fuller by one inch and with marked rigidity in the cæcal region, was absolutely soft elsewhere and rose easily and freely on deep inspiration The succeeding night was a restless one and in the morning the general condition evidenced no improvement, for the pulse was still over 100 and of diminished strength. The temperature was 103°, the face was drawn and anxious, and although the abdominal measurement showed a diminution of a full inch and its walls were still pliant there was increase in tenderness both as regards its area and its intensity The bowels had moved freely and spontaneously and the motion was in all respects a characteristically healthy one. Believing that a peritonitis was in progress—a diagnosis in which Sir Henry Blanc, who saw the case with me, agreed—I with his able assistance, opened the abdomen. The escape of a considerable quantity of intensely bloody serum and the appearance of congested intestine confirmed our belief, and in drawing up the cæcum, the walls of which were greatly thickened, two gangrenous patches were visible on its surface. One, of the diameter of a shilling, was situated on its inner and lateral aspect, and the other, measuring at least five times the size of the other, presented on its anterior surface. The smaller one was treated by invagination and the other by a free opening and the insertion of a Paul's tube. The dilated cavity of the cæcum was quite empty and its mucous lining generally seemed to be healthy The ascending and transverse colon was carefully examined, but there was no change to be detected in it either as regards its dimensions or the thickness of its walls By interrupted sutures the cæcum was attached to the peritoneum and the wound was closed. The patient made an excellent recovery and her after history was of interest, for she developed within a few months of the operation a malignant stricture of the splenic flexure of the colon, which has since been removed with success That this occurred apart from the morbid state of the cæcum I feel well assured, for what the first operation revealed was a true cæcitis or typhlitis in which similar pathological changes occurred to those which we meet with in a chronic appendicitis Its chief interest to me lies in the fact that had I not seen the patient upon a previous occasion and formed some idea of the existing conditions there was nothing in the picture of her grave illness to distinguish it from that of an ultra acute appendicitis.

Of the close simulation of lethal appendicitis by perforated gastric or duodenal ulcer, especially the latter, and by the twisting of the pedicle of an ovarian cyst, I have no personal experience, but I know from the records of others how strong the counterfeit may be, and it is always well to remember the fact when preparing to operate upon a seemingly severe case of appendicitis. Little reference is made in text-books to the fact that it is at times difficult to differentiate between appendicitis and typhoid fever and yet the problem is a notable one If operation always and of necessity followed the diagnosis of appendicitis I am sure that certain cases of enteric fever would be submitted to unnecessary and dangerous interference, for I have seen the zymotic disease ushered in with very acute perityphlitic symptoms, with severe pain, with abdominal tenderness and right-sided feeling of distress may everyone of them be subsiding, but the local presence of tenderness, of abdominal retraction, of rigidity, or of fulness (and any of these may be slight)—will keep awake the sense of anxiety and lead to safe action.[8] The absence of peristalsis as ascertained by the use of the stethoscope may prove of high value, and the estimation by a frequent blood count of increase in leucocytosis, especially as regards the polymorphonuclear cells, may be of great assistance. Unhappily in the case of fulminating appendicitis when a sufferer is too feeble to react to the toxæmia this last test may fail us, but in these cases we are not so much dependent upon it as in certain others where the question of suppuration becomes pre eminent.

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[11] This reflection is strengthened when one calls to mind—as most operating surgeons can call to mind—cases in which in desperate conditions of obstruction all that could be done was an enterectomy and this with the happiest results It is true that the relief of intestinal distension and pressure may at times serve to release a strangulation or permit the withdrawal of an intussusception but it is quite as likely that at others the immediate good which opening the intestine produces represents the removal of the urgent obstructive symptoms that inflammation in the appendix may and can produce.

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Rectal touch is of the highest value in the examination of cases of peritoneal inflammation and in appendicitis it should never be neglected. It may confirm the diagnosis where the inflamed organ lies in the pelvis, it may demonstrate an acutely tender mass high up in the iliac fossa, it will certainly show an inflamed peritoneum when external abdominal tenderness may be slightly marked, and it may lead to the recognition of certain conditions that will alter entirely our original belief regarding the case.

Striking as are the phenomena that indicate a lethal appendicitis, it is still possible to misread them, and as the best way to avoid mistakes is to be aware of the possibilities of the errors we are likely to make, here are some that are feasible.

Colic of the appendix—a condition the existence of which is denied by one of our best and ablest authorities—may, when severe, prevent the signs that usually attend a perforation or a rapidly destructive lesion, as witness the following story. A Frenchman, aged 30 years, who never previously had had any abdominal trouble, was while dressing in the morning conscious of some uneasiness in the lower abdomen on the right side. Jokingly he told his wife that he had an "*appendicite*," but as the crampy feeling quickly passed away so did his thought concerning it. An hour after his midday meal, while walking in the street, he was seized with such intense abdominal pain that he became rapidly collapsed. Seen by his French physician the gravity of his case and its probable cause were at once recognised and in the afternoon, three or four hours after his seizure, I had the opportunity of examining him. He was suffering greatly, as evidenced by his complaints, by the pale, clammy state of his skin, by his anxious, drawn face, by his quick, feeble pulse, and by the intense rigidity of the muscles over the right iliac fossa. The diagnosis of a ruptured appendix seemed fairly clear, but as it was possible that a severe intestinal colic might explain his condition a full dose of morphia was given him. Means were taken to rally him from his state of shock and it was arranged that I should see him a few hours later. On an evening visit—six hours from the time of his primary attack—he was found still collapsed, but his medical attendant who had remained with him, stated that the morphia quieted him, that he had comparative ease, and that his general state had correspondingly improved. A short time before my arrival the intense pain had returned, to be quickly succeeded by great vital depression. So notable was this and so enduring that one of the two other physicians summoned by the family was opposed to operation not because he did not think it necessary but because he believed that the patient could not survive it. When the abdomen was opened and the appendix was found this was quite normal in appearance, as were the parts in its neighbourhood. Its proximal third was, however, harder, thicker and firmer than the rest of the organ but it bore on its surface no evidence of any notable lesion. Search was then made for harm elsewhere, but as nothing was found to upset the diagnosis the appendix was removed. On further examination when the hardness and tenseness were much less evident it was discovered that a grain of barley still incased in its hard outer husk was lying transversely to the axis of the appendix with its sharp and pointed extremity buried in the submucous and muscular tissue and stretching—without perforation—the peritoneal covering of the organ.

In the absence of all naked eye evidence of inflammation or ulceration externally or internally and in the passing state of rigidity in the area of the appendix corresponding to the position of the foreign body, I regard this as a true case of appendicular colic and although the pointed character of the barleycorn may have been able to inflict more irritation than a pointless body would, it is difficult to believe that by its presence any foreign body might not give rise to corresponding although less pronounced phenomena.[10]

Renal and hepatic colic have proved sources of error in the recognition of acute appendicitis and I remember one case in which the mass formed round an inflamed appendix was in such close relationship with the liver that it was no matter for surprise that in the opening days of the illness the patient's sufferings were thought to be due to the passage of a gall stone.

Under the conditions which mark some intestinal obstructions may be hidden the morbid changes associated with an ultra acute appendicitis, for the peritonitis thus provoked may, by its effects upon the neighbouring coils of intestine, give rise to such clinical phenomena as are inseparable from those of mechanical obstruction and yet with care it is possible to differentiate between them. Here is an instance in point. A young German woman in the best of health, who had suffered no abdominal symptoms of any kind, was in the early hours one morning seized with a severe pain in the abdomen accompanied by vomiting. The French physician under whose care she was asked me to see her with him in the forenoon of the second day of her illness, when her state was as follows. She had a temperature of 101° F., a fairly good pulse of 90, a flushed face, a rather full but in no wise tender abdomen unmarked by muscular rigidity but in which one observer thought coiling was visible, and constant, forcible vomiting. She was constipated and there was little passage of flatus. It appeared to me that such complaint of pain as could be elicited by examination was greatest in the right iliac region, but to abdominal pressure she was strangely tolerant. On the evening of the same day she was admitted to the British Hospital under my care when it was found that her condition was worse, for her abdomen was fuller and the vomiting was quite stercoraceous in character, but she still had a raised temperature of 102° and the impression remained with me, largely on that account, that the obstruction was inflammatory—probably perityphlitic—and not mechanical in its nature. In deference to the strongly expressed opinion of her own capable medical attendant, with whom the diagnosis of intestinal strangulation abode, a median section was performed and the intestine in the right iliac fossa was found to be much distended with its walls highly injected and as one neared the cæcum spots of lymph became visible upon its surface. Then there appeared what at first sight was taken for a loop of intestine—for it was nearly as large—a hugely dilated and distended appendix with plum coloured walls upon which at several points gangrenous areas were present. When this was removed—and at its proximal end the dilatation was much less—it was found to contain three stercoliths, each of the size of a large olive, and so resembling those berries in colour and form as to be easily mistaken for that fruit. The congested intestinal surfaces and the area in which the appendix lay were mopped with a strong mercurial solution a large drain was placed in the pouch of Douglas, and the wound was closed. Despite the occurrence of a stitch abscess and the necessity for breaking up more or less the abdominal wound, the patient made a good recovery, for all the indications of obstruction disappeared with the operation and she quickly regained her health.

Among the many cases of severe appendicitis I have met she began to amend, and ultimately recovered from such a condition as one had learned by sad experience to regard as quite a hopeless one Several times in 24 hours she received a subcutaneous injection of some ounces of normal saline fluid to which were added small doses of strychnine—for her heart s action was of the feeblest—and in and through these means she exists to-day

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[8] For clear full, and valuable teaching on this point see a lecture by Mr Charters J Symonds delivered before the Hunterian Society in 1899 and a paper in THE LANCET of May 10th 1902 p 1305 by Mr A. H. Tubby on the Quiescent or Latent Period in the Course of Grave Abdominal Inflammations.

[9] THE LANCET June 16th 1902, p. 1679

[10] That the personal element in this case had much to do with its apparent gravity was after the operation suspected and since then the medical attendant of the patient has told me that while he was suffering from a nephritic colic his condition was very similar to but much less acute than that which led to the removal of his appendix.

Here, then, may end my quest. Early operation in appendicitis (that is, within the first 48 hours) I practise only in the grave cases and I am happily able to bear strong testimony to its value and its success, for I have never found it increase a peritonitis already in existence—indeed, it has cured it. The difficulty has often been the prompt recognition of those conditions in which delay too often spells deaths, and my endeavour has been to render, if possible, their recognition more facile and less hesitating

Cannes France

THE HISTORY OF THE DISCOVERY OF TRYPANOSOMES IN MAN

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MISTAKES as to priority in scientific discoveries are so frequently made, are so easily perpetuated and are so discouraging to workers that we shall present no apology for attempting a critical history of the discovery of trypanosomes as parasites in man. There is the more call for someone to undertake this task because the discovery promises to be an important one and because some fragmentary discussion regarding it has already taken place So far as we know at present there are five possible claimants in the field—namely Hehir, Barron, Nepveu, Forde, and Dutton. We propose to examine their respective claims as thoroughly as possible, but must premise that we can judge of these claims only by means of the published documents which are now before us and which we mention specifically in the footnote references

Major Patrick Hehir I.M.S. (1891, 1892)—So far as we know no claim has yet been advanced in favour of this observer being the discoverer of the human trypanosome, but as this claim may be made in the future and as his case appears to be as good as those of the two following observers, we may as well deal with it here. The first mention made by Major Hehir of anything like a trypanosome is contained in his work on Malaria (1891) p. 14[1] where he states that he met with "trichomonas like bodies in six out of his 343 cases and 'pyriform" bodies in 39 cases. Of the first form he says "It remains transparent and structureless throughout, but acquires two or more filamentary processes after leaving the corpuscles. Originally I thought that these were distinct structures and in no way related to the other forms" (i.e., Laveran s bodies) 'It may be found in the blood cells or free. In the latter case it soon acquires two flagellae (*sic*), one at each extremity, and sometimes throws out small flagellae from its irregular border. This last clause suggests the undulatory membrane of trypanosomes and monads. Of the pyriform body he says that it possesses 'a single active flagella' and that 'it varies considerably in size, it is structureless, and remains so except that after some time mobile pigment granules are seen in it. After a few hours from this period it is set free, it appears to be a misshapen crescent." In thinking that his flagellate bodies issue from the red corpuscles, Major Hehir evidently had the hæmogregarines in mind but he seems to have dropped this idea in his next publication. The presence of pigment in the pyriform body suggests that it was a malarial gametocyte. The work is illustrated with rough drawings in outline, and those of the trichomonas like and pyriform bodies (Plate IV, Figs. 3 and 4) may just possibly be meant for trypanosomes. Next year (1892) Major Hehir published a long paper on parasites found in the blood and excreta in cases of cholera,'[2] and on page 3 mentions finding trichomonas-like bodies with a wavy border on one side and long tapering flagellæ arising from the extremities." This description might certainly suggest monads as much as trypanosomes, but, on the other hand, some of the drawings of these objects (Plate V, Fig 3) are distinctly like the latter, especially the one with a vacuole at one end and a flagellum at the other which certainly seems to be meant to be a trypanosome. With regard to the nomenclature used by Major Hehir for his flagellate organisms (*Trichomonas*), we may remark that there was at one time considerable confusion between the parasite groups of trypanosomes and monads[3] Both groups have undulatory fringes, or at least lateral flagella, and the number of terminal flagella in the monad group was by no means quickly determined. Lewis[4] at first thought that his trypanosome of rats belonged to the monad group and various names have been given to trypanosomes by various observers, as for instance, *Hæmatomonas* (Mitrophanow) *Herpetomonas* (Saville Kent), and *Trichomonas* (Crookshank, 1890) The last is the name used by Major Hehir in 1891 and 1892. Gruby's name *Trypanosoma* did not come into general use until later, and we cannot therefore object to Major Hehir that he did not use it in his papers under reference Apart from this it may be argued that he must have been observing trypanosomes whatever his nomenclature was, because organisms of the monad group (e.g., *Cercomonas* Davaine or *Trichomonas* Donné) have not yet been demonstrated with certainty in the blood

We certainly cannot say definitely that Major Hehir did not find trypanosomes in human blood, but, on the other hand we should be sorry to admit definitely, on the published evidence, that he did find them. His first paper referred to above[5] describes and figures many objects which he considers to be parasites of malaria but which are more like artifacts and at all events are not admitted by any of the best authorities on malaria. In his paper on the organisms of cholera he gives 15 full page plates of rough drawings of very singular objects which appear to be zoologically impossible. In 1895 Hankin[6] expressed an opinion that most of Major Hehir s cholera parasites were "nothing but crystals of common salt various kinds of precipitates, fragments of fibrin, altered red or white blood corpuscles, or even masses of bacteria. Next year Major Hehir[7] published another long paper on malaria in which he claims to have found the spores of the malaria parasites in soil and water, to have detected 'free flagella" in syphilitic blood, and to have proved that "the Amœba coli is a true flagellated sporozoon.' We would add, however, that at one time Major Hehir was considered an authority[8] and his paper on cholera was issued as a special supplement of the *Indian Medical Gazette* Numerous other papers by him of a nature similar to those we have quoted can be found in the pages of that journal from 1891 up to his reply to Hankin.[9] Since 1897 however, we have seen no further contributions from his pen.

Dr Alexander Barron (1894)—Dr Laveran seems to have been the first to draw attention by a brief note in his book "Traité du Paludisme" to a short communication made to the Liverpool Medical Institution by Dr Barron,[10] then professor of pathology at University College, Liverpool. We transcribe the entire passage as we find it. 'December 6th, 1894.—Dr Barron related a case of a lady, aged 39, the muscular rigidity, with indeed all the phenomena, except the tumour formation, that mark appendicular inflammation, and within a week the appearance of typhoid spots reveals the true nature of the malady In such cases our sheet anchor in diagnosis will rest with the increase or the diminution of the leucocytes, for in the case of the fever they will diminish, while in the other, especially if pus-formation occur, they will enormously increase.

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[1] Hehir: Microscopical Observations on the Hæmatozoon of Malaria, 1891 Madras Lawrence Asylum Press

[2] Hehir Microscopical Observations on the Blood and Excreta in Cases of Cholera, Indian Medical Gazette, Special Supplement April, 1892.

[3] See Leuckart Blanchard, and Crookshank's Bacteriology 1890 p. 407

[4] Quarterly Journal of Microscopical Science, vol. xix. (2) 1879, p. 109

[5] Hehir Microscopical Observations on the Hæmatozoon of Malaria, 1891 Madras: Lawrence Asylum Press

[6] Hankin: A Contribution to the Etiology of Cholera, Indian Medical Gazette, 1895, p. 207

[7] Hehir The Hæmatozoon of Malaria and its Discovery in Water and Soil, THE LANCET Nov 28th (p 1514) and Dec. 5th (p 1589) 1896.

[8] See for instance, the translator s preface to Laveran s Du Paludisme New Sydenham Society vol. cxlvi., 1893.

[9] Hehir A Contribution to the Etiological Relations of Cholera (reply to Hankin) Indian Medical Gazette, 1896 p 264

[10] Barron: Untitled communication to the Liverpool Medico-Chirurgical Journal, including the Proceedings of the Liverpool Medical Institution, January 1895 p. 222

A condition difficult of explanation yet not of recognition, and apt to occur in connexion with many abdominal troubles, may, when appearing with the appendix as its exciting cause, lead us astray in regard to prognosis and to treatment. I refer to peritonism We all know it, but I am sure we do not all know—too often cannot know—how to estimate it aright. It is so extraordinarily like peritonitis that it is hard, sometimes impossible, to distinguish between them, and yet the importance and the gravity of the one are occasionally only mimicked by the other Its bearing upon the matter under consideration is, however, important Sir Frederick Treves has drawn attention to the fact that many cases of appendicitis occurring in women begin during the course of menstruation and "that this is explained by the circumstance that the two organs concerned are closely allied and that they certainly can mutually disturb one another" With this important observation it is well to bear in mind this other—one more or less familiar to many practitioners and to which Dr S J Gee has particularly drawn attention—that at times in women a day or two preceding the flow they have abdominal pain, they shiver, they vomit, and they get a full—at times a very tender—abdomen, they have a quick pulse and a rise in temperature, they lie in bed with their limbs drawn up and they present a typical picture of peritonitis Yet when the discharge appears the whole picture is changed, every grave sign and symptom disappear, and the woman is well She has had an attack of peritonism, and if this were misread and on exploration of the pelvis there was found no evidence of harm there, an unnecessary laparotomy might be performed in the search of a ruptured appendix. Even when the appendix is the cause of a peritonism it may be difficult to recognise the offender for through the abdominal distension which is one of the most notable features of the latter condition, by the gastric intolerance and the constipation attendant upon it which also mark its presence we are met with the phenomena of a pseudo-occlusion. The swollen abdomen lacks, however, the tenderness of the truly inflamed one, and even when there are a certain quickness of pulse and a certain rise in temperature the freedom with which the patient moves and breathes and the expression of the face suggest the presence of a deception. I have a note of a case in which, in the third attack of a recurrent appendicitis, the abdomen was so distended and the vomiting so persistent that immediate operation was contemplated, but close and constant observation demonstrated the facts that the temperature never rose over 99 4° F and that the pulse, excellent in quality, never much exceeded 100 The expression, too was in no wise drawn, and such abdominal tenderness as existed was only discovered in the right iliac fossa The condition of absolute constipation was pronounced, but copious and repeated enemata brought down gas mixed with a small quantity of fæcal matter and this gradually augmented, so that by the end of the second day a satisfactory movement was obtained The meteorism gradually subsided and there could be felt in the region of the appendix a thick, rather tender, cord. On the removal of this—for it was an enlarged appendix—a few weeks later there was in its neighbourhood no evidence of any recent peritonitis.[12]

Important as the condition of peritonism always is, and at times most grave in its import, it is difficult to accept unreservedly the dictum of some that by its very presence it calls for immediate operation, for, as we have seen, it does not always mean great things, and it may pass away leaving no gross evidence in its train. But it is not within the peritoneal cavity alone that conditions may arise which render the recognition of a perityphlitis a difficulty A commencing basal pleurisy or pneumonia, involving as they are apt to do the pleural surface of the diaphragm may tend to a train of symptoms that, without sufficient care in their investigation, may easily be mistaken for those arising from an acute peritoneal inflammation. This fact has been long the common knowledge of most practitioners and it has led many to investigate as a matter of routine the pulmonary conditions in all acute disease. By following this rule the error is not likely to be made, for the auscultatory sounds associated with a pleural lesion are, as a rule very widely different from those one finds in association with an inflamed peritoneum, but as Mr. H. L. Barnard[13] has lately pointed out in a most interesting paper there are certain conditions which may tend to mislead and have, indeed, misled some excellent and careful surgeons. Apart from the help visual examination of the chest and the use of the stethoscope will surely bring, the consideration of the temperature—especially at the beginning of the illness—of the pulse and respiration rate, of the catching character of the latter, of the fact that however hard and rigid the abdomen may feel it will momentarily relax in the act of inspiration, and that its tenderness is chiefly "superficial and firm deep pressure with the hand may be permitted," will direct us aright and turn the thoughts to the true direction in which the patient is suffering

With reference to treatment I have not much to add I hold with many that the giving of opium is apt to mask guiding symptoms and that it is best if possible to avoid it. But if it must be given—and at times acute suffering imperatively demands it—opium by suppository or laudanum given as an injection, is better than morphia subcutaneously If movement of the bowels be called for—and it very often is—then we must depend upon the stimulating action of an enema, aperients given by the mouth are fraught with danger The method of operation in those cases done early—that is, within the first 48 hours—is, as a rule, straightforward and simple, and I would only add that I have found its simplicity, and I believe its safety, increased by the incision being made closer to the anterior superior spine of the ilium than is usually advised. It is quite possible to display and to remove the appendix without any protrusion of the small intestine. What this may mean to a somewhat inexperienced operator a recollection of the past with many of us will best explain, and inasmuch as these operations fall under the category of emergencies and must, if they are to be of any service, often be undertaken by the practitioner in attendance upon the case, the easier the task is for him the better will it be for his patient. In the cleaning and drainage of the inflammatory area and its surroundings I have, as a rule, a greater belief in the use of marine sponges and "swabs" than in irrigation, and in large-sized drainage-tubes with gauze wicks than in gauze packing The removal of the gauze is often a very painful process for the sufferer and it is not always so efficient as we may believe it to be; for every now and then a wound thus treated will look well on its surface, while in its depths there is confined an exudation which should have been drained away And in certain circumstances, in a somewhat prolonged retention of the drainage-tubes, I have found only good—the process of granulation has expelled them and the tracks through which they passed have quickly closed and have shown no tendency to yielding in after days. In the after management of bad cases—cases in which, despite early operation and all therein involved the septic process is not checked and the evidences of peritoneal infection do not subside—I would bear testimony to the extreme value of normal saline solution used subcutaneously I am not likely to forget one case under the care of Dr Lalou and myself in the Asile Evangélique of Cannes, the happy management of which rested almost entirely in his hands It was that of a young woman upon whom I operated within 24 hours of her seizure, in the presence of a well established dry peritonitis having its origin in a gangrenous appendix. In this patient, although improvement followed for a time, yet, despite free drainage and the means that best meet such conditions, on the fifth day of her illness her state seemed desperate. Her aspect was that of a dying woman, her abdomen, drum-like in form, was intensely tender over all its surface, her temperature was high (103° F), and her pulse was quick-running—well nigh uncountable, and she had that incessant gulping vomiting of dark matter so characteristic in the closing scenes of a septic peritonitis Yet she lives, for so soon as her bowels moved and a free diuresis was established—and for this the saline infusion was responsible—

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[12] Lejars: Chirurgie d Urgence p 415

[13] THE LANCET August 2nd 1902, p 280

He begins by setting forth that the researches described by him were made in Algeria in the summer of 1888 and in August, 1890 (the latter apparently being the researches during which, as he claims in his article of 1898 he discovered the human trypanosome) He then passes in review all the parasitic forms which he has observed in the blood of malaria patients, but insists only on the points which he believes to be new (recalling a similar statement by Major Hehir) These parasitic forms are certainly as novel as they are numerous. They consist of "*algues inférieures et schizomycètes*" and of "*infusoires flagellés et sporozoaires*" By the flagellate infusoria he means (p 48) Laveran's parasites which were then often thought to be of this nature. Of the former class he discovers "*masses zoogléiques* ' floating in great numbers in the blood of almost all the pernicious cases and disappearing on recovery, a microbacillus, a '*bactérien en biscuit* ' which occurs not only in the blood of cases of malaria but in their stools and in the water of pits reputed to be malarious, "*bactériens en flotteurs* ', also an "*algue véritable*" which demonstrates its existence in the blood by developing in (apparently) sealed specimens, also *spirilla* which are generally fixed to the red corpuscles—"they therefore recall the bodies described by Laveran under the name of spherical bodies with flagella" (*sic*), also a "*streptocoque paludique*", also a "*bactérie careniforme* ' which is furnished at its two extremities with long lashes perpendicular to its axis and which suddenly transforms itself into a crescent, also a "*bactérie érucante*" which he says has a "vague resemblance to the caterpillar of our gardens" and which has "singularly perplexed" the author because it may either be "a distinct species or a phase of the coccidium paludicum (*sic*) or a schizomycete." A similar body was found in the portal vein.

In connexion with the '*infusoires flagellés* ' the author describes what he thinks are Laveran's parasites He begins with the spores, of which he has been able to count 20 in a single cell of a "villosité intestinale." They remain quiet for a time, to the number of four five, or six, attached to a single corpuscle, but later give evidence of their existence by producing "formidable accidents." He refers especially to those of the larger hæmamœbæ which take the form of a starfish One finds this free in serum, 'animated with movements so rapid that it was very difficult to seize its form in an exact manner" There are other "*amiboïdes bien curieux* ' which have four branches but which appear to lose the fourth foot when seen in profile (*sic*). He also describes some very singular "*corps vésiculeux* ' We note especially the "*corps claviforme* ' and the "*corps en gourde* ' Three of the latter were found fixed on the same corpuscle and had the appearance of gorged leeches or even of *Cysticercus cellulosæ* The author also describes finding in the milk of two nurses an organism with the form of a retort All these forms including certain "*vésicules à queue*" and '*vésicules en larmes bataviques* ' are, according to the author, "*très probablement des formes de transition très voisines de celles du trypanosome* On p 50 he says that he is convinced that they ' *rapprochent beaucoup de certaines grégarines, de certaines coccides*," but that he is unable to determine exactly their phases and much less their species Nevertheless, he thinks that they represent "*le stade sphérique ou la période de segmentation du trypanosome*" Why so he does not explain. The figures of these bodies (Figs. 3, 12, and 23) resemble nothing that we know of in connexion with trypanosomes or indeed, with anything else. It is unnecessary to deal with his descriptions of Laveran's crescents and his so-called "flagellate bodies" except to note that the latter are "almost always fixed inside the red corpuscles ' which is of course seldom, if ever the case. He describes three kinds of crescents. Fig 31 is like these bodies but Fig 16 distinctly represents fragments of red corpuscles He finds free flagella very frequently (as Major Hehir does). Some of his *corps flagellés* are triangular with a flagellum at each angle (Figs 17 and 18) One of these (Fig 17) is the only one of the drawings which presents the smallest likeness to a trypanosome, but on reference to the text (p 48 paragraphs 4 9 and 10) it appears to be one of Laveran's flagellate bodies of the triangular pattern.

Lest it be pretended that Dr Nepveu has here drawn a real trypanosome we may remark that Fig 17 represents a long narrow body with two flagella, with knobs at their ends, issuing from one extremity and (?) a third flagellum at the other extremity Now the adult trypanosome is certainly long and narrow but has only one flagellum, while the fission forms certainly may have two or more flagella, but are broad and generally partially divided objects with the flagella issuing from the sides—quite different, in fact, from the figure. But the matter is finally decided by the presence of the little knobs at the end of the flagella in the illustration. Dr Nepveu had evidently read of the enlargement often seen at the end of Laveran's so-called flagellum, and consequently gives such an enlargement to all his figures of flagellate bodies (Figs. 17 and 18) and refers to it in his text as *une petite vésicule terminale* Now the flagellum of the trypanosome never possesses an enlargement of this kind. Hence he was clearly not drawing a trypanosome. His other flagellate bodies strongly remind us of some of Major Hehir's drawings and are probably blood plates with filaments of fibrin attached It is impossible to know what he means by his *corps vermiformes.* One would suspect filariæ but for the illustration, which suggests nothing of the kind. The illustrations of this work consist of a page of drawings in outline roughly scratched by the point of a pen They are very similar to those of Major Hehir, and most of them probably represent exactly the same objects—namely, artifacts, blood plates, fibrin, vacuoles, and adventitious bodies.

As we have already mentioned, he says near the end of his work "Je n'ai jamais pu trouver, malgré le plus grand soin, la trypanomonade ou le trypanosome de Danilewski, mais certainement des caractères assez nombreux semblent en indiquer cependant la présence, ou tout au moins la présence d'un hématozoaire très voisin" This passage speaks for itself. It has been suggested that by "*le trypanosome de Danilewski*" Dr Nepveu meant a particular species of trypanosome which he could not find, but this reading is impossible because Danilewski mentioned many kinds of trypanosomes found in many animals Nepveu evidently meant that he could not find trypanomonads or trypanosomes such as Danilewski had described. (We may explain that the name *Trypanomonas* was at one time given by Danilewski to Lewis's trypanosome of the rat in order to distinguish it from the trypanosome of frogs. He thought that the former is an immature form of the latter,[15] or at least a young trypanosome, and Dr Nepveu seems to have some confused remembrance of this erroneous hypothesis We have already spoken of Labbé's use of the word *Trypanomonas*) Reviewing this paper of Dr Nepveu we see that he expressly denies in it having ever found trypanosomes in his researches of 1888 and 1890 He claims only to have found "characters which indicate the presence ' of trypanosomes, but he gives no evidence whatever that the objects he refers to have any connexion with trypanosomes, or, indeed, with any other parasite In fact, the whole paper suggests that with the exception perhaps of Laveran's crescents, he was not describing true parasitic organisms at all, but simply a series of artifacts

A little later in the same *Comptes Rendus*, Dr Nepveu[16] records the discovery of yet another couple of parasites—namely, of flagellate bodies included in the leucocytes in cases of malarial fever and of certain polygonal organisms in the same. The illustrations of the former are unlike anything which would now be considered possible, and the discovery has not been confirmed It is interesting to note however that two of the cases in which these organisms occurred (p 700) have the same names as two of the cases (Genestet and Cabane) in which the author claimed seven years later to have found trypanosomes[17] They suffered also from the same disease, pernicious fever The polygonal cells have not been studied except by the author

After this year (1891) we find a series of short publications by the author in the *Comptes Rendus de la Société de Biologie* We cannot refer to them here, but would advise the reader who is interested in this matter to look through them The heading of most of them suggests that Dr Nepveu was at Marseilles during this period.

We have thus given a brief review of such of Dr Nepveu's writings as we are acquainted with, and we would advise the reader to study them for himself if he wishes to form an independent opinion regarding them. We would suggest, however, that he study them in conjunction with the writings of Major Hehir and a paper on artifacts in the blood written by one of us (Ross[18]) subject of a uterine fibroid, which had ceased to bleed after phlebitis and an attack of influenza who, in the early part of this year, there being no hæmorrhage of any kind, began to become anæmic and had a peculiar earthy complexion, suggesting possible malignant disease. On examination in August no evidence of any organic disease beyond the fibroid could be found, but the blood contained large numbers of flagellated protozoa, as many as eight or ten in the field of the microscope $\frac{1}{12}$ oil immersion. She was not seen again until October, when she appeared to be, and said she was, perfectly well. No protozoa could be found She was treated with arsenic, aloes, and iron. No change in diet or surroundings." The note ends here and the minutes of the Liverpool Medical Institution give no additional details On Jan. 16th, 1902, one of us formally asked the members of the institution whether any of them could throw further light on the subject The only reply given was one by Professor H Briggs, who stated that the case was his own and that "Dr Barron's organism was in his own opinion, not like Dr Dutton's specimens" (We may explain that the phrase 'Dr Dutton's specimens" refers to some preparations of the human trypanosomes found by him and Mr R M Forde in the Gambia some weeks previously, as will be presently described.) A short abstract of these proceedings will be found in the *British Medical Journal* [11] Dr Barron's case is the more tantalising because, being an expert pathologist, he was not likely to have been misled by artifacts It will be noted, however, that the parasites were said to be flagellated protozoa, that they were very numerous, that there are no statements regarding their size, form, structure, and zoological affinities, and no drawings of them, and that it is not mentioned whether the patient had ever been in the tropics. Professor Briggs's statement suggests that they were not trypanosomes, and in fact it remains impossible to ascertain what they were

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[15] See for instance Annales de l Institut Pasteur 1890 p. 759

[16] Nepveu : Corps Flagellés inclus dans les Cellules Blanches chez les Paludiques &c. Comptes Rendus et Memoires de la Societé de Biologie, 1891, p 699

[17] Nepveu : Sur un Trypanosome dans le Sang de l'Homme Ibid 1898, p. 1173 (not indexed)

[18] Ross A List of Natural Appearances in the Blood which have been Mistaken for Forms of the Malaria Parasite, Indian Medical Gazette, 1894 p. 441

Dr Gustav Nepveu (1898)—So far as we know this is the first observer who actually uses the name "trypanosome" for the flagellate organisms which he claims to have found in human blood. His paper [12] has no illustrations and is only a page and a quarter in length, but the author states perfectly definitely in it that he had found trypanosomes in human blood. He begins by remarking that up to the present trypanosomes had been found only in certain animals, but he refers to Dr Barron's case He proceeds

> In 1890 in pursuance of *(à la suite de)* researches made in Algeria on the parasite of malaria I found in the blood of a patient in whom Laverania also were present conjointly with them a flagellate organism which was common enough I counted about three of them in each preparation of 18 mm square About this time (see Nepveu: Etude sur les Parasites du Sang chez les Paludiques 21 1891 Bulletins et Memoires de la Société de Biologie) I already gave some of the drawings which I had collected up to that time I always hoped to be able to complete by a more detailed study these *first observations but since then I have found the parasite again only* on rare occasions I therefore decided to give the few details which follow in the hope of drawing the attention of naturalists and physicians who will be able to complete these researches
>
> This trypanosome shows all the characters of the genus: general form a colourless homogeneous membrane of which one of the borders thinner and more hyaline than the other is animated by the characteristic undulatory movements This membrane carries a nucleus and a fine flagellum placed in front the undulations of which follow each other rapidly
>
> It is thus that it appeared in Khill (quotidian fever) and in Cabane *(pernicious comatose fever)* In a third patient, *Genestet I observed* organisms which I thought were related to those described under the name of trypanomones" a form which is perhaps only a stage of evolution of trypanosomes In this patient the organisms were furnished with two flagella at one of their extremities Labbé [13] has described a trypanomone of this kind
>
> In more than 200 patients for the most part malarial of which I have studied the blood I have found these various forms only in six Three of these were suffering from quotidian fever (Khill Langevelde Bichiolli) one from a tertian type of fever (Hendrick) two from pernicious comatose fever (Cabane Genestet) The seventh observation was made on *Dr X——*, who was apparently in good health (larval paludism)
>
> In none of these patients have I observed any symptoms corresponding to this special parasite invasion They were almost all invaded by the Laverania which dominate in all and always under diverse forms This seems to be therefore a pure and simple coincidence which I think worthy of notice
>
> In conclusion the trypanosome ought to be placed among the parasites of the blood of man I cannot give with all the precision desirable a more complete description of this variety I therefore do not wish to give it a particular name It would be better to begin with to establish the similarities and differences which I find between this parasite of man and the congeneric ones observed in animals and to complete first our morphological and evolutive study *of it*

This is all. At a cursory glance nothing could be more convincing than this paper, but those who have studied the discoveries of new parasites which are so frequently made (e.g., in epilepsy, goitre, cholera, syphilis, small pox, &c.) will perhaps wish to inquire further In the first place, we note that Dr Nepveu's description of his trypanosome is merely what may be called a generic description and not a specific one, that is, it would apply equally well to almost all the kinds of trypanosomes known Anyone who has seen the familiar trypanosomes of animals, or has even read an account of them in the text-books, could have written such a description He gives no measurements and no drawings, he does not inform us (a thing which he might easily have done) which of the many trypanosomes figured in the text-books, and differing in many particulars from each other, most resemble his, and the position of the nucleus, the staining reactions, and the details of movement are not noted (In the original passage, "*Un noyau et un flagelle mince placé en avant*," the word *placé*, being singular, refers only to *flagelle*) He does not (in spite of his concluding sentence) make any effort to differentiate his trypanosomes from those of animals The excuse which he gives for this lack of detail—namely, that he has found the parasite only on rare occasions—is scarcely adequate. Since then the most exact drawings and descriptions have been given from a single case, and yet Dr Nepveu was not able to give them with the material of six (if not seven) cases. Surely he might have retained some preparations from some of these cases from which photographs or drawings at least could have been made. The reader should note that he expressly denies that his parasites were pathogenetic. This does not accord with what has been found in connexion with the majority of cases recently reported.

It will be observed that in one place he states that in the case of Genestet he had found organisms furnished with two flagella *at one of their extremities*, that these organisms appeared to be allied to those called trypanomonads, 'a form which is perhaps only a stage of evolution of the trypanosome," and that "Labbé has described a trypanomone of this kind." It has been gravely contended in favour of Dr Nepveu's claim that the trypanosome with two flagella is so characteristic an object that it is not likely to have been imagined by him It is true that trypanosomes undergoing fission have two or more flagella, but as will be seen on reference to the classical works of Rabinowitsch and Kempner, Laveran and Mesnil, Bradford and Plimmer, these flagella are unfortunately *seldom or never at one end* In fact, each derivative organism has its own flagellum, and the freshly formed flagella are seen at the sides of the parent organism Dr Nepveu's remark seems to weaken rather than to support his case, and suggests that he had found, or thought that he had found, some multiflagellate organism such as a monad. Still more unfortunate is his reference to Labbé. On looking at the work of Labbé mentioned we find that his organism certainly had two flagella, but that they are placed *one at each end* And Labbé does not apply the name "trypanomones" only to this kind but to the whole genus, much less does he give the name to organisms with two flagella at one end, as Dr Nepveu suggests. The idea that trypanomonads are an earlier stage of trypanosomes is based upon a confusion of Danilewski's which we shall mention again.

Near the beginning of his paper Dr Nepveu says that his discovery was originally made "*en 1890, à la suite de recherches faites en Algérie*," and that about this time he had already published drawings in the publications of the Société de Biologie On referring to this article of his [14] we find no drawing which purports to be, or which even clearly denotes, a trypanosome, while the article concludes with the most definite statement that he had not found trypanosomes at all, "in spite of the greatest care." The only justification which appears to exist for his reference to this earlier paper of his is that he claimed in it to have found "numerous characters seeming to indicate the presence of them (the trypanosomes) or, at least, of hæmatozoa like them" (p 50)—a very different matter By a close study of this and of a succeeding paper of Dr Nepveu we find, in fact, that he has discovered many other parasites besides trypanosomes. This paper of 1891 is headed "Par M le Professeur G Nepveu de Marseille."

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[11] Brit Med Jour 1902, vol i p 205.

[12] Nepveu Sur un Trypanosome dans le Sang de l Homme Comptes Rendus et Memoires de la Société de Biologie 1898 p 1172.

[13] Bulletin de la Société Zoologique de France 2 xvi pp 229-231 1891. (Author's reference.)

[14] Nepveu: Étude sur les Parasites du Sang chez les Paludiques, Comptes Rendus et Memoires de la Société de Biologie, 1891 p 39

We may, perhaps, be justified in concluding this discussion by some words of Charles Darwin.[25] "I feel sure," he writes to a correspondent, "as long as species mongers have their vanity tickled by seeing their own names appended to a species, because they miserably described it in two or three lines, we shall have the same vast amount of bad work as at present and which is enough to dishearten any man who is willing to work out any branch with care and time." In order to obtain the credit for an observation much more is necessary than just to record once in print that it has been made, without taking any trouble to convince others, without publishing accurate descriptions or drawings, or even without giving a full account of the circumstances under which the observation was made. Of course, science cannot accept this sort of thing, to do so would be to admit every kind of pretender For instance, anyone can record a statement to the effect that he has seen a new parasite, and can even *furnish* a *good* general description of it drawn from descriptions of allied parasites found in other hosts and given in the text-books That such a thing is done with intent to deceive is happily not very likely, but unfortunately it can often be done unconsciously by inexperienced students (especially in connexion with minute parasites of the blood), who having found some object which seems to them to accord with the text-book description, rush into print, full of ardour for their new discovery A timely remembrance of the words of Darwin would not only save many such from the disappointment of finding their claims rejected, but would also guard the interests of "the man who is willing to work out any branch with care and time."

ON THE PERMANENT CARE OF THE FEEBLE-MINDED[1]

BY MRS ELLEN F PINSENT,

CHAIRMAN OF THE AFTER-CARE COMMITTEE OF THE BIRMINGHAM SCHOOL BOARD

I HAVE some hesitation in speaking of the value of the work of an after-care committee when the only one of which I know anything has been in existence so short a time, but I may succeed in giving some idea of the difficulties with which it is necessary to contend The first important question is as to the advisability of establishing such committees. On this point I have no hesitation I am most anxious to see them established wherever there are classes for the mentally deficient. I think that all those who have had anything to do with these children are agreed that there is no stated age when they can be considered grown up or treated as responsible adults Many, I believe most, are as much children at 16 years of age as they were at 10, the only difference being that, as at 16 they are capable of doing greater harm, they therefore require greater care when they reach that more dangerous age. I do not think it possible that much lasting help can be given by members of after-care committees in the majority of cases, and yet the children in these very cases are just those who are absolutely unfit to face the world without permanent care.

When we started an after-care committee in Birmingham our immediate aim was to find situations for those children who left the special classes capable of work, and also to see if there was anything that could be done for the hopeless cases where the children were found to be incapable of work. This, I say, was the immediate object but it was by no means the most important in the minds of those who formed the committee It was established first and foremost as an investigation committee with the object of estimating the worth of the laborious and expensive education given in special classes. It was hoped that if for some years after they left school the careers of these unfortunate children were closely watched and accurately reported the committee would then have some facts to place before educationalists which would enable them to judge how far the special class really meets the requirements of mentally deficient children. We hope, too, to be able to show how many of those who leave special classes ultimately become self supporting or even partially self supporting It is too early in our history to place any great confidence in our figures, but such as they are I will give them to you

We had 48 children on our list to begin with and of these we found it impossible to trace 13 This, I hope, is a larger percentage than will ever occur again. Many of these children had left school for some years before we began work. Now that each case is taken up at once and constantly watched we shall have a better chance of tracing them, though I am afraid we shall always lose a certain number The parents are perpetually flitting, and as there are so few after care committees, when a child goes to another town we have no organisation to whom to hand him or her over We feel this a good deal in Birmingham, for, although our children may only go a short distance—to Smethwick, Aston, Handsworth, or Yardley, which are all in reality part of one great population—yet these children are often completely lost, as none of these places have even special classes, much less after care committees. Thus, some years' work in a special class may be rendered almost useless from the fact that the child's parents have moved out of our school board district

Before passing on I should like to point out that the children who are perpetually wandering are almost always the offspring of low and degraded parents and probably if they were found would swell the numbers of the incapable and hopeless. This should not be forgotten when conclusions are drawn from our statistics. It also points to the advisability of such children being placed in a boarding school where they could be kept under permanent control and not left to the chance of their parents remaining in the neighbourhood of a special class or of an after-care committee. There can be no doubt that many parents of feeble-minded children, belonging as they so often do to the street-hawker and irregularly employed class, are even more migratory than the rest of town populations. This is one of our most disheartening difficulties, for, unless the after-care association can establish permanent custodial homes it must always lose a large percentage of cases, and every lost case may mean, and generally does mean, a future generation of feeble-minded children.

Of the 35 remaining persons 16 are at work The average age of these 16 persons is 17 years, and the average weekly wage which they earn is 5s 9*d*.—one boy earns 10s. a week. We have not at present been established long enough to know how often these persons change their situations, or the amount of time wasted during such changes, which if considerable would, of course, lower their weekly wage. But, speaking generally, I believe that our investigations will show that they are perpetually changing their situations. Certainly of the four cases which have come under my own eye only one is satisfactory, one person is too bad to work at all, one never keeps his situation more than a few weeks and the other never more than a few months. Neither of the latter will ever be capable of self support after their near relations die and I think it probable that both will find their way into gaol. Here they will cost at least as much as in an industrial colony where I feel sure that working under supervision both could have contributed largely to their own support. These cases I believe to be typical of most of the 16. A small percentage will get along passably, but by far the greater number will eventually be found in the prison, the penitentiary, or the workhouse. The next seven children on our list, although capable of work, are out of work. This you will notice is nearly one third of the total number of cases in which the subjects are capable of work. Our after-care committee will probably get them work of some kind, but by that time others will have lost their situations and I fancy our books will show that this is about the usual proportion. Our utmost efforts will probably prove inadequate, there will always remain a third doing nothing If those who fail to keep their situations were placed in industrial colonies they would work continously with greater profit both to themselves and to society at large.

I have now accounted for 23 out of our 35 children. Of the remaining 12 one has died, five are so bad that they should be placed at once in some asylum or home, and six are being looked after fairly well at home but are incapable of work and will have to be provided for on the death of the mother I have said fairly well looked after and by this I mean that they are clothed, fed, and kept passably clean but I do not believe for a minute that they are protected from all chance of moral harm Some of them are girls who should never be

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[25] F Darwin: Charles Darwin p. 159 London: John Murray 1902.

[1] A paper read before a Conference held at Leicester on Nov 26th 1902, upon the Treatment of the Mentally Defective.

Of course, as with Major Hehir and Dr Barron, we cannot definitely say that Dr Nepveu did not find trypanosomes in human blood. Although his paper of 1891 contradicts his statement of 1898, that he discovered them in 1890, yet it is possible that he saw them later We have no means of judging The paper of 1898 is so vaguely worded that it is impossible to ascertain from it when and where the observations were made—that is, if they were not all made in Algeria in or before 1890 Beyond this the cases are neither localised nor dated Are we to suppose that all the cases were found in Algeria in 1890 or that some were found subsequently up to 1898? In the latter event, where were they found? Did Dr Nepveu return to Algeria after 1890 or did he find the cases in Marseilles or elsewhere? Surely he ought to have given some exact information on these points Surely, also, considering the large amount of material he possessed in his six or seven cases, and in view of the importance of the discovery which he claims, he ought not to have allowed seven years to elapse before publishing, he ought to have given much more precise details than he did give and he ought to have placed his discovery beyond cavil by demonstrating his organisms to persons capable of judging them. If he did so, where are the facts recorded?

At the same time his various papers fail to convince us that the author possessed any really accurate knowledge even of the literature of trypanosomes, or indeed of malaria Like the papers of Major Hehir, they suggest, that the author was an enthusiastic but inexperienced observer who mistook everything seen under a strong lens for some kind of parasite. If we cannot assure ourselves that these observers did not find flagellate organisms in the blood we certainly cannot, in spite of their statements, feel convinced that they did. It is possible that their flagellate organisms were artifacts, such as many of their other organisms certainly seem to be. There is no good evidence that Major Hehir ever saw his trichomonas like body and there is no more evidence that Dr Nepveu ever saw his trypanosome than that he saw flagellate bodies within the leucocytes or numerous curiosities which he mentions as existing in malarial blood. Even if the reader decides to grant these observers the benefit of the doubt he will be forced to consider the difficult question as to which of the two deserves the priority Certainly Hehir's drawing of 1892 (Plate V, Fig 3) presents as good an idea of a trypanosome as Dr Nepveu's very general description of 1898, and was published six years earlier For our own part, unless some fresh evidence can be produced in their favour, we shall be forced to conclude that the claims of Major Hehir, Dr Barron, and Dr Nepveu are all of them, to say the least, very questionable. Laveran and Mesnil have already independently come to the same conclusion regarding those of Dr Barron and Dr Nepveu. Referring to their papers of 1894 and 1898 they say, "Jusque dans ces derniers temps on n avait cité que des cas très douteux de trypanosomes chez l'homme."[19] We have consulted with Dr Laveran on the subject, and he authorises us to say that he sees no reason for changing this opinion of the papers of Dr Barron and Dr Nepveu

Mr R M. Forde and Dr J S Dutton (1901) —This case need not detain us long The first publication was by Dr J S Dutton [20] He states that the case in which the parasites were found was admitted into hospital at Bathurst, Gambia, with fever on May 10th, 1901 under the care of the colonial surgeon, Mr R M Forde The patient's blood was examined by Mr Forde, and Dr Dutton says "Mr Forde informed me that he saw very many actively moving worm like bodies whose nature he was unable to ascertain." The patient was now invalided to England and on August 12th entered the Royal Southern Hospital, Liverpool, where he suffered from "three short periods of pyrexia" and other symptoms. Here Dr Dutton examined his blood for malarial parasites on two occasions with negative results and Dr C J Macalister recorded his case In December the patient arrived in the Gambia again and Mr Forde asked Dr Dutton (who also had arrived in the Gambia on a scientific mission) to examine his blood once more. Dr Dutton expressly admits (p 455) that this request was made "on account of" Mr Forde s previous observation of the "actively moving worm like bodies whose nature he (Mr Forde) was unable to ascertain.' On doing so (Dec 15th) Dr Dutton, who had previously found nothing in the patient's blood now succeeded in detecting unquestionable trypanosomes to the number of only three in three slides.

Such is the history of the discovery as taken from this paper The rest of the paper gives a close analysis of the symptoms of the case as observed by Mr Forde, Dr Macalister, and Dr Dutton, and a detailed description of the parasites, including their form, movement, numbers, size, and staining reactions, as observed by Dr Dutton during a long study of the subject. He gives also a coloured drawing of the stained parasite and photographs of it and of allied organisms in animals (*T Lewisi*, *Brucei*, and *equiperdum*), and compares the human parasite, which he names "*T gambiense*," with these, and also the symptoms produced by it in man with those produced by them in animals The previous claim of Dr Nepveu is briefly considered. Charts comparing the temperature in man and in nagana are added In a footnote at the conclusion of the paper Dr Dutton states that "since going to press" he has found the same parasites in one out of 115 dried blood films taken from native children in the Gambia during his visit there

We should add that shortly after the discovery was made both Dr Dutton and the patient returned to England. Here Dr Dutton, Dr H E Annett, and Mr J L Todd continued the study of the case, both of the parasites and of the symptoms. The parasites were exhibited at the Royal Society, and at Liverpool in connexion with the annual meeting of the British Medical Association, and both the case and the parasites were shown to many others, including ourselves. Dr Dutton contributed another paper on the subject to the British Medical Association, July 29th, 1902.[21] This is practically a repetition of the former paper, except that the consideration of Dr Nepveu's claim is omitted

Meantime Mr Forde, who had first seen the parasites in May, 1901, seems to have published nothing on the subject. On Sept. 1st, 1902, however, a paper from his pen[22] appeared giving some of the clinical details of the case during the periods when the patient was under his care in 1901 He substantiates Dr Dutton's account of the discovery, but adds that when he (Mr Forde) first saw the parasites he "prematurely pronounced" them to be "a species of filaria", that this conclusion "became doubtful after repeated observations of the parasite", that he showed the case to Dr Dutton, and that Dr Dutton "at once recognised" "the parasite" "as a species of trypanosoma." Mr Forde adds that it was also Dr Dutton who recognised the peculiar undulant nature of the fever

The leading facts appear to be clear and undisputed. Later, however, Mr Forde[23] published a letter in which he seems to claim having made the discovery by himself in May, 1901, when he first saw the parasites. This view may be contested, as we have his own words to the effect that he then thought the parasites were a species of filaria and that it was Dr Dutton who recognised them to be a *species of* trypanosoma. We may note, also, that he published nothing on the subject (so far as we know) until 15 months after his first observation, and three months after Dr Dutton's first publication On the other hand, it was undoubtedly Mr Forde who drew Dr Dutton's attention to the existence of parasites in the case In the circumstances we think that most people will consent to the opinion that the names of Mr Forde and Dr Dutton ought to be associated in the history of the discovery Dr Macalister also contributed some clinical details. Whatever the claims of others may be it was certainly Dr Dutton who first established the existence of trypanosomes in human beings in a manner fully satisfactory to science, and it was also he who was the first to give adequate descriptions and illustrations of the new parasite and a comparison of the symptoms with those of other forms of trypanosomatosis in animals. The case of Mr Forde and Dr Dutton has been so thoroughly investigated, especially by the latter, and is so well attested, that it is unnecessary to examine the confirmations of the discovery which have already been made public—namely, a case of Dr Habershon Dr Manson and Mr Daniels, and some fresh cases of Dr Dutton and Dr Todd [4] is not possible to secure at day schools, (*d*) mentally defective children living so far from any special day school that it would be impossible for them to attend, and (*e*) certain defective children known as "moral defectives." 3. Epileptics 4 Epileptics who are also feeble-minded 5. Feeble-minded children who are also crippled, blind, or deaf-mute 6. Imbeciles and idiots.

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[19] Laveran and Mesnil: Des Maladies à Trypanosomes, leur Répartition à la Surface du Globe Janus Mars 15 1902.

[20] Dutton Preliminary Note upon a Trypanosome occurring in the Blood of Man Thompson Yates Laboratory Reports May 1902

[21] Dutton: Note on a Trypanosoma occurring in the Blood of Man, Brit. Med Jour 1902. vol ii p 881

[22] Forde: Some Clinical Notes on a European Patient in whose Blood a Trypanosoma was observed Journal of Tropical Medicine, Sept 1st 1902.

[23] Forde: The Discovery of the Human Trypanosoma, Brit Med Jour Nov 29th 1902.

[24] Editorial in the Brit. Med Journ 1902 vol ii p 1452 describing a case of Dr Habershon Dr Manson, and *Mr Daniels* Dutton and Todd: Brit. Med Jour, Feb 7th 1903

Class B —Those over school age, including the following sub-divisions (1) mentally deficient but capable of industrial work under supervision—i.e., cases for a permanent industrial colony, (2) mentally deficient and incapable of work—i.e, cases for a permanent colony, (3) epileptics who are capable of work in a colony (4) feeble minded epileptics, (5) feeble-minded persons who are also crippled, blind, or deaf mutes, and (6) imbeciles and idiots.

The ultimate aim of this inquiry is, of course, to collect evidence showing the necessity for boarding schools to be supplemented by permanent industrial colonies or permanent custodial homes to which children who were unfit to face life on their own responsibility could be transferred from such boarding schools In this way they would never be allowed the liberty which they can only misuse to their own degradation and to the degradation of the society in which they live Theoretically it may be hard to decide what degree of mental deficiency renders people morally irresponsible for their actions, but when it comes to the practical side, the question as to which cases will ever become independent of help and self supporting, it is not nearly so hard a matter Let us face the worst that might happen. Let us grant that a very small percentage of the feeble-minded would be kept in a colony who might have gone through life without serious harm to themselves or to others and then let us weigh this evil—for I grant it would be an evil—against the infinite amount of suffering and moral degradation caused by the fact that people of defective intellect are allowed the full liberty of responsible citizens, that they are allowed to make the lives of their own families miserable and to leave behind them others as defective as themselves Ultimately such people do have some restriction or other put upon their personal liberty, too often in gaol, too often in penitentiaries, and most often, perhaps, in the workhouse. We are only asking for restriction a few years sooner and we offer instead of the usual story of crime, shame, and pauperism that these years should be spent happily and safely and filled with pleasant and honest labour

As to the exact plan of action which our committee will think it wise to adopt I cannot speak. The difficulties ahead make one almost despair Would it be better to try to win the local authorities first or to appeal direct to the Government? Is it primarily a matter for the guardians or for the city councils? Might we not have better hopes of success if both those authorities combined and went together to the Local Government Board? Among all the suggestions for the treatment of this evil there is only one on which I have a really clear opinion and this is not very helpful as it is merely negative. I should like, if possible, to avoid any appeal to private charity Any consideration of the numbers we have to deal with must convince us that private charity would be entirely unable to cope with them This is an affair which touches the welfare of the nation and only the nation can deal adequately with it Asylums and homes supported by private charity are only a mitigation and can never provide for all As long as we refuse to deal with the whole question feeble-mindedness will go on increasing It is probable that private charity postpones the day when the State will see the necessity of stepping in. Private charity has been at work for many years and the evil is still increasing On the other hand, there can be little doubt that a thorough and complete system of State intervention would lead to a steady decrease in the numbers of the mentally deficient.

Harborne Birmingham

WATER SUPPLY OF TEIGNMOUTH.—At the meeting of the Teignmouth district council held on Feb 3rd Dr F C. H. Piggott, the medical officer of health, presented a report on the water supply of the town He stated that the water from the Coombe brook (which is supplied to about half the inhabitants of Teignmouth) after analysis by the Clinical Research Association was declared to be 'unfit for drinking '

ANEURYSM OF THE ASCENDING ARCH OF THE AORTA IN A SMALL BOY

A POST-MORTEM SURPRISE

BY ALFRED C JORDAN, M D CANTAB

A BOY, aged six and a half years, was brought to consult me on Sept. 8th, 1902, for headache and vomiting, and he had a discharge from both ears These symptoms had begun two days previously Unlike his brothers and sisters, he had always been a delicate child. The ears began to discharge for the first time before he was two years old after whooping cough He was a pale, ill nourished boy with the rough skin which is characteristic of malnutrition He complained of headache, chiefly felt above the right ear There was no tenderness over the mastoid process or above the ear There was some muco-purulent discharge from both ears His temperature was 101° F On the 9th the headache was worse, the vomiting continued and the temperature was 102° On the 10th the vomiting had almost ceased but the temperature was 103° On the 13th the following note was made. The temperature was 99 4°, the headache was less severe, there were no vomiting, no fits, or twitching, the bowels were constipated, the pulse was regular, not slow The pupils were small, equal, and reacted well to light and to accommodation, consensual light reflex was normal, there was no squint The heart and lungs were normal. The abdomen was full, it was not tense or tender, there was no enlargement of the liver or spleen. The boy was pale. On the 14th the left knee began to swell and to be painful, there was effusion into the joint. There was no sore-throat and the temperature was normal The headache was slight and the boy seemed better in other respects. The specific gravity of the urine was 1015, acid and clear, there was no albumin or sugar On the 16th Dr Howard Tooth saw the boy with me. The optic discs and the fundi were normal. He was given ten grain doses of sodium salicylate three times a day on the supposition that the swelling of the knee was of the nature of acute rheumatism. On the 20th the temperature remained normal. The effusion into the left knee joint, which had continued up to the 18th had now begun to subside The joint was far less painful and tender than on the 16th. On the 23rd he was free from headache and his temperature remained normal. The knee was painless though the effusion had not yet entirely cleared up There was still some discharge from the ears He was sitting up playing with his toys He continued to improve during the next three days The knee became normal On the 26th he was up playing and laughing, when suddenly he turned pale and died.

To summarise the chief points of the case a boy, aged six and a half years, who had been the subject of *otitis media* since babyhood, began to suffer with headache, vomiting, and fever on Sept 6th These symptoms grew worse until the 10th, then they began to subside, and on the 20th they left him. On the 14th the left knee began to swell. Effusion into the joint increased up to the 18th and then began to diminish, the knee being normal at the time of his death. On the 26th when he was apparently convalescent, he suddenly died.

Necropsy —At the post-mortem examination the brain and meninges were quite normal in all respects. The tympanic cavities contained muco-purulent fluid, the right containing more than the left. In the left lateral sinus there was an ante mortem clot, white and tough, loosely adherent The lining of the sinus was smooth and healthy In the abdomen everything was normal On removing the sternum the pericardium was seen to be distended, on incising it a quantity of blood stained serum escaped and the heart was found to be enveloped in a thick coat of dark blood clot. On removing this the cause of the boy s sudden death was at once evident, for on the ascending arch of the aorta, on its anterior surface, was a sacculated, light-red swelling, in the centre of which was a horizontal slit-like opening (Fig 1) On the corresponding point of the inner surface of the aorta was a triangular opening with sharp edges (Fig 2) The triangular flap, attached along the shortest side of the triangle, was pushed outward into the lumen of the sac. Evidently a small opening in the intima had first allowed out of the house by themselves, instead of which I know that they are prone to wander alone for hours in the streets A poor mother with other children cannot give her whole time and strength to the weak minded member of the family The child must take her chance during the busy hours of the day These girls are often of a clinging and affectionate disposition and will follow any man who chooses to speak kindly to them We who pay the rates and taxes will have to support these girls in the end. Would it not be wiser to do so at once, instead of waiting until they have produced others for us and our children to support? Once more it is for permanent industrial and custodial homes which we must work and the chief duty of an after care committee is to collect the evidence which will demonstrate their necessity No after care committee, however vigilant its members, can watch over the feeble minded at all hours of the day and keep them from harm, but what an after care committee *can* do is to show the public the result of its investigations and go on publishing facts until ratepayers, Poor law guardians, and city councillors are convinced.

I am very anxious to take this opportunity of approaching the Poor-law guardians on the subject of the worst cases with which after care committees will have to deal. I do this not at all in a spirit of captious criticism—for I recognise fully the enormous difficulties with which the administrators of the Poor law have to deal—but I am really anxious to come to a better understanding The Poor law should, I think, be a help to us, but at present it is only a difficulty It seems to me that we are pulling in exactly opposite directions and until we pull together I despair of any good results. It appears to me that it is the policy of the Poor law authorities to keep cases of extreme mental deficiency and imbecility out of the workhouse as long as possible. Our policy is to do all we can to persuade parents to avail themselves of the workhouse as a refuge, generally the only possible one, for their uncontrollable children. I have failed to find any asylum or home within the means of poor parents and therefore when a case is pressing the Poor law is our only hope, and I find that when, generally with much difficulty, we have persuaded the parents to apply it is quite impossible to predict what will happen I will give you two puzzling cases.

CASE 1.—This is a girl about ten years old. Her father is living and she has a stepmother Her father earns from 30*s* to 35*s* a week and would be glad to pay something for her maintenance if she could be placed in some home. She is absolutely uncontrollable. I have seen her father obliged to hold her still by main force while she struggled and fought One day she put the cat on the fire, another she undressed herself in the street Her stepmother cannot take her out as she is uncontrollable, and therefore when the necessary shopping has to be done she is tied to the kitchen table and left to howl. The medical superintendent of the school board turned her out of a special class as an imbecile and as being incapable of benefiting by instruction therein The after care committee could find no home or asylum within the parents' means and therefore with some difficulty it persuaded the parents to apply to the guardians A medical man was sent by the Poor law authorities to examine the child I suppose he must have found her in a quiet mood, for he said that she was not imbecile and refused to sign the necessary certificate. After a good deal of further trouble on the part of the lady who undertook this case I understand it was suggested by the guardians that the child should be sent to one of their cottage homes Here she would be one of 19 normal children I can well imagine the life she would have led the unfortunate foster mother in charge of the cottage home However, luckily for her and the other children under her charge, the girl's father refuses to pay the 7*s* a week which the guardians asked and which he considers, justly I think, more than he can afford When she has half killed some neighbour's child we may succeed in getting her removed Burning the cat, unfortunately, was not enough. But is not the whole thing an extraordinary muddle? Medical officer No 1 says the child is an imbecile, while medical officer No 2 says she is not an imbecile The school board authorities say she is too bad even for a special class, while the Poor law authorities say that she is fit to mix with normal children

CASE 2.—This is a girl, about 16 years of age nearly blind, nearly deaf, and nearly dumb, very feeble minded and violent-tempered with the other children Her parents are unable to control her, she escapes from the house and wanders in the street, and she has locked the baby up in the cellar, but she also has never done anything to justify her forcible removal. A member of the after care committee after infinite trouble persuaded the parents to apply to the guardians. The medical man in this case, which to the lay mind is certainly not so pronounced as the other, signed the certificate and the child was taken to the city asylum. The committee breathed a sigh of relief—once more she was out of harm's way Presently the authorities settled that the parents should contribute 2*s* 6*d* a week. The father was proved to have earned an average wage of £2 7*s* 6*d* a week for the last two months No one could say that the contribution was too much, and, of course, he should have been glad to pay it, but he refused and the child was brought back to the frightful risks of her former life. We could not prevent it—we are powerless until the child is proved to be dangerous. The liberty of the subject must not be interfered with and the parent must have his way This is surely one of the points on which we need fresh legislation

Before passing on I should like to emphasise two things illustrated by these cases First, the extraordinary variety of medical opinion as to what constitutes an imbecile, and secondly the extraordinary variety of payments demanded by the Poor law authorities. From one man earning 35*s* a week they ask 7*s*, and from another earning £2 7*s* 6*d* they ask only 2*s* 6*d* It is a little perplexing to have to work with such variable quantities.

It is not surprising that the Poor law authorities wish to keep these children out of the workhouses, as they have no proper provision for them. They might, of course, send them away to idiot asylums where they could be properly graded and looked after, but this is extremely expensive Sometimes it is done, but the more usual plan is to place them in the epileptic ward of the infirmary where they are associated with all degrees of mental deficiency, from epileptics whose intellect is normal to raving idiots In this case one has most pity for the epileptics whose intellects are still normal though at the same time it is not ideal for feeble minded children I know of one boy on our after-care list who is said to be trainable to some extent and who is now in the infirmary of a workhouse spending his time in imitating the cries and gestures of two or three male idiots who are inmates of the same ward. If unions were to combine to have separate graded establishments for such cases there would be no difficulty in finding sufficient numbers to render the grading satisfactory But I am told that there is a difficulty about getting the Government grant of 3*s* a head, as many of these children could not be certified under the Lunacy Acts. Here, again, it would seem as if the only remedy lay in fresh legislation on the subject

Before concluding I should like to mention the last bit of work recently undertaken by the Birmingham After Care Committee. It has been known to us for some time that there were a large number of idiots, imbeciles, epileptics, and feeble-minded persons who had never passed through special classes and who were not on our original after care list We made it our business to collect, with the help of the school board officials and others, a list of these cases When we had obtained a sufficient number it was thought advisable to appoint a sub-committee consisting almost entirely of medical men who have most kindly undertaken to examine and to report on every case In this way we hope at no great interval to be in a position to inform the city council of the extent to which the evil exists. We shall, at any rate, know the facts, and, more than this, we shall have classified the cases under various heads, which should help us later if it is found possible to do anything for these dangerous and unfortunate members of society I will give you the heads under which we propose to classify our cases They fall naturally into two main divisions, those of school age and those over school age.

Class A—Those of school age (i.e., under 16 years) These again sub divide into 1 Those suitable for special classes for the feeble minded These, of course, have already been dealt with by the school board, although our committee of medical men is finding out some few cases which have hitherto escaped notice. 2. Cases which for various reasons could be better dealt with in boarding schools for the mentally deficient. Such cases have been recognised by the London School Board and classified under the following heads (*a*) mentally defective children who but for their defect would be committed to industrial or truant schools, (*b*) mentally defective children living in very bad homes, (*c*) mentally defective children whose regular attendance it alum, tannic acid, turpentine, perchloride of iron, and adrenalin chloride. The bleeding would sometimes stop for a quarter of an hour after the little cavity had been plugged, but would soon burst out afresh as vigorously as ever The best result was undoubtedly obtained from adrenalin chloride (1 in 1000 Parke, Davis and Co.), the bleeding being diminished during its employment but not arrested. On the evening of the 8th, when the boy had been bleeding almost continually for five days and nights and had become anæmic and restless, yawning and sighing at times, with a variable pulse sometimes irregular in character and at other times as rapid as 120 per minute, I asked Mr Bilton Pollard to meet me in consultation. On hearing of the various styptics already employed Mr Pollard suggested a trial of calcium chloride. A small pledget of wool was steeped in some of this solution (30 grains to an ounce) and then inserted into the little cavity This was shortly removed and replaced by another and yet again by several others, until the removed plug showed no blood stain whatever A final plug was, of course, left *in situ*. The cessation of bleeding was now complete. The nurse in attendance was then ordered to moisten the inserted plug with some fresh solution every 20 minutes. We left the house shortly after 8 P M and this treatment was continued for two hours when the boy fell asleep and did not wake till six o clock on the following morning there being no return whatever of the hæmorrhage. When I saw him in the morning the plug was gone, but there was not the slightest return of the bleeding I bade the nurse continue painting the gums for three days in case a fresh outbreak might manifest itself, but this, however fortunately, did not occur, no bleeding whatsoever taking place since the first employment of the calcium chloride.

The family to which the patient belonged was of pure Scotch descent and consisted of two boys and a girl. The little patient was the eldest, then came his brother aged five and a half years who also was afflicted with hæmophilia, and lastly a girl, aged four and a half years, who as might be expected, was free from the disease. On the mother s side—and it is, of course, through this branch of the family that we search for a history—there was evidence of the direct heredity of this pitiful complaint, one of her brothers having died from hæmorrhage, at the age of five years and four months, after extraction of a tooth Till then there was no suspicion that he was afflicted with this malady and it was a standing puzzle how it was that he always 'bruised' so easily and sometimes without any apparent cause. The first evidence of any kind in the present case that the parents had of their elder son s bleeding propensity was when he was at the age of six months He was circumcised at that time and the bleeding was only stopped after several days duration with some difficulty Directly he began to walk bruises began to appear before that time none having occurred. At the age of two and a half years he cut his tongue with a tin toy, and again when a little older he slightly severed the frænum of his upper lip with a piece of hard sharp toast, both of these slight injuries giving rise to hæmorrhage of a troublesome kind. As lately as six weeks previously to this present attack he had some obstinate hæmorrhage, lasting 11 days, in the course of shedding an upper central incisor tooth. This was partially arrested by removing the extremely loose tooth and touching the gum with the actual cautery There was slight oozing after this for some time which the mother said appeared to subside gradually of its own accord. His younger brother, like himself is nearly always covered with large and painful bruises. He was circumcised at the age of three months and when a little older injured the frænum of his tongue, both of these trivial wounds giving rise to annoying and somewhat obstinate bleeding

Summing up this case I would not have it thought that I consider calcium chloride to be an unknown or untried local styptic although, at the same time, from questions which I have put to several practitioners of undeniable experience, it appears to be far less generally appreciated in this use than as an internal remedy But when it succeeds and perchloride of iron and adrenalin chloride fail there should be every reason for its being considered superior to, and preferred in ordinary usage to, either of these two well known styptics—to the former on account of its intrinsic cleanliness and to the latter on account of its greater safety Frequent applications to any part of the mouth, especially in a child, naturally render it liable for a larger dose of whatever drug may be employed to be swallowed than is perhaps justifiable, and calcium chloride if swallowed in reasonable doses is the very drug one would prescribe. It is into the hands of the great body of general practitioners that trying and anxious cases as the present one recorded first fall, and it is for such of these who may be, as I was myself, unaware of the unquestionable superiority at least in this instance, of calcium chloride as a local styptic over other styptics of more familiar name and repute, that I take the liberty of publishing this case

Hornsey lane N

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

INTRA-UTERINE FRACTURE OF THE SKULL

By G W KILNER CROSLAND, M.R.C S ENG, L.R.C P LOND

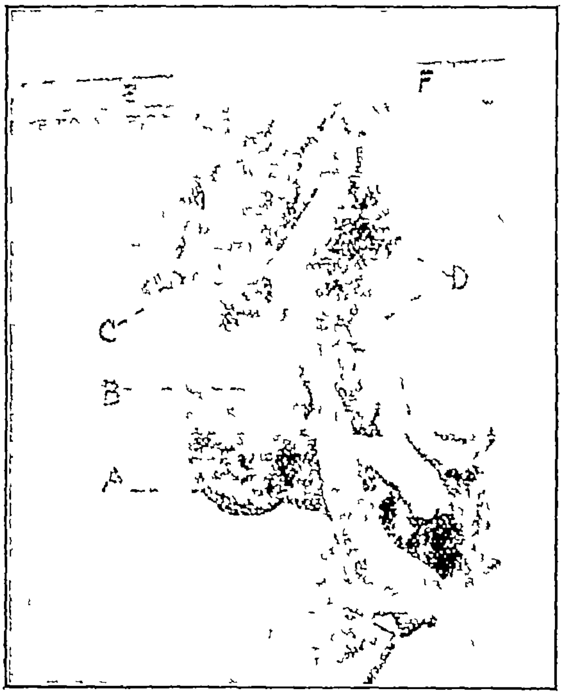
FRACTURES occurring in newly born children are chiefly interesting in their medico-legal aspect. The following case shows particularly well what a great amount of injury can be sustained by the child in utero without serious consequences to the mother and without premature labour taking place.

The patient was a multipara and was pregnant to term, of her fifth child The message was urgent and upon arrival I found that a precipitate labour had taken place and that a dead female child had been born, the mother having been delivered in a kneeling position upon the floor She informed me that four days previously she had fallen down the cellar steps, striking and severely bruising her back (the sacral region), at the time of the accident she felt very faint and the thought passed through her mind that her child was injured, there was no escape of either liquor amnii or of blood from the vagina. Four days later labour pains commenced and rapidly progressing the labour took place as stated above.

On examining the child a very curious and unusual condition was present she was dead, maceration and *post-mortem* change having commenced to take place. There was slight œdema of the feet and of the umbilical cord, the abdomen was flaccid, and the cuticle was commencing to peel away in places. On the left parietal region there seemed to be a cephalhydrocele but on examination this turned out to be a fracture or rather separation of the left parietal and the squamous portions of the temporal bone from one another and from the rest of the skull. They were both displaced or tilted outwards and the violence which had caused this had also displaced the brain in the same direction The lower jaw was fractured on the right of the symphysis. There was on both sides extensive orbital and subconjunctival ecchymosis It was evident that the severe injuries which had caused the death of the child were due to the head, resting in the normal position, being forcibly jammed as it were between two opposing sides of the pelvic brim probably the sacral promontory and the pubic bones There were no signs of syphilis, so-called fœtal rickets, or defective ossification which are said to be predisposing causes of this condition

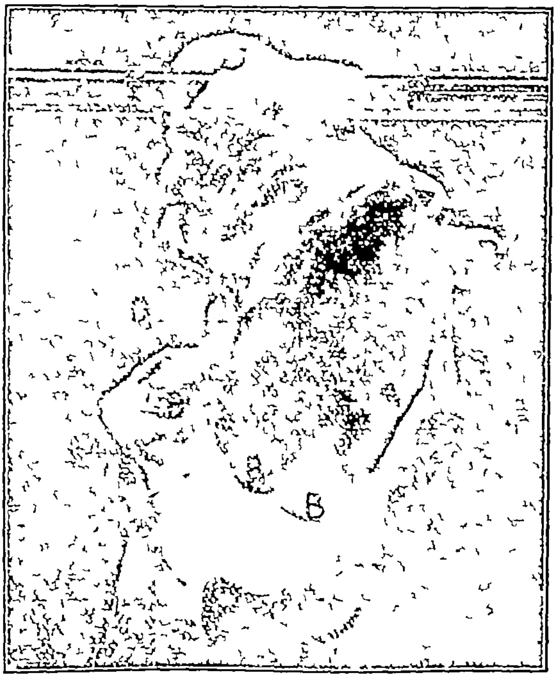
Injuries to the bones which are discovered in newly born children may be classified under three heads (1) those occurring before labour has commenced due to criminal or accidental violence, (2) those occurring during labour due to (*a*) disproportion between the child and the pelvis, (*b*) strong uterine contraction, and (*c*) unskilled assistance at birth, and (3) those occurring after birth, caused by (*a*) criminal violence and (*b*) accidental violence from precipitate labour inattention &c Cases which come under all these headings are described by various authorities on forensic medicine who seem to agree that those in the first group and affecting the cranial bones are very uncommon Casper in his handbook, after mentioning two cases, says "They compel us to assume that the child may be killed in utero by injuries to its cranium produced by violence inflicted directly upon the body of the pregnant woman, and, further Death from this cause is one of the rarest phenomena." Taylor, in his occurred and blood had leaked through it, causing a limited bulging of the fibrous coat of the aorta. The intima had thus lost the support of the fibrous coat and some slight exertion had led to a sudden enlargement of the opening—a tear, in fact, which would be immediately followed by the bursting of the fibrous saccule and fatal hæmorrhage into the pericardium. The aorta itself, even in the vicinity of the opening, was perfectly normal, and the valves and cavities of the heart, as well as the heart muscle, were quite healthy There were no vegetations or other signs of the action of micro-organisms The lungs and air passages were natural The heart had been repeatedly examined during life with the special object of excluding ulcerative endocarditis, and there had never been a murmur at any part of the cardiac area. There had been no impulse over the sternum, and the superficial and deep areas of dulness had been normal. The apex beat had been in its normal position

FIG 1.



A Sacculated swelling with linear rupture B Ascending aorta. C Reflexion of pericardium D Pulmonary artery laid open E and F Great vessels

FIG 2



A Triangular perforation in ascending aorta. B Aortic semilunar valves C Muscle and endocardium of the left ventricle D Pulmonary artery laid open E and F Great vessels

Many questions arise in the endeavour to explain the occurrence of an opening into a child's intra pericardial aorta Was it traumatic? Had the boy received a blow, or had he fallen and a stray pin or nail entered his aorta? There was no history of any such occurrence and no sign of any skin wound or puncture. Moreover, the object must have penetrated his sternum, since the swelling was situated immediately behind the sternum The inner aspect of the sternum was examined most carefully and there was not the least roughness or irregularity of any sort. One naturally looks for some connexion between this aortic perforation and the middle ear trouble for which the boy was under treatment The occurrence of an effusion into the left knee seemed to show that there had been some dissemination of septic material into the general circulation. The suggestion arises that there had been a small septic ulcer in the aorta the base of which had given way In that case it is hardly possible that the aortic and mitral valves, the cavities of the heart, and the rest of the aorta with its main branches should have remained entirely healthy Dr Tooth considers the aneurysm to have been undoubtedly of pyæmic origin, and the knee trouble to have been of the same nature The suggestion that the middle-ear suppuration was the beginning of the train of events seems to him the only reasonable one.

The specimen has been placed in the museum of St. Bartholomew's Hospital Dr F W Andrewes, pathologist to the hospital and curator of the museum, regards it as an acute infective aneurysm and suggests that, in the absence of any other evidence as to its causation, it may have originated as a localised septic aortitis, possibly due to a minute pyæmic embolus in one of the vasa vasorum. An embolus of this nature might occur in any small artery, in the present case it happened to occur in a very unusual situation and apparently in this one situation only

I publish these notes in the hope that they may bring to the mind of some reader a parallel instance or an explanation which will throw light on the present case

Leadenhall street, E C

A CASE OF HÆMOPHILIA ILLUSTRATING THE VALUE OF CALCIUM CHLORIDE AS A LOCAL STYPTIC

BY T WILSON PARRY, M A., M B, B C CANTAB.

IN the early morning of Sept 4th I was called to a boy, aged seven years and four months, who was bleeding from the mouth On examination, blood was seen to be welling up between the left lower first permanent molar and the temporary molar lying immediately in front of it the latter being decayed on its distal surface. Both of these teeth were firmly fixed. There was rapid oozing from the cleft and judging by the considerable clot that had been already evacuated from the mouth as well as by what still remained, there had evidently been continuous bleeding during the night So profuse and persistent did the hæmorrhage eventually become that the likelihood of there being more than one bleeding point was suspected and, accordingly, in consultation with my partner, Dr D McB Greig, a careful examination of the child's mouth and throat was made under an anæsthetic but no other source of bleeding than that already mentioned could be found. The inter dental fissure from which the blood flowed was so small that it was with great difficulty that the smallest fragment of wool could be packed into it. During the next four days however, I plugged it as efficiently as possible with minute pledgets of wool steeped in styptics of unimpeachable repute, to wit,

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON

Trauma and Infection at the Epiphyseal Line—Membranous Gastritis—Chronic Pancreatitis with Calculi—Stenosis of the Superior Vena Cava and of the Right Pulmonary Vein.—Primary Sarcoma of the Lung—Traumatic Rupture of a Bronchus.

A MEETING of this society was held on Feb 17th, Mr R. J GODLEE, a Vice-President, being in the chair

Mr H. L. BARNARD showed a series of specimens illustrating the Transition from Traumata to Infections of the Juxta-epiphyseal Line. He referred to the view chiefly supported by Ollier and other French writers that growing pains in children were the clinical expression of small hæmorrhages and trabecular fractures in those soft tissues. In conditions of latent pyæmia micro-organisms were supposed to circulate in the blood and if these escaped into the hæmatoma suppuration was liable to follow Two specimens were shown exhibiting small hæmorrhages in the epiphyseal line of the femora of patients who had not exhibited any sign or symptom of their presence before death, one, however, had leukæmia. Mr Barnard then endeavoured to explain the clinical varieties of infective osteitis—i.e., osteomyelitis, epiphysitis, and periostitis—by the position of the original lesion It was claimed that central lesions caused osteomyelitis, peripheral lesions periostitis and intermediate lesions epiphysitis.—Dr O F F GRÜNBAUM considered that there was positive evidence of the frequent existence of micrococci in the blood in many conditions and it was difficult to understand why suppuration did not occur more often than it did.—Mr. GODLEE asked for further information with regard to the hæmorrhages occurring in the epiphyseal line and as to their frequency in the post-mortem room. He mentioned the case of a youth who fell and struck himself in several places, in each of which an abscess subsequently developed.—Dr W S. LAZARUS BARLOW criticised the relation of growing pains to affections of the epiphysis. He stated that the high vascularity of the epiphyses would have led the observer to think that they would be less subject to infection than other tissues.—Mr. S. G. SHATTOCK asked whether every case of acute infective periostitis arose in the epiphyseal line He quoted some recent work on tuberculous infection of the bones and joints in which red marrow was regarded as the chief seat of infection.—Mr BARNARD replied.

Dr GRÜNBAUM showed the Cast of a Stomach vomited by a child, aged three years. The cast represented a complete lining of the stomach and consisted of a fibrinous network in which blood cells were entwined. Microscopically the only organisms found were staphylococci arranged in pairs. No bacilli were seen. This was contrasted with a cast removed from the pyloric end of the stomach of a child who had died from diphtheria in which case the pseudo-membrane was swarming with bacilli which had the form and arrangement suggestive of diphtheria bacilli. Attention was drawn to the fact that the membrane was vomited in two pieces, an interval of 18 hours separating the appearance of the first piece, which was the larger and which was from the cardiac end from the second piece, which was obviously from the pyloric end. This, said Dr Grünbaum was what might be expected from the fact that the majority of oxyntic cells were at the cardiac end and a certain degree of acidity would be required to loosen the pseudo-membrane from the gastric mucosa. The temperature of the child was subnormal during the illness the knee-jerks were absent and albuminuria was slight. After a rational rectal diet for ten days the stomach became tolerant and an uninterrupted recovery ensued.

Dr. T CHURTON showed a Pancreas in which there was complete Atrophy of the Epithelial Elements. The duct was lined with small calculi. The patient was a man, aged 41 years who had begun to lose flesh and strength three years before. Sugar was found in the urine when first examined one year before. The wasting of muscles was extreme but he was active until a few days before his death and perfectly conscious to the last hour There was never acetonuria. The quantity of urine was not great—from 80 to 100 ounces daily, the specific gravity was from 1023 to 1035. The quantity of sugar was from 1000 to 3000 grains and that of urea was from 300 to 550 grains There was no redness of the face or tongue, the sugar discharge was not lessened by codeia. The patient had been a furnace-man in an iron foundry and habitually drank cold water, even in winter when heated at work. He showed some signs of premature senility thick radial arteries and inelastic costal cartilages with deficient lateral expansion of the chest.—Dr JOHN F H. BROADBENT mentioned three cases of atrophy of the pancreas which he had recently seen. Two of these were in alcoholic subjects who had cirrhosis of the liver, the third was in a young individual with rapid wasting and glycosuria.—Dr CHURTON in reply quoted Lancereaux's statement that every case of diabetes in a lean person was pancreatic in origin. He doubted this statement as some of the nervous cases of diabetes also showed marked wasting

Mr. T W P LAWRENCE and Dr H. BATTY SHAW showed a specimen of Stenosis of the Superior Vena Cava below its junction with the Vena Azygos Major and also of the Right Pulmonary Vein. The specimen was found in a patient, aged 36 years. Five years before death he began to suffer from palpitation, dizziness faintness, dyspnœa, and hæmoptysis, he was sick after each meal and was thought to be suffering from phthisis. After about three months treatment he improved so much that he was able to resume his duties A second attack occurred 18 months after the first one and the same symptoms supervened, in addition the face had become very swollen and large veins had developed in the front of the chest and abdomen. A right-sided serous pleural effusion was found which recurred after aspiration. No further aspiration was performed and he was sent to convalesce in the country He improved somewhat and later was treated with potassium iodide, presumably because he had contracted syphilis 15 years before the onset of his first attack. He was, however, unable to return to work for the next 18 months, but in the summer of last year he was able to resume light duty in the City At this period he could not lace his boots owing to the dyspnœa produced by stooping, he was often sick after meals, and he rested at night propped up against pillows. In December, 1902, he was suddenly seized with great pain in his chest and was admitted to University College Hospital under the care of Dr J R. Bradford. Whilst in the hospital he grew steadily worse and he died on Dec. 30th, the œdema, which had been confined to the upper part of the body, spread to the abdomen and legs, there was a return of right pleural effusion, and the veins in the front of the body were very much dilated and filled from above downwards. At the necropsy the portion of the superior vena cava reaching from its junction with the vena azygos major to the auricle was found to be converted into a thick cord through which a small probe could be passed with difficulty, showing that the lumen was not quite obliterated. The entrance of the superior vena cava into the auricle was marked by dense white scar tissue. The single right pulmonary vein showed an annular stenosis where it was involved in an indurated mass, which also caused considerable thickening of the anterior wall of the left auricle, the anterior and upper part of the septum auricularum, and the inner wall of the right auricle. This mass of indurated tissue was continuous with that already noticed at the lower end of the superior vena cava. There were pericardial adhesions at the base of the heart and the right orifice of the transverse sinus of the pericardium was closed by adhesions. There was a further occlusion of the sinus transversalis towards its left end so that a closed cavity was formed of the right portion of the sinus Its wall was thick and composed of dense fibrous tissue, its inner surface was of a dull red colour and was coated with a loosely adherent inflammatory exudation of a purely fibrinous character The rest of the heart was normal. Both lungs were free from any sign of tuberculous disease and the mass of indurated structures above mentioned was continuous with the thickened pleura overlying the right lung and attaching the organ to the pericardium and chest wall and forming in the latter case an interpleural cavity from which a thin turbid fluid was removed. On section the right lung showed consolidation and collapse, the left lung being normal. The areolar tissue of the mediastinum was normal except where it was in relation with the pulmonary adhesions and the induration around the great veins above described, in these situations it was thickened, but there was no general chronic indurative mediastinitis. The case should apparently be classified as one of indurative mediastino-pericarditis, but it presented the peculiarity of being one in

"Medical Jurisprudence," quotes several cases, including one mentioned by Stanelli, very similar to the above. Fracture of the lower jaw in utero due to external violence applied to the mother seems to be of excessively rare occurrence.

Huddersfield

A NOTE ON THE CULTIVATION OF ANAEROBIC BACTERIA.

BY H. S FREMLIN, M R C S ENG, L R C P LOND

PLATE culture of bacteria under strictly anaerobic conditions by means of hydrogen is attended with considerable difficulty, as I have already shown in a paper on this subject.[1] On further experiments in anaerobic plate culture I have found that alkaline pyrogallic solution is much more satisfactory than hydrogen, if only a suitable apparatus be employed After several attempts I have devised such apparatus It consists of a circular glass chamber with a lid and is sufficiently large to hold an ordinary three and a half inch Petri dish. This chamber, which is five inches in diameter and one inch in depth, has a wide rim carefully ground. The lid of the chamber is flat and is ground at the margin so that when closed the ground surfaces of the lid and of the chamber are in accurate apposition In placing a Petri dish containing the inoculated medium within this chamber it is an advantage that the inoculated plate be put into another glass dish (as, for instance, the lid of a Petri dish) in order to prevent any splashing of the culture medium, or discolouration of the plate containing it, by the pyrogallic solution contained in the chamber The lid of the chamber must be well smeared with vaseline so that the apparatus is efficiently sealed after the lid has been applied The amount of pyrogallic solution required is the same as that ordinarily used for the cultivation of anaerobic bacteria in a Buchner tube Two tests, a chemical and a bacteriological, are applicable for ascertaining that anaerobic conditions have been secured and maintained in the apparatus. As a chemical reagent methylene blue may confidently be used. When the abstraction of oxygen is complete within such chamber as that described culture media contained in it that have been coloured with methylene blue become decolourised. For the bacteriological test bacillus tetani, as a strict anaerobic organism, may be relied on. The chamber in question is quite as suitable for plates that have been kept under aerobic conditions for some days as for plates just set up, the oxygen is extracted from the medium equally well in both cases A detailed account of this method will be found in the forthcoming report of the medical officer of the Local Government Board

Government Lymph Laboratories Chelsea Bridge S W

A NOTE ON A CASE OF BILATERAL LOCAL HYPERIDROSIS

BY G NORMAN MEACHEN, M D B S LOND, M.R.C P LOND, M R C P EDIN,

PHYSICIAN TO THE SKIN DEPARTMENT, TOTTENHAM HOSPITAL N

A BOY, aged 14 years attended at the out-patients' department of the Tottenham Hospital with an irritative dermatitis of the skin over the abdomen due to pediculi when it was accidentally discovered that beads of sweat were standing out upon the tip of his nose On closer inspection the hyperidrosis was seen to be limited to the integument over the dorsum of the tip of the nose and to the two alæ nasi, corresponding to the distribution of the external terminal branches of the nasal and maxillary division of the fifth nerves of both sides The sweating area was slightly erythematous and covered with numerous small telangiectases The skin over the bridge of the nose, as well as that of the rest of the face, was quite dry The condition had been noticed for a year and was practically constant, being apparently uninfluenced by emotional or meteorological changes. He had had no previous illnesses There were no other cutaneous abnormalities present and the other systems of the body were normal.

The chief interest of this case lies in the unusual situation for a local hyperidrosis, its bilateral character, its persistence, and the absence of any apparent cause, such as neurosis or a nerve lesion

New Cavendish street, W

A NOTE ON THE USE OF CARBOLIC ACID IN THE TREATMENT OF SMALL-POX.

BY JAMES T NEECH, M D DURH., D P H. VICT,

MEDICAL OFFICER OF HEALTH AND MEDICAL SUPERINTENDENT OF THE BOROUGH FEVER HOSPITALS, HALIFAX

ALTHOUGH it appears that various local applications have been used in the treatment of small pox, and among them dilute carbolic acid, I can find no record of the pure acid ever having been used for that purpose. The use of the acid when applied early in arresting the development of boils and the excellent results I have obtained in the past in the treatment of certain pustular eruptions of the skin led me to think of trying it in this disease This idea struck me at least two years ago but I never had the opportunity of trying it till recently The very limited experience I have had of it so far is so encouraging and in one case I think so remarkable that I determined to make a few remarks on the matter that others who have a much larger number of cases of this disease under their care may try this remedy if they think fit to do so The method adopted was to apply carefully with a small camel hair brush the pure acid to the rash over a certain area of the body each day, the face and head being the area selected for the first day

The first case so treated was that of a girl, aged 12 years It was the seventh day of the eruption—viz, Jan. 24th—and the vesicles were beginning to become pustular The result was that the vesicles either dried up into crusts without becoming fully pustular, or, as happened in many cases, the contents of the vesicles became absorbed and the epidermis inclosing the vesicle scaled off. During this process the girl, who had been very ill, felt well and her temperature was normal The vesicles all scaled off within five days, leaving the usual marks but no pitting

The second case was that of a male, aged 54 years, and the disease was confluent In this case there was a diffuse red rash all over the body and the face was swollen to such an extent that he was scarcely able to see. There was also delirium It was impossible to apply the carbolic acid in consequence of the character of the rash until the vesicles appeared, which they did on Jan 28th, when the application to them of the acid was commenced as before over the face and head This treatment was assiduously persisted in till the rash over the whole body had been treated, with the result that pustulation was averted The swelling of the face gradually subsided and the man improved daily, the temperature first falling to normal on the morning of Feb 2nd In this case also after treatment the serum in the vesicles either exuded and dried up into scabs or became absorbed and the epidermis peeled off

The same treatment has been applied to two other mild cases in different stages and as far as one can judge from so limited an experience the application of carbolic acid will arrest the disease either in the papular, vesicular, or pustular stage. The second case recorded above was severe and confluent. The treatment cut short the disease, the second suppurative fever was averted there will be no pitting, and the offensiveness of the pustular stage was prevented, and in my opinion the infectiousness of the patient was very materially diminished In conclusion I have to acknowledge the valuable assistance which Mr C G Foggo rendered me in carrying out the treatment and in watching the cases

Halifax

TAUNTON AND SOMERSET HOSPITAL — The annual meeting of the governors of this institution was held on Feb 11th. The medical report stated that 901 in patients were admitted during 1902, compared with 824 in 1901. The out-patients numbered 4311, against 3968 in the preceding year The financial statement showed that the income amounted to £4771 and the expenditure to £4958, leaving an unfavourable balance of £187 The donations received during the year included £200 from Mr Proctor Baker who was elected president for the ensuing year been able to accomplish even in the post-mortem room.—Mr SPENCER replied that he was, of course contemplating cases in which the ligaments of the joints were more or less disorganised and relaxed and he agreed that it would hardly be practicable in a normal joint.—Mr SHEILD added that in all his cases the joint was distended with turbid serum containing large flakes and lumps of purulent lymph rich in gonococci

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[1] See Report of Medical Officer of the Local Government Board 1900–01, pp 617-619

Dr A. STANLEY BARNES (introduced by Sir WILLIAM GOWERS) read the notes of a case of "Local Panatrophy" which he (Dr Barnes) believed in its clinical relationships lay midway between the case shown by Dr Harry Campbell on Oct. 24th, 1902,[1] and that exhibited by Dr T D Savill on Jan. 23rd, 1903,[2] at that society The patient at the age of 24 years was thrown from a horse and at 25 years fell on the back of her head whilst skating At the age of 32 years she first began to have facial neuralgia, and at 34 years she noticed a difficulty in raising the left arm. She was seen about that time (1884) by Sir W Gowers who found atrophy around the shoulder and in numerous other places on the surface of the body At the present time, the patient now being 52 years of age, patches of atrophic skin were to be found on the face and in many other situations. There was also a partial right facial palsy, possibly due to implication of the facial nerve in one of the atrophic patches. Over the largest of the patches the subcutaneous tissue and the muscle were wasted, and in one patch the subjacent bone was also atrophied. The skin was soft, thin, and devoid of hairs, there was no anæsthesia, and there was no reaction of degeneration in the muscle beneath. —Dr T D SAVILL remarked on the interest of the case which, like the cases exhibited by Dr Harry Campbell and by himself, he regarded as belonging to the class of morphœa atrophica described by the late Sir Erasmus Wilson The atrophy might be very considerable and involve the subjacent tissues He (Dr Savill) had lately seen a patient in whom the patches, at first resembling morphœa lardacea (sclerodermia) had after eight years become atrophic like those under consideration The history of injury and neuralgia in Dr Barnes's case tended to confirm the idea that the disease was of neurotrophic origin.—Dr POORE alluded to a patient under his care who presented patches of atrophic skin on different parts of the body, evidently of the same nature as those described and who also exhibited curious recurrent patches of local dilatation of the blood vessels on the fingers.—Dr BARNES, in reply, stated that no evidence of vascular disturbance had been discovered in this case. The neuralgia from which the patient suffered was bilateral. He adhered to his statement that the patient was suffering from paralysis of the face and gave his reasons for that belief There was a total absence of any sclerosing tendency in the skin lesions.

OBSTETRICAL SOCIETY OF LONDON

Fœtal Ascites —Profuse Meningeal Hæmorrhage during Labour —Primary Carcinoma of the Fallopian Tube —Sarcoma of the Ovary —Exhibition of Specimens —Reports of Officers —Presidential Address

THE annual meeting of this society was held on Feb 4th, Dr PETER HORROCKS, the President, being in the chair

Dr T W EDEN showed a specimen of Fœtal Ascites The patient, aged 18 years, was admitted to one of the workhouse infirmaries in London on Jan 17th, 1903, having then been for some hours in labour On admission it was noted that the external os was of about the size of half a-crown, the membranes were ruptured and the presentation was a footling Pregnancy had advanced to about the end of the eighth month. The progress of the labour was very slow, and on the morning of the 18th one drachm of liquid extract of ergot with one ounce of brandy was given and repeated twice during the course of the day At 8 P M the foot of the child was found in the vagina in the words of the medical attendant "quite black and putrid.' Traction upon the limb was made to deliver the breech but the foot separated at the ankle The remainder of the limb was then seized, but it soon separated at the hip-joint. Traction upon the other leg failed in the same way Then an attempt to seize the breech was made with a pair of craniotomy forceps, but 'every time traction was made they came away with a piece of putrid skin." Being unable to make out the cause of obstruction, the medical attendant sent for assistance. A distended abdomen was found to form the presenting part and to be the cause of the obstruction to delivery It was opened with a pair of scissors, and between two and three quarts of thin yellowish fluid escaped The body of the child was delivered naturally within a few minutes The placenta was adherent and had to be removed by the fingers. The body of the fœtus showed marked signs of maceration On laying the abdomen open the peritoneal cavity was seen to be enormously enlarged, the liver the stomach and the intestines were crowded into the vault of the diaphragm, there were neither peritoneal adhesions nor any signs of peritonitis in any part. The heart was normal, there was no distension of the ureters, and the kidneys were normal. The liver and portal circulation appeared to be normal. There was no syphilitic history The cause of the ascites was obscure. The mother made a good recovery —Dr HERBERT R. SPENCER had met with about six cases of fœtal ascites In some of these the amount of fluid was small but there was a large amount of lymph binding the intestines together and the absence of any obvious cause for this peritonitis and the presence of bone disease and the history had led him to think that in these cases the ascites was due to syphilis —Dr E. MALINS was inclined to think that syphilis was adduced generally in the absence of other known or ascertained causes

Dr A. W SIKES brought forward a short communication on a case of Profuse Meningeal Hæmorrhage during Labour and this was discussed by Dr SPENCER and the PRESIDENT

Dr H. RUSSELL ANDREWS read the notes of a case of Primary Carcinoma of the Fallopian Tube, and some interesting points in regard to the disease were brought forward by Mr ALBAN H. G DORAN and Dr J INGLIS PARSONS.

Dr PARSONS read the notes of an unusual case of Sarcoma of the Ovary

Mr HANDLEY showed a specimen of a Solitary Interstitial Fibroid removed by abdominal myomectomy

Dr SPENCER exhibited Kurz s ingenious Needle Holder

The reports of the treasurer, of the librarian, and of the chairman of the Board for the Examination of Midwives were then received and ordered to be printed in the Transactions of the society, the different officers being thanked for their services.

The PRESIDENT, in delivering his address, referred to the passing of a law whereby legally qualified ladies were made eligible for the Fellowship of the society and the names of ten ladies who had been elected during the past year were given It was also pointed out that a new rule had been made to enable authors of papers to have their work published in journals other than in the Transactions of the society if they so desired. The financial condition of the society was satisfactory Now that the Midwives Act had been passed the necessity for continuing the examination held for midwives by this society would shortly cease to exist Dr F H. Champneys was congratulated on being elected chairman of the first board appointed by the State and the State was to be congratulated on having secured the services of one who knew the work so well and who was second to none in ability for organising the new State examinations on a thoroughly satisfactory basis. The new pathological committee, instituted 12 months ago, had done excellent work. Allusion was made to the excellent material provided by the exhibition of 59 specimens during the past year Nine papers had also been read during the year, and a brief *résumé* of each paper was given, the salient points of each subject being commented upon together with the general opinions which were given during the discussions. Obituary notices of Fellows who had died during the preceding year were given—namely, of Mr John Griffith Lock of Tenby, of Mr John James Tweed of London, of Dr Thomas Robert Lombe of Torquay, who was elected a Fellow in the year of the foundation of the society 1859, of Mr James Neal of Birmingham, and of Dr Henry Oldham, consulting obstetric physician to Guy s Hospital. Dr Oldham was one of the first vice-presidents of the society and was its third President and its second treasurer and one of its first three trustees He held the latter post up to his death, that is, for a period of over 40 years. Dr Champneys had been appointed in his stead Dr Oldham was appointed obstetric physician to Guy's Hospital at the same time as was Dr Lever He was one of the best lecturers that Guy's Hospital ever had Interesting details of his life were given, obtained from Sir Samuel Wilks, Dr Constantine Holman, Colonel which the change was markedly localised, and in view of the previous history of syphilis the possibility presented itself of the disease having originated in a gumma around the great veins of the heart.—Dr A. E GARROD stated that most of the recorded cases of indurative mediastinitis were associated with right-sided pleurisy He referred to a case recorded by Sir Dyce Duckworth and himself of total occlusion of the superior vena cava, an interesting feature of which was that there was no swelling of the head or neck He also referred to another case of narrowing of the superior vena cava with swelling of the head and neck.

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[1] THE LANCET Nov 1st 1902, p 1196

[2] THE LANCET Jan 31st 1903 p 303.

Dr E P BAUMANN and Dr F A. BAINBRIDGE showed a specimen of Primary Sarcoma of the Lung from a girl, aged three years and 11 months, who was admitted into the Hospital for Sick Children, Great Ormond street, under the care of Dr D B Lees on June 30th, 1902, as a case of empyema. The illness had begun six weeks before with headache and abdominal pain and during its course the child had become greatly emaciated, a cough developed and several attacks of hæmoptysis occurred. The past history and family history were unimportant On admission the case appeared to be a clear one of effusion into the left pleura, with dulness over the whole left side of the chest and absence or deficiency of the breath and voice sounds, bulging of the intercostal spaces, and displacement of the heart to the right. The temperature was 101 4° F, the pulse was 132, and the respirations were 68 Repeated aspirations and an exploratory incision resulted only in the withdrawal of a little blood stained fluid containing on one occasion fragments of cheesy débris, these gave negative results on examination for malignant disease, tubercle, and other organisms The temperature remained high and irregular The child became rapidly worse and death occurred on July 12th, a fortnight after admission The whole duration of the illness was eight weeks. At the necropsy the upper lobe of the left lung was found replaced by a soft growth which microscopic examination showed to be a sarcoma. The lower lobe was collapsed and firm, but showed no traces of the new growth The left pleura was adherent and thickened but was not invaded by the growth. The bronchial and mesenteric glands presented a healthy appearance and no other tissues or organs were involved The post-mortem records of the Hospital for Sick Children from January, 1860, to the present day did not furnish a single other instance of the occurrence of primary sarcoma of the lungs

Mr GODLEE showed a card specimen of Traumatic Rupture of a Bronchus without Fracture of the Ribs or other Inter thoracic Injury

CLINICAL SOCIETY OF LONDON

The Drainage of the Knee joint in Acute Suppurative Arthritis —A Case of "Local Panatrophy"

A MEETING of this society was held on Feb 13th, Dr G VIVIAN POORE, a Vice President, being in the chair

Mr H L. BARNARD communicated a paper on the Drainage of the Knee joint in Acute Suppurative Arthritis, illustrated by nine cases He commenced by considering various operative procedures which had been adopted from time to time such as those of the late Mr Walter Rivington and Mr Walter Whitehead Mr Barnard pointed out that few cavities of the body were so difficult to drain as the knee joint The usual method by lateral anterior incisions drained only the anterior half of the joint The anatomy of the knee joint showed two capacious pouches behind which reached above the condyles posteriorly where they were covered by the heads of the gastrocnemius They were separated from one another by a complete septum formed by the crucial and other ligaments The external pouch sent a bursal extension down the leg along the tendon of the popliteus. When the knee-joint was extended these two pouches were shut off from the front of the joint by the tight coaptation of the femur and tibia. When distended with pus they ruptured into the depths of the popliteal space, where the sepsis was liable to involve the vein. The abscess then tracked down the calf and up the thigh making drainage of both tracks almost impossible. The pouches should be freely opened by two inch incisions in the line of the leg made by cutting on the condyles where they could be felt projecting on either side of the popliteal space when the leg was fully extended. In order not to wound nerves, when the skin had been divided a blunt instrument should be used to scrape down to the capsule which might then be freely divided with the knife. The knee was then flexed to relax the structures and tubes were inserted on each side. In eight of the nine cases treated by this method the temperature fell to normal in from 36 hours to a week. Massage — downward in front and upward behind — greatly assisted the evacuation of pus from the deep pockets. The nine cases given in the paper were consecutive The four traumatic cases gave the best results Two had good movement, one had some movement, and one had fibrous ankylosis. The five cases of auto-infection were less satisfactory, two were amputated, one for feeble repair and persistent sinuses, in an old woman, aged 65 years, and the other for a tuberculous cavity in the end of the femur infected with erysipelas Two cases apparently due to leucorrhœa were most unsatisfactory It was claimed that the method of posterior drainage would cope successfully with the immediate dangers of sepsis The final condition of the joint depended rather on the cause of the suppuration Subacute cases of suppurative arthritis of the knee due to auto infection should be treated by the usual lateral patellar incisions and irrigation —Mr W G SPENCER observed with regard to the posterior pouches of the joint that if they were opened from behind there was much more danger of injuring the popliteal nerves than if opened by cutting down upon a probe or sinus forceps Discussing the merits of the open method he related a case on the verge of delirium tremens in which an injury to the knee joint was followed by necrosis of the patella and suppuration In this case he opened the joint freely and recovery ultimately followed with the joint ankylosed in the middle position. He regarded the open method as a preferable alternative in cases that would otherwise have to be treated by amputation.—Mr H. H. CLUTTON advocated small lateral incisions and washing out the joint, followed by immediate suture, a method which had given excellent results in a number of cases usually treated by more energetic measures The joint could be digitally examined. The infecting microbe could be investigated He thought that some of Mr Barnard's cases, although acute, might have been treated in this way Acute cases had been very satisfactorily treated by this method.—Mr A. MARMADUKE SHEILD remarked that the pouches of the knee joint were very inconstant in their position and communications He also claimed that the good results related by Mr Barnard were not confined to the London Hospital but that elsewhere acute suppurative arthritis was generally recovered from with movement of the joint, especially in young and otherwise favourable cases Age was an important factor He referred to five cases of his own of acute gonorrhœal infection of the knee joint treated by one incision on the inner side of the patella and flushing with a solution of biniodide of mercury, the wound being closed at once, with very good results In four complete, and in the fifth almost complete, movement was obtained. He recalled the striking results obtained by Dr J O Conor of Buenos Ayres with this method of treatment. This surgeon, indeed, went a step further, for he treated in the same way joints with what was generally described as rheumatic effusion but which in many instances were obviously nothing of the kind, being of the nature of a pyæmic infection such as occurred in puerperal women and after neglected abortion Similar septic suppuration was met with in servants who lived in badly drained houses. Mr Sheild thought that in some cases drainage might be done advantageously through posterior incisions but advocated the employment of large tubes with thorough irrigation of biniodide of mercury solution (1 in 1000) —Mr F C WALLIS referred to three cases of gonorrhœal effusion into the joint which he had opened and washed out with normal saline solution with extremely satisfactory results, in that the patients recovered with perfectly moveable joints He did not think that it was good practice to wash out the joint with strong antiseptic solutions, which tended to irritate further the synovial membrane.—Mr BARNARD, in reply, pointed out that he only advocated the posterior incisions in very severe cases, especially in cases of suppurating wounds of the knee or wired patella cases which went wrong He asked Mr Sheild whether there was pus in all his cases, in view of the fact that the great majority of these cases got well without any incision at all. He asked Mr Spencer whether he or anyone had ever succeeded in introducing a probe or sinus forceps into the posterior pouches from the front, a feat which he himself had never of the operation was much less frequent now than it was in the old days, partly because anæsthetics abolished pain which was an important factor in the causation of shock, and partly because they protected the central nervous system from receiving impressions of the serious damage which was being done to the tissues by the operation Shock was a reflex phenomenon, but the relation of anæsthetics to shock differed from their relation to the other reflexes in that whereas they could only abolish the latter they could both abolish and also produce shock or a condition exactly resembling it. Dr Blumfeld was of opinion that since both shock and deep chloroformisation were characterised by a marked fall in blood pressure a deep degree of anæsthesia should as far as possible be avoided in operations upon patients already suffering from shock or likely to suffer from it as a result of the operation. There was, however, no evidence to show that ether produced shock in the same way as chloroform although it often gave rise to collapse after a prolonged administration of large doses in the kind of case referred to The surgeon was apt to forget the immense importance of economising the time during which parts of the body such as the bowels, for instance, were being subjected to manipulation, for the longer such procedures lasted the more easily was shock induced. The purely nervous element had also to be taken into consideration and added greatly to the difficulty of determining the cause of shock. Dr Blumfeld here quoted undoubted cases of shock from nervous influence. In a letter on the Surgical Treatment of Perforated Typhoid Ulcer,' published in THE LANCET of Jan. 17th, p 199 Mr H. J Curtis had raised the question of anæsthetics and had advocated the use of local anæsthesia, assuming an extra danger from general anæsthesia in these cases. Dr Blumfeld believed that the society was not prepared to admit this assumption but that it was in a position to say with regard to such cases that if an operation must be performed there was less danger in performing it if a general anæsthetic were properly given than there was in performing it without one.—Mr Curtis said that if the perforation were doubtful and an exploratory operation were undertaken he preferred local analgesia, but if the perforation were undoubted then a general anæsthetic was much to be preferred, and he merely suggested local anæsthesia as a compromise in those cases where it was thought that a patient ought to have the benefit of the doubt of an exploratory operation, but where the intrinsic risk of a general anæsthetic had to be avoided. He had seen Cæsarean section performed under local anæsthesia with no pain or trouble except when the vessels were caught in the clip forceps.—Mrs F M. Dickinson Berry M D, and Miss L B Aldrich Blake, M.D, said that they had seen many operations for goitre performed under local anæsthesia without any symptom of shock.—Mr H O Crouch was emphatically of opinion that shock was far more likely to supervene under light than under deep anæsthesia, that his practice was to push the anæsthetic to its fullest extent, and that he taught that fall of blood pressure from chloroform was much less dangerous than fall of blood pressure from shock.—Dr Harold Low said he constantly observed that when the fear of the operation which caused symptoms of shock, was removed by the administration of an anæsthetic the patient's condition markedly improved and the symptoms of shock disappeared, this was especially the case under ether —The President said that after an experience of 25 years he felt that there were cases in which shock was produced under light anæsthesia and also cases in which the shock was more marked under profound anæsthesia. Each case had to be treated according to circumstances.—Dr James Maughan reported a case of Death following the Administration of Nitrous Oxide. The patient was a young woman who was suffering from tonsillitis but in whom the constitutional symptoms were marked and the pulse rate was out of all proportion to the physical signs Dr Maughan administered nitrous oxide as she would not allow him to incise the tonsil without an anæsthetic. She was placed in an easy chair in her nightdress with a prop between the teeth Anæsthesia was quietly induced to the stage of loss of light reflex, two breaths of air having been given with the gas. At this point the face-piece was removed but precisely at this moment the patient was observed to have stopped breathing She was immediately placed on the floor with the forceps upon the tongue, Howard's method of artificial respiration was tried for about 15 seconds, ammonia being held to the nose meanwhile, but no air entered, no further time was therefore lost, Dr Maughan promptly performing laryngo-tracheotomy, when a full deep inspiration was taken, the lips and cheeks quickly returning to their normal colour The corneal and conjunctival reflexes were, however, absent and never returned. The radial pulse was small, quick, and barely perceptible, the respirations were about 12 per minute and so continued for 15 minutes when the intervals began to enlarge and the inspirations to become shallow The breathing became more and more irregular during the next ten minutes when the patient died, the pulse during the last ten minutes of life becoming imperceptible at the wrist, although the heart sounds could be heard up to the last moment. The post-mortem examination revealed nothing beyond extensive angina Ludovici and some œdema of the glottis The mitral orifice of the heart was rather smaller than normal but there was no evidence of structural damage either recent or remote Dr Maughan was at a loss to explain the cause of death since the tracheotomy prolonged life for 19 minutes, he therefore asked for the opinion of the society He regretted that he had not used a local or a very light chloroform anæsthesia, but he thought that in a rapidly progressive disease of this kind affecting the respiratory organs no anæsthetic could be deemed harmless —Dr R. J Probyn Williams agreed that in such circumstances nitrous oxide gas was certainly not harmless, but in this case he could not see that the death was due to the gas since the patient lived for 19 minutes after the administration was stopped and the air way was rendered clear by the operation of tracheotomy —Dr Low related a similar case in which he had been called upon to give chloroform, he was using the lightest possible degree of anæsthesia but the patient became so ill that he stopped the administration and the patient recovered sufficiently to be able to answer questions, only to die a few moments later He pointed out that if this patient had not spoken the death would have been attributed to the chloroform.—The President agreed that the case could not be attributed solely to the anæsthetic, and there was no doubt that the patients in these acute cases of septic throat died very suddenly He could not see what more Dr Maughan could have done for the patient. He thought that probably the true explanation was that the patient died from heart failure due primarily to the septic infection but hastened by the anæsthetic.

MANCHESTER MEDICAL SOCIETY —A meeting of this society was held on Feb 4th.—Dr A M. Edge delivered his Presidential Address on Diagnosis and Some of its Difficulties After some preliminary observations the President commented on the necessity, when examining a case, of using the knowledge which might be gained by careful observation of the patient's expression, attitude, &c. He deprecated having recourse to bacteriological methods of diagnosis until a thorough examination of the patient had been made and an opinion had been formed thereon. An exception was made however, in the case of suspicious sore-throats, in which he advised an examination for Löffler's bacillus at the earliest possible moment. He went on to say that the term "diagnosis" when used in its widest sense included etiology, prognosis, and treatment and he gave illustrations in support of the statement. Some of the causes of failure in diagnosis were then enumerated, such as absence of previous history, haste, carelessness, and attaching too much importance to a single symptom Incomplete diagnoses were also referred to and several cases were mentioned as instances But after excluding all such causes of difficulty and failure the President stated that there would always remain a large number of cases in which diagnosis was frequently impossible from their very nature, giving as an example the group of affections termed, from an important symptom, obstruction of the bowels. The President concluded by a reference to the wonderful advance in diagnostic methods which had occurred during the last quarter of the nineteenth century —Dr P H. Mules communicated a paper on Some Toxins in their Relation to the Eye and its Appendages. The following cases were described. 1. A case of Retro-bulbar Neuritis with complete blindness of the right eye of a young woman aged 28 years, who 19 years previously had suddenly and persistently lost her hearing on the same side. The toxins of inherited syphilis were considered to be the cause Mercurial inunction and full doses of quinine were followed by return of the vision to J 1 and $\frac{6}{12}$ but there was persistent disc pallor The hearing returned to one fourth of

Oldham (his surviving son), and others Thanks were given to the senior honorary secretaries, Dr Spencer and Dr Amand J M. Routh, who had greatly assisted the President during his first and second years of office respectively

A vote of thanks to the President was moved by Mrs. M. A. D SCHARLIEB and seconded by Mr DORAN and carried unanimously

The list of officers for 1903 recommended by the council was read

A vote of thanks to the retiring vice president and members of the council was moved by Dr C HUBERT ROBERTS and seconded by Dr F G BLACKER.

Dr C J CULLINGWORTH moved and Dr EDEN seconded, that the cordial thanks of the meeting be given to Mr Doran for his valuable services to the society as editor of the Transactions, which office he had now resigned

This was carried with acclamation and was acknowledged by Mr DORAN

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM

Tuberculosis of the Ear, the Nose, and the Naso pharynx

A MEETING of this society was held on Feb 2nd, Dr URBAN PRITCHARD, the President, being in the chair A discussion on Tuberculosis of the Ear, the Nose, and the Naso-pharynx was opened with papers by Dr V H. WYATT WINGRAVE Dr W JOBSON HORNE, and Dr W MILLIGAN

Dr WYATT WINGRAVE read a report upon the Microscopical Examination of the Discharge in 100 cases of Middle ear Suppuration, with an Analysis of the Results, having special reference to the presence of tubercle and "acid fast" bacilli. He arrived at the following conclusions (1) that acid- and alcohol-fast bacilli were demonstrable in a large proportion of chronic purulent ear discharges, (2) that in 17 cases they were presumably tubercle bacilli, in so far that they conformed to the recognised morphological and staining characters, and were for the most part associated with trustworthy clinical evidence of tuberculosis, (3) that in seven (pseudo-tubercle bacilli) cases, while conforming in a greater or less degree to the staining requirements, they were morphologically unlike tubercle bacilli, yet five of them had either a family or personal history of phthisis, (4) that success in their demonstration in a great measure depended upon the methods of collecting and staining together with perseverance in search, and (5) that in the peculiar selective action of the squames—a property specially attributed to certain bacilli—they had a possible source of error in diagnosis and an explanation of the peculiar affinity of other bacilli for fuchsin.

Dr JOBSON HORNE read a paper on the Clinical Diagnosis and Surgical Treatment of Tuberculosis of the Temporal Bone considered with reference to the Pathology and Morbid Anatomy of the Disease. The paper so far as it related to the clinical diagnosis, after taking into account the characteristic features of tuberculosis of the ear dealt mainly with two points (1) the value to be attached to circumstantial evidence in the absence of positive proof of the nature of the disease, and (2) the necessity for discriminating between primary and secondary infection of the ear The surgical measures and the limitations to be put upon such measures were to be decided by ascertaining this second point. Caution was expressed against regarding suppurative disease of the middle ear occurring in a tuberculous subject as necessarily tuberculous in nature. It was held that the detection of the bacillus tuberculosis was the only proof positive of the disease being tuberculosis The existence of a group of 'acid fast" bacilli other than the bacillus tuberculosis did not invalidate the microscopic diagnosis of the disease, provided the ordinary requirements of bacterioscopic technique were complied with Negative evidence was of no value, failure to detect the bacillus tuberculosis did not prove the disease to be non tuberculous nor did it disprove the possibility of it being tuberculous. The difficulty in detecting the bacillus in the discharge was discussed A theory was advanced which would at once explain both this difficulty and a well known clinical feature of the disease—absence of pain and also the correlation of these two clinical phenomena The theory was based upon the fact demonstrated by Dr W Bulloch and Dr J J R Macleod that the "acid fast" property was due to a wax like body in the bacillus and not to a fat, that the wax when broken up set free an alcohol which was an essential factor in the staining property It was suggested that the decomposition of the wax was accountable for the difficulty in detecting the bacilli and the resulting product possessed an anæsthetic property The differential diagnosis between primary and secondary infection could be made partly by the exclusion of tuberculosis existing in other organs, but more particularly by the condition of the glands adjacent to the affected ear, in the primary infection the glands were more often and more extensively involved. As regards treatment, the surgical ablation of disease secondary to pulmonary disease was to be avoided, but in the primary form it was to be undertaken by removing in the first instance the infected glands, the possibility of the occurrence of a blood infection and of death from miliary tuberculosis was to be kept in view

Dr MILLIGAN read a paper on the Diagnosis and Treatment of Tuberculous Disease of the Middle Ear and its Accessory Cavities. The paper dealt fully with the subject and the conclusions arrived at were as follows 1 That in all cases of middle ear disease of suspected tuberculous origin search should be made for tubercle bacilli either in the discharge, in tufts of exuberant granulation tissue, or in enlarged periotic glands. 2. That inoculation experiments (either subcutaneous or intra peritoneal) afforded a ready and trustworthy means of proving or excluding the tuberculous nature of the disease 3 That a final and exact diagnosis was imperative both from the point of view of prognosis and of treatment 4 That tuberculous disease of the middle ear and accessory cavities was a frequent disease amongst infants and young children 5 That the disease was most frequently found as secondary to tuberculous processes in other regions of the body 6 That primary tuberculous disease of the middle ear was probably of more frequent occurrence than was usually supposed 7 That the prognosis was always grave, but that in a certain proportion of cases suitably planned surgical intervention would eradicate the disease 8. That in many cases it was advisable to conduct the operative treatment "in stages" 9 That when less than 10 per cent of hearing power remained no attempt should be made to preserve the organ as an organ of special sense 10 That when more than 10 per cent. of hearing power remained in a patient, in otherwise apparent health, a definite attempt should be made to preserve what amount of hearing power still existed. 11 That where the tuberculous origin of the disease had been scientifically demonstrated the case should be regarded as infectious and precautions taken accordingly

A discussion, in which the PRESIDENT, Mr C A. BALLANCE, Mr A. E CUMBERBATCH, Dr A. L WHITEHEAD, Dr HUGH E. JONES, and Mr A H. CHEATLE took part, was adjourned until March 2nd

SOCIETY OF ANÆSTHETISTS —A meeting of this society was held on Feb 6th, Mr Walter Tyrrell, the President, being in the chair —The President, referring to the case of death following an administration of nitrous oxide gas, a newspaper report of which he read at the last meeting of the society, said that on investigation he had found it to be a death not from nitrous oxide gas but from acute ammonia poisoning, strong ammonia having been held to the nostrils of the patient for about ten minutes after the administration by the dentist who had given the gas, as the patient did not seem to be recovering in the usual way The patient was removed to hospital and died some 13 hours after the administration —Dr Joseph Blumfeld read a paper entitled "The Relation of Anæsthetics to Shock" and said that his object was to raise a discussion upon the question of the part which anæsthetics played in the prevention of shock, he was aware that exactly opposite opinions were held on this point, some observers believing that the shock which was present after certain operations was due entirely to the anæsthetic and others believing that it was due entirely to the operative procedures and would be much worse without the anæsthetic. He also referred to the difference of opinion with regard to shock and the depth of anæsthesia, some anæsthetists holding that shock was more commonly met with in light than in deep anæsthesia and others holding exactly contrary views. In speaking of shock he also included collapse, for both were conditions of prostration in which failure of the circulation played a prominent part. Death from shock thanks to the President for his address, proposed by Dr C H. F Routh and seconded by Mr Jessett, was put to the meeting by Dr Macnaughton Jones and carried by acclamation.

Incorporated Society of Medical Officers of Health.—A meeting of this society was held on Feb. 13th, Dr. Arthur Newsholme, a Vice-President, being in the chair —Dr E W Hope, medical officer of health of Liverpool, opened a discussion upon the Renewal of the Vaccination Act He urged the desirability of transferring the administration of the Vaccination Acts from boards of guardians to sanitary authorities and said it was anomalous that the only certain means of safeguarding the public from the dangers of small pox should not be in the hands of that body which was responsible for the public health. He insisted upon provision being made for an adequate supply of lymph and suggested that depôts should be established in various parts of the country where lymph could be manufactured and supplied On the question of giving false information or withholding information relating to small pox when asked by the proper authority Dr Hope quoted with approval a clause in the Liverpool Corporation Act, 1900, which made the occupier of a house liable to a penalty if he either refused information or gave false information relating to any person resident in the house who was or had been suffering from a dangerous infectious disease.—A series of motions which had been previously discussed at branch meetings and by the council of the society were brought before the meeting and with slight alterations were agreed upon. These resolutions expressed the opinion of the society that every child should be vaccinated before he or she was six months old, that any relief from this requirement should be by empowering magistrates to suspend vaccination for a definite period and not by unlimited exemption as at present, that a renewal of exemption should be applied for when a child reached the age of four years and again when he or she was 12 years old, that revaccination at 12 years should be required, that the Local Government Board should be empowered to require revaccination at an earlier age than 12 years in infected localities, that all "contacts" should be required to be vaccinated or revaccinated forthwith if the medical officer of health considered it necessary, that the administration of the Vaccination Acts should be in the hands of the metropolitan borough councils, the county borough councils, and (except in London) of the county councils, which last authorities should have power to delegate their duties to sanitary authorities, that the Local Government Board should undertake the duties imposed by the Acts in the case of defaulting councils, that a minimum standard of vaccination and revaccination should be prescribed by the Local Government Board, that a form of certificate of vaccination or of revaccination, stating the number, area, and description of marks produced, should *alone* be used by medical practitioners, that calf lymph guaranteed by the Local Government Board should be supplied on demand to every registered medical practitioner, that Government stations for the preparation of vaccine should be established in the provinces, and that all officials under the Vaccination Acts should have fixity of tenure of their offices It was decided to ask the Epidemiological Society and the British Medical Association to join the society in an endeavour to obtain an interview with the President of the Local Government Board with a view to legislation being introduced in the next session of Parliament to secure such powers as those indicated in the above resolutions.—Sir Michael Foster, M P, took part in the discussion and congratulated the society upon not having spent too much time upon the conscientious objector who in some way or other would have to remain. In his opinion the success of the struggle of vaccination against small pox would depend not upon the conscientious objector but upon the improved development of the machinery of vaccination He emphasised the importance of the utmost care being taken to secure the efficiency of the operation and the goodness of the material and said that he believed the greater part of the objections to vaccination came from the careless and imperfect way in which it had been performed

West Kent Medico-Chirurgical Society —The fourth meeting of the forty seventh session of this society was held at the Royal Kent Dispensary, Greenwich road, on Feb 6th, Dr George Herschell, the President, being in the chair —After the election of four new members Mr Charles J Heath read a paper on Operative and Other Treatment of Chronic Suppuration in the Middle Ear After giving briefly the pathology of the various causes of continued suppuration treatment was considered Great stress was laid on the avoidance of syringing the ear and on the importance of drying the ear with suitable wool mops and afterwards passing the fluid remedy right through the ear and Eustachian tube to the naso-pharynx, so that it could be tasted. Under these conditions, and owing to the fact that good results depended on very frequent application of the remedy and therefore that patients must use it at home, he insisted on the use of a non poisonous fluid He used spiritus vini rectificatus and thought that if it were applied in the manner stated and pumped through to the pharynx, using the tragus as the pump, it would cure 30 per cent. of all cases Removal of ossicles and membrane when diseased did not, as a rule, stop the discharge, for generally if the bones were diseased the attic and antrum were also affected and the complete post-aural mastoid operation should be carried out. The presence of granulations and bare bone in the tympanum did not show that the antrum was diseased, cases showing these characters were often rendered healthy and the purulent discharge was entirely stopped by the treatment which he advocated. In referring to the post-aural complete operation on the mastoid, he said that the long canal of the facial nerve was incomplete in three out of ten cases operated on and could be demonstrated by using the probe before any bone was removed by operation, further, knowing the exact position of the nerve it was the surgeon's *duty* to avoid injuring it and he thought that facial paralysis consequent on the operation was almost inexcusable. The locality of the two *fenestræ* should not be curetted, though the remains of the membrane and the two larger ossicles should be removed Tight packing in the tympanum for 24 hours might destroy the hearing and that portion of the cavity should never be packed at all, he advocated the freest drainage and used a large drainage-tube through the split cartilaginous meatus and as an antiseptic application to the cavity on the completion of the operation said he could not speak too highly of the glycerine and iodoform emulsion. In sewing up the wound completely behind the ear he always made the anterior flap overlap slightly the posterior flap, as it made a better ultimate scar and prevented the ear turning outwards or becoming depressed into the enlarged meatus. His cases never had more than one large dressing put on the ear and that was at the time of the operation. On the second day after the operation the patients were practically always up and dressed. In hospital their stay was from one to three weeks. Mr Heath showed six cases, in two of which the operation had been performed on both sides In all of them the hearing was remarkably good and in most of them the hearing was as good as that of any member of the society present He called the attention of the members to the small opening through which the operation was performed.—The paper was discussed by the President, Mr J P Purvis Mr Chisholm Williams, and Mr H W Roberts —A vote of thanks was accorded to Mr Heath who briefly replied.—The next meeting, on March 6th, will be clinical

Dermatological Society of London —A meeting of this society was held on Feb 11th Mr Malcolm A Morris being in the chair —Dr J J Pringle showed a man, aged 38 years, suffering from a Syphilitic Eruption on the Flexure of the Right Knee the Face and the Lips The individual lesions consisted of deep-seated nodules which were softening in the centre The duration of the oldest portion of the eruption that on the knee, was 10 weeks and there was a history of a sore on the penis 13 weeks before The question arose as to whether this was a relapsing syphilide from a previous attack of which no history could be obtained or whether it was a precocious nodular syphilide —Dr E G Graham Little showed a case of Lichenoid Eruption, possibly Lichen Planus in an Infant. The eruption consisted of an irregular patch on the inside of the right knee and two angular patches on the right lower abdomen and left groin respectively He also showed a case of Prurigo Hebra in a woman The features of the original trouble were obscured by the immense amount of chronic eczema present and there was very little sign of the initial lesion visible at the time of exhibition —Dr H. Radcliffe Crocker showed a young woman suffering the normal. The diagnosis was confirmed by the family history 2 Three cases of Paralysis of the Ocular Muscles following Herpes Zoster Frontalis The constant pathological condition of the sensory ganglia in cases of zoster was almost conclusive of a bacterial infection. Therefore these paralyses were considered to be due to resulting toxins. The absence of the herpetic eruption in two was interesting as allowing many obscure cases of neuritis with paresis to be referred to zoster for their origin.—Dr Thomas Harris related a case of Unconsciousness which presented difficulties in diagnosis He first saw the patient, a man, aged 50 years, on Dec 4th, 1902, at 6 P M, in consultation with Dr A. V Davies of Shaw The patient was then sitting in a chair quite unconscious and could not be roused, although pricking caused some resentment. His colour was natural, as also were the respirations, and his pulse-rate was 80 per minute. When the eyelids were raised both pupils were at first minutely contracted, but about a quarter of an hour later when re-examined they were of normal size and slowly responded to light. The heart and blood vessels appeared to be healthy and the urine was normal. There was no paralysis of the ocular or facial muscles The limbs when lifted and allowed to drop fell in a flail like manner Five hours later Dr Davies was astonished to find the patient sitting up and in ordinary conversation with some friends. He said that he felt a little drowsy and as though he had lost count of things. Dr Davies stayed with him until 3 A M, during which time he persisted in talking and smoking At 3 A.M he was persuaded to lie down and he went to sleep At 6 A.M he was roused and given some nourishment. His bowels were moved at this time but there was nothing peculiar in the motion. At 10 A.M he was in much the same condition as on the previous evening, but more easily roused At 12.30 P M he was again talking and smoking He then had another motion which was very green and offensive From that time until Dec 7th he slept for a few hours at a time and then woke up for a few hours but since Dec. 7th up to the present time he had enjoyed his usual health When he had recovered he gave the following account of his illness. On Dec 3rd he was in his usual health and at 6 P M he had tea. At this meal he partook of a dish of cockles which were cooked by boiling No one else in the house partook of any cockles. At 8 30 P M he did not feel very well He was, however, able to attend a meeting and returned home and went to bed at 11 30 P M in apparently good health. At 5 30 A.M on Dec 4th he got up to go to his work. On getting out of bed he felt all right but then had a shooting pain in the right eye, followed by loss of sight of that eye. He proceeded to dress himself in a dazed sort of way and then called his son as he was accustomed to do He said that his legs at this time felt a bit queer, as though they did not belong to him. He walked downstairs The sight had now returned to the right eye and he lighted the kitchen gas. Immediately after that he felt "as though he was running his head into a corner" He walked towards his armchair and then became unconscious. At 7 10 A M his wife came downstairs, found she could not rouse him, and sent for the medical attendant Dr Davies, thinking the patient might have taken some narcotic drug as he had been subject to asthma, tried to rouse him and with assistance walked him about By this means in the course of a few hours he was roused sufficiently to be able to walk about alone He talked in a somewhat incoherent manner and like a man who was drunk. There was, however, difficulty in keeping him awake and about 3 P M he relapsed into complete stupor and remained so until Dr Harris saw him at 6 P M It appears that the patient had been subject to asthma for the last 18 years but had otherwise enjoyed good health He had never had any kind of fits and had not been subject to dizziness or headaches just previously to, or some time before, the attack. The patient was a very intelligent man and not at all a neurotic subject. His field of vision when tested after the attack was normal and the attacks of asthma appeared to have been true bronchial ones and not attacks of hysterical dyspnœa. Considering the long period—nearly 12 hours—between taking the cockles and the onset of the attack, together with the recurring attacks of stupor, whilst in the intervals he was quite awake and with a clear intellect, it did not seem probable that the shell fish were the cause That it was some form of auto intoxication arising from absorption of some toxic substance from the bowels was worthy of some consideration, but the attack appeared more probably to have been a manifestation of the *petit mal* of epilepsy The sudden onset with pain in one eye and loss of sight were very suggestive of that being the real nature of the attack Nevertheless, the absence of any previous attack which could suggest epilepsy in any form rendered the case unusual and worthy of record.

BRITISH GYNÆCOLOGICAL SOCIETY—A meeting of this society was held on Feb 12th, Dr Heywood Smith, the President, being in the chair—Dr H Macnaughton Jones read two cases of Cysts in the Inguinal Canal The first simulated a hernia and had been kept up by a truss, but became irreducible and increased in size and on operation was found to be a cyst containing blood and intimately connected with the round ligament in a patent canal of Nuck. The diagnosis in the second case also was difficult, but at an operation for salpingo-oöphorectomy and ventrofixation the round ligament was found spread out over, and intimately attached to, a cyst in an otherwise normal canal Quoting a case of double inguinal hernia, ultimately fatal, mistaken for hydrocele of the round ligament, he concluded that every doubtful swelling in the inguino-labial region in women indicated operation.—Mr F Bowreman Jessett described an operation for the removal of a dermoid cyst of the right ovary The appendix had been adherent to the tumour and was much thickened, and was removed after double ligature without turning back the peritoneum, Mr Jessett having found from experiments on the cadaver that by ligaturing the appendix in its entirety the mucous coat was completely divided just as the inner coat of a tied artery Mr Jessett also showed a Uterus removed for hæmorrhage due to a submucous fibroid, some two years after a ventrofixation for retroversion and prolapse. Chromic gut sutures had been passed through peritoneum, fascia, and muscular tissue, but at the second operation there were merely some peritoneal attachments to the abdominal parietes, from one half to one inch long, sufficient to prevent the recurrence of the retroversion, and some omental adhesions, but nothing to interfere with pregnancy had it occurred—certainly there was no such support as would have prevented recurrence in a case of complete prolapse.—After some remarks by the President, Dr L Garrett Anderson, and Dr F A. Purcell, Mr Jessett replied.—The President then delivered his Inaugural Address. He said that in 1884 after consultation with the leading gynæcologists of the day he had to draw up a plan and rules for the society and to convene the meeting at which it was constituted. Dr Robert Barnes accepted the position of honorary President and happily was still with them, and Sir J Halliday Croom, their late president, was a member of the first council elected From the first it had been felt that the exhibition of specimens and the reading of cases should take precedence of more formal papers In a comprehensive review of the work done by the society since its commencement he mentioned that 738 specimens had been shown, nearly all from operations and very few from necropsies. Of these, 243 were examples of fibroid tumours in the removal of which up to the year 1896 clamps and the serre-nœud were almost invariably employed, but since that date the prevailing method had been sub-peritoneal hysterectomy, and he congratulated the society on the share it had taken in the improved method of treating the stump Of ovarian tumours 140 had been exhibited, chiefly in the earlier years, for ovariotomy had come to be regarded as no longer an operation to be deferred till a tumour had developed to an inconvenient or dangerous size and probably only the rarer forms were now thought worthy of being brought before the society, of those shown 26 were dermoid and 19 malignant growths, while 14 were instances of twisted pedicle. While this mass of material proved the vast importance of surgical methods in the relief of the diseases of women, it must not be forgotten that medical methods afforded no "chips from the workshop" for exhibition, though in medical gynæcology so called there was no doubt much minor surgery Their past work had he believed, taught them that it was not the most anomalous cases that cast most light upon any form of disease and that each Fellow should bring forward any case that might show the advantage, or otherwise, of any special treatment, that it was well to follow up some particular subject till something definite had been obtained, and that vast fields for research remained for diligent investigation, for instance the etiology of cancer He gave the details of the society's scheme for the examination of monthly and gynæcological nurses as already published—A vote of opened. The results of treatment in chronic pancreatitis have been most encouraging, as out of 24 cases operated on only one patient died directly from operation and he had been reduced to the last stage of exhaustion before a surgical opinion was sought Of the 23 patients recovering from operation, with the exception of two who died a few months later, complete and perfect recovery ensued. The authors point out that these results contrast very markedly with the surgical treatment of cancer of the pancreas, where nearly half of the patients operated on have died directly as the result of operation and in those who have survived life has only been prolonged for a comparatively short time.

The subject of Pancreatic Cysts is very fully considered. The following classification is adopted and is probably as precise as our present knowledge permits (1) retention cysts (2) proliferation cysts (cystic adenoma and cystic epithelioma), (3) hydatid cysts, (4) congenital cystic disease (5) hæmorrhagic cysts, and (6) pseudo-cysts The authors admit that from a pathological standpoint the inclusion of the last form is not permissible As, however, the clinical features tally precisely with those of true pancreatic cysts, the academic objection rightly gives way to considerations of convenience The book concludes with a chapter on New Growths of the Pancreas

The work, as a whole, is an interesting and valuable contribution to our knowledge of pancreatic disease and the authors have been successful in carrying out the objects which they had in view

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Methods and Theory of Physiological Histology By GUSTAV MANN, M D C M Edin., B S Oxon., Senior Demonstrator of Physiology in the University of Oxford. Oxford At the Clarendon Press 1902. Pp 488 Price 15s

THIS work is intensely practical and its value is due to the fact that the methods described are based largely upon the researches of the author assisted by his colleagues The author states that nobody realises what labour there is before the histologists and he is hopeful that the publication of his book if it fulfils no other purpose will serve to bring out deficiencies in theories and in methods. That is a very philosophic view The work is divided into eight parts. In Part I. are chapters upon the value of fixation and the chemicals used as the agents of fixation the macroscopical effects of fixing reagents the microscopical phenomenon of coagulation and precipitation and instructions as to the selection of the ' fixative This section is, perhaps, the most valuable in the work, as it is the lengthiest. Part II. contains chapters on bleaching, isolating and decalcifying, and on injecting blood and lymph vessels Methods of obtaining sections and a history of microtomes and how to use them are described in Part III. while Part IV is devoted to the nature of dyes and to the history of the methods of staining In this section a most interesting historical account of staining is given. The author rightly asks the reader to reflect occasionally on the work accomplished by older histologists without the aid of stains. The method probably commenced in the early 'fifties' and it is hardly possible to estimate how valuable an instrument dyes have been to the modern histologist and bacteriologist. A means of differentiation was thus opened up which otherwise could not have been possible. The section dealing with staining is again on account of its great importance, very exhaustive.

Passing over Part V and Part VI. the latter dealing with the chemistry of some tissue constituents and microchemical reaction we come to Part VII in which in Chapter XXIV the theory of staining is discussed and here we cannot help quoting the author's excellent views as to the objects of staining which are as follows 1. To help us in determining morphological facts. In this case all methods, no matter whether physical, chemical, or physico-chemical, are justified. 2. To recognise microchemically the existence and distribution of substances which we have been made aware of by macro-chemical means It is not sufficient to content ourselves with using acid and basic dyes and speculating on the basic or acid nature of the tissues or to apply colour radicals with oxidising and reducing properties, but we must endeavour to find staining reactions which will indicate not only the presence of certain elements, such as iron or phosphorus but the presence of organic complexes, such as the carbohydrate group, the nucleins, protamins, and others In this last sentence are summed up the spirit and substance of the work. Finally, Part VIII. contains one chapter devoted to the methods of rendering preparations permanent and an appendix follows which gives shortly the chemistry and constitution of the dyes

We most heartily congratulate the author on the accomplishment of a very big task. He could not have achieved it without a very sound acquaintance with the modern developments of physico-chemical phenomena. The materials have been collected with evident care and were largely drawn from the author's own researches. The book is full of most valuable practical instructions bearing upon histological methods and altogether this important branch of study is certain to gain considerably by this admirable attempt to elucidate principles.

A Text-Book of Obstetrics for Practitioners and Students By various authors. RICHARD C NORRIS, M.D Editor, ROBERT L DICKINSON M.D, Art Editor With nearly 900 Illustrations. Second edition, revised, Vol. I., pp. 554, Vol. II, pp 549 London and Philadelphia W B Saunders and Co. 1902 Price 35s net

SINCE the first edition of this book appeared many important advances have been made in the art of obstetrics As the editor points out, the results of bacteriological and chemico-biological researches as applied to the pathology of midwifery and the wider range of surgery in treating many of the complications of pregnancy, labour and the puerperal period embrace many new problems some of which have found their final place in obstetric practice. It has been thought proper, therefore, to issue a thorough revision of this text-book. Unfortunately since the appearance of the first edition Dr T. Parvin, Dr. J H. Etheridge, and Dr C W Earle have died. The chapters originally written by Dr Etheridge have been rewritten by Dr Clarence Webster whose name appears for the first time as one of the contributors and the editor has revised the portions written by Dr Parvin and Dr Earle. Considerable evidence of alteration and revision is present in different parts of the book. The section upon Diseases of the Ovum has been very largely added to and is now much fuller and more satisfactory than it was in the first edition. In the section upon the Diseases of the Placenta we note with satisfaction that the old heading "placentitis" has disappeared, and it is pointed out that much of the work published dealing with diseased conditions of the placenta is worthless because it was done at a time when the true nature of the placenta was not properly known. The views of Dr D Berry Hart upon the mechanism of abortion are given and a very interesting illustration of the condition known as tuberose subchorionic hæmatoma of the decidua has been added. How thoroughly the section of the book dealing with the Pathology of Pregnancy has been revised is shown by the fact that the bibliography contains some 200 additional references. A very full and interesting account is given of the condition known at the present day as the toxæmia of pregnancy and the toxic origin of eclampsia is accepted as the most likely cause of that disease. In discussing the treatment of eclampsia the principles laid down from Ulceration of the Legs, the ulcers were of about the size of sixpenny pieces and showed no infiltration of the base, being surrounded by pigmented skin There were scars of former ulcers and the patient gave the history of wandering from hospital to hospital in search of relief The diagnosis offered was that of dermatitis artefacta and this was accepted by all the members He also showed a man suffering from a Pruriginous Eruption scattered over the body and extremities The individual lesions appeared to be infiltrated follicular papules which became pustular, necrosed, and healed with scarring The patient had multiple enlargement of the lymphatic glands and the diagnosis offered was that of pseudo leukæmia also affecting the skin.—Mr Arthur Shillitoe showed a case of unusually widespread Morbilliform Erythema in early syphilis A careful inquiry had excluded any drug eruption and the rash had already persisted for some weeks

Medico Legal Society—A meeting of this society was held on Feb 10th, Sir W J Collins the President, being in the chair—The adjourned discussion upon Dr H. Littlejohn's paper on Medico Legal Post-mortem Examinations was carried on in the same friendly and animated manner as at the opening meeting The speakers upon the subject were unanimous in support of calling in a skilled pathologist, about which so much had been heard of late, and a comparison was drawn between the English and Scottish procedure in matters of investigation.—Mr F Gordon Brown, who was employed by the police at the time, read a paper upon the Whitechapel Murders. After describing in detail the terrible story of murder and mutilation he endeavoured to come to a conclusion as to the character of the murderer, it could not, he said, be due to robbery or jealousy considering the depraved natures of the victims, neither was it for the satisfaction of sexual lust, for in no case had there been violation, but he concluded that it must have been the act of an insane man with full knowledge as a slaughterer and must be classed under the term of Sadism.

Nottingham Medico-Chirurgical Society—A meeting of this society was held on Feb 4th, Mr J Mackie, the President, being in the chair Dr A. S Green (Lincoln) showed x ray photographs of (1) Spiral Fracture of Tibia, (2) Congenital Malformation of Foot, (3) Empyema of Left Chest, and (4) Impaction of Surgical Neck of Humerus—Mr W A. Howitt showed an x ray photograph of a Spiral Fracture of the First Phalanx of the Ring Finger of the Right Hand—The President, Dr W Hunter, and Dr F H. Jacob discussed the cases—Dr Jacob read a paper on Quacks and Quack Medicines which had been compiled by Mr S R. Trotman and himself Many well known patent medicines had been analysed, the greater part of the analyses being performed by Mr Trotman, and the formulæ for these were presented to the meeting—An excellent discussion followed in which the President, Mr W M Willis, Mr T Geraty, Dr C H Cattle, Dr W Hunter, Dr A Fulton, Dr Green, Mr J Thompson, and Dr Parry Jones took part, and Dr Jacob replied

Edinburgh Royal Medical Society—A meeting of this society was held on Feb 13th. Dr A. B Ross, senior President, being in the chair—Mr R M Johnstone communicated notes on a case of Myositis Ossificans The patient was a man, aged 35 years who was shown before the society The condition began when he was eight years old and had become gradually worse with acute exacerbation at varying intervals. During the acute stage the muscles were swollen and very painful and after the symptoms had passed off ossification set in. Many of the joints were ankylosed The muscles of the abdomen were not affected at all—Dr W M McFarlan read a paper on Abdominal Pain

Wigan Medical Society—The annual meeting of this society was held on Feb 12th, Mr T M Angior, the President, being in the chair There was a good attendance of members present. After the election of office bearers a social evening was agreeably spent. The following gentlemen were elected office bearers for 1903—President Dr Matthew Benson. Committee Dr Benson (President), Mr T M Angior (ex President) Mr W Mitchell Roocroft, Dr R. P White, Mr C M Brady, Dr John Blair, Dr Ferdinand Rees, Dr George Wolstenholme, and Mr Winstanley Treasurer Mr E. H. Monks, J P Honorary secretary Mr William Berry

Reviews and Notices of Books.

Diseases of the Pancreas and their Surgical Treatment By A W MAYO ROBSON, F R C S Eng, Senior Surgeon, Leeds General Infirmary, Emeritus Professor of Surgery, Yorkshire College, Victoria University, and B G A. MOYNIHAN, M S Lond, F R.C S Eng, Assistant Surgeon, Leeds General Infirmary, Consulting Surgeon to the Skipton Hospital and to the Mirfield Memorial Hospital Illustrated London and Philadelphia W B. Saunders and Co 1902 Pp 293. Price 12s

IT is only within recent years that any material progress has been made in regard to our knowledge of the functions and diseases of the pancreas The experience gained by pathologists, however, demonstrates that this organ not infrequently proves a source of serious, and often fatal, disease. The authors of the work now under consideration state that they have had a twofold object in the publication of a book dealing with the surgical aspects of pancreatic disease—namely, to record and to review the investigations accomplished in the past and to indicate, as far as is possible, the scope and trend of future research

The first chapter deals with the Anatomy of the Pancreas. Due credit is given to the admirable works of Körte and Oser, and the results of the inquiries of Opie and others into the functions and significance of the islands of Langerhans Chapter II. deals with the conclusions arrived at by the many observers who have conducted experimental researches on the organ, more especially in regard to the artificial production of diabetes It has been clearly shown that total extirpation of the pancreas produces all the symptoms of diabetes. Glycosuria, however, does not appear when any portion of the gland—head, body, or tail—is left, but at once manifests itself if the remnant be subsequently removed. Very interesting are the remarks on Pancreatic Diabetes in Man. The authors conclude that in a large number of cases diabetes is associated with or accompanied by, disease of the pancreas, the most frequent of which is a chronic interstitial inflammation and sclerosis. On the other hand, however, cases of diabetes occur in which there is no demonstrable affection of the pancreas and cases of chronic interstitial inflammation are seen without the phenomena of diabetes The valuable researches of Opie are again referred to From pathological observations this authority maintains that the destruction of the islands of Langerhans is concerned in the production of diabetes and this view is maintained by the experimental work above alluded to

The condition of Inflammation of the Pancreas is fully considered, four chapters being devoted to this subject The authors' classification of pancreatitis differs from that adopted by some other authorities. Mr Mayo Robson and Mr Moynihan are of opinion that it is convenient to consider pancreatitis clinically under the headings of (1) acute, (2) subacute, and (3) chronic, which does not interfere with Fitz's pathological classification of acute pancreatitis into hæmorrhagic, suppurative, and gangrenous We agree with the authors that for clinical purposes the plan they have decided upon is quite satisfactory The symptoms, diagnosis, and treatment of these forms of pancreatitis are well described although some of the cases recorded might have perhaps been given more succinctly The remarks on the treatment of chronic pancreatitis are especially worthy of note The authors maintain that cases of this nature must be treated by abdominal section and drainage, but the drainage should be indirect and obtained by draining the gall bladder by cholecystotomy or cholecystenterostomy or the pancreatic and common bile duct together by duodeno choledochotomy, the exact line of treatment cannot be determined until the abdomen is title indicates, the book is intended more particularly as a guide to medico-legal work in India. Many subjects, therefore, are discussed which are not to be found in the purely English manuals, as the law of India is different from that of England in certain matters which come under the notice of the medical jurist. For instance, Chapter VI, which deals with the subject of Age, contains details of the Indian Penal Code in relation to certain acts which are not otherwise offences, but become offences when done to persons below certain ages which are specified. There is also a material difference as to the age of "consent" in trials for rape according to the English and Indian laws

The chapter on Infanticide will be found interesting In most countries infanticide is resorted to in order to get rid of the offspring of illegitimate intercourse or of the legitimate children of parents too poor to support an additional tax on their resources. In India, however, there are reasons specially referable to the social conditions that exist amongst certain races which account for the destruction at birth of children and more particularly of female children. These reasons are fully discussed and disclose conditions which happily are gradually disappearing under British rule.

The section on toxicology however, in our opinion forms the most instructive portion of this volume. Much that is contained in this part of the work is beyond the requirements of the student for examination purposes but forms valuable material for reference. Many poisonous substances are dealt with and in the chapters devoted to vegetable poisons plants are mentioned which are peculiar to tropical countries and several excellent plates are introduced representing the appearance of some of the plants. The methods employed for detecting the poisons are clearly given and the medico-legal points which may arise are fully discussed We can cordially recommend this volume to those readers for whom it is intended

LIBRARY TABLE.

Spirals in Nature and Art. By THEODORE ANDREA COOK M.A. F S A., with a preface by Professor E. RAY LANKESTER, F R.S London John Murray 1903 Pp 200 Price 7*s* 6*d* —Some time ago Mr. W Lethaby wrote a most interesting book entitled 'Architecture, Mysticism, and Myth,' in which he pointed out how architectural forms and decorations were derived from the study of natural objects or developed with a view to symbolise natural phenomena. Mr Cook has taken a portion of the same very wide subject for his charmingly written essay He discourses upon spirals and draws attention to the fact that the exquisite spiral staircase in the Chateau of Blois was evidently modelled upon the form of a shell—namely *Voluta vespertilio* and that upon the rare reversed variety the spiral being left-handed. Mr Cook is of opinion that the architect of this wonderful staircase was Leonardo da Vinci. That great man, of course, lived for some time in the Loire valley and was buried at Amboise. He was certainly capable of building the staircase in question and as Mr Cook proves from the drawings which he left behind him Leonardo da Vinci took great interest in spirals He was also left handed, which would account, thinks Mr Cook for the staircase having a left-handed spiral. Whether Mr Cook be right or not about Leonardo da Vinci does not very much matter but we think that he certainly makes out a very strong argument for the staircase having been modelled from the shell. Many other examples of spirals and spiral growth in animals and plants are given but there is a screw formation which Mr Cook does not refer to, and although perhaps it comes under the heading of neither nature nor art we may call attention to it. We mean that obtained by dipping a helix of wire with a central supporting column into soap film The beauty of the resulting surface is very remarkable. Architects will find Mr Cook's little book very interesting

"The Green Republic" a Visit to South Tyrone By A. P A. O'GARA, M.D London T. Fisher Unwin. 1902. Pp 244 Price 6*s* —Any light thrown on the Irish agrarian and land question should be welcomed, but it is to be feared that Dr O'Gara's book, which deals exclusively with this subject, will not, to any appreciable extent, enlighten the darkness which enshrouds this complex subject. Dr O'Gara's views are set forth in the preface, introduction, and conclusion of the work, the rest consists of 12 sketches, or rather dialogues, which merely serve to elaborate and to illustrate his arguments in the form of somewhat wordy and diffuse discussions on the various points. Dr. O'Gara takes an extraordinarily pessimistic view of the Irish land problem and has a very poor opinion of Irish tenants as a class. He appears to be convinced that any hope of Irish tenants working out their own salvation (and incidentally that of their country) by eventually becoming the owners of their own land is quite futile—a view, by the way, diametrically opposed to that of the recent land conference held at Dublin between representatives of the landlords and of the tenants. Dr. O'Gara advocates as a panacea for the evil the working of the land by joint-stock companies run on strictly business lines—a suggestion quite outside the domain of practical politics. To earnest students of the Irish land problem this book will be of much interest.

JOURNALS AND MAGAZINES

Journal of Anatomy and Physiology Conducted by Sir WILLIAM TURNER K.C B, F R S., D J CUNNINGHAM, M D, F R.S., G S HUNTINGTON M.D, A. MACALISTER, M.D., F R.S, and J G M'KENDRICK, M D, F R.S Vol. XXXVII. Part 2 January 1903. With Plates and Figures in the Text. London Charles Griffin and Co, Limited. 8vo. Price 6*s* —The contents of this number are as follows 1. Johnson Symington M.D Edin, of Belfast Are the Cranial Contents displaced and the Brain damaged by Freezing the Entire Head? (with a plate.) The author comes to the conclusion in opposition to Professor Froriep that no alteration in these respects is effected by freezing 2. R. Broom, M.D Glasg on the Development of the *Pterygo-quadrate* Arch in the Lacertilia. In this article the author demonstrates the occurrence of a cartilaginous connexion between the quadrate and epipterygoid in various and very diverse lacertilian embryos rendering it practically certain that the immediate ancestors of the lizards were possessed of a fixed quadrate as in sphenodon a point of considerable importance in classification. 3. O Charnock Bradley, M.B. Edin., professor of anatomy Royal Veterinary College, Edinburgh on the Development and Homology of the Mammalian Cerebellar Fissures, Part 1, with five plates. This article describes the formation of fissures in the cerebellum of rodents. 4 H. W Marett Tims, B A. Cantab M D Edin. the Evolution of the Teeth in Mammalia 5 J O Wakelin Barratt M.D Lond., the Form of the Dilated Cerebral Ventricles in Chronic Brain Atrophy, with numerous woodcuts. 6. Walter H. Gaskell, F R.S., on the Origin of Vertebrates deduced from the Study of Ammocœtes, Part III This part deals with the origin of the vertebrate body cavity and excretory organs and is an attempt to explain the meaning of the somites of the trunk and of the ductless glands. Dr. Gaskell endeavours to show in these interesting papers that the ancestor of the vertebrates was not an arachnid purely or a crustacean purely but possessed partly crustacean and partly arachnid characters 7 The Proceedings of the Anatomical Society of are that the convulsions should be controlled, elimination stimulated, and the uterus emptied. The administration of chloroform and oxygen is recommended but ether should be used for any prolonged operative measure. The author of the section, Dr Davis recommends the avoidance of pilocarpine, the administration of large doses of morphia, the practice of venesection, profound and prolonged anæsthesia, and rapid emptying of the uterus when no sign of spontaneous labour is present When the circumstances are favourable, however, and the cervix cannot readily be opened Cæsarean section may be performed. No doubt in future editions, if rapid emptying of the uterus be still advocated, the employment of Bossi's dilator will take the place of Cæsarean section in such cases There is much more new matter that has been added to many of the other sections but we must refer our readers to the book itself It is a most valuable work and will prove of service not only to students and practitioners but also to teachers of the science and art of obstetrics A number of new illustrations have been added and some of the old have been re-drawn. The book is now published in two volumes, each with separate paging and index. There is also a general index which is not so full as might be wished in such an important text book.

Madrid bajo el Punto de Vista Médico social Por el Dr PH HAUSER, &c Dos partes Madrid. 1902. 8vo, pp 919 Price 25 pesetas. (*Madrid from the Medico social Point of View* By Dr PH. HAUSER, &c Two volumes Madrid. 1902 Price about 14s 6*d*)

DR. HAUSER has undertaken the gigantic task of pointing out in detail the sanitary defects of Madrid as compared with other great cities, and in so doing he has not spared the country of his adoption. He has taken great pains in the years during which he has resided in Madrid to ascertain thoroughly the sanitary condition of the town, and in his endeavours he has been rather thwarted than aided by the authorities. It is satisfactory to learn from the preface to the second volume that his book has been well received by the medical profession in Spain, and it is to be hoped that its members will use what authority they have in procuring a reform of the many faults which he points out

The book begins with the history of the evolution of sanitation in Madrid from its foundation to the present time, with a complete topographical and geological description of the city, its soil, and the effect of the soil upon its climate and hygiene. Dr Hauser devotes a whole chapter to an account of the different methods of purification of sewage and of the prevention of contamination of the soil—a chapter very necessary in Spain where even the most elementary knowledge of hygiene is lacking He then proceeds to describe very accurately the system of sewerage in Madrid, pointing out the course and the defects of the existing sewers He states that 431 streets are entirely destitute of sewers, that 93 streets are but partially drained, and that in the 586 streets which are supposed to be properly sewered there are hardly *100 houses* (*sic*) which are really in a thoroughly sanitary condition. The author next describes the different varieties of material used on the roads and the methods adopted in cleansing the roads, comparing these with those employed in Paris and in Berlin Next we are informed about the sources and state of the drinking water which is not filtered and contains, besides other impurities, from 1650 to 2860 bacteria per cubic centimetre and is at times offensive to sight and smell. Fortunately the wines are good and cheap and *chufa* makes an excellent summer drink if the drinker can only be sure that the water with which this root of the *Cyperus esculentus* is mixed has been boiled. Dr Hauser passes next to the workmen's quarters in Madrid, these are wretched barracks with no water supply, no ventilation, very little light, and no attempt at drainage in the houses or streets These quarters are naturally nests of infectious diseases. There are in Madrid town 438 houses which harbour 52,655 persons, or an average of 110 inhabitants per house, the actual numbers varying between 107 and 152 per house. Dr. Hauser, after describing the attempts made in England, France, Germany, and Belgium to improve artisans' dwellings, mentions some private societies founded in Madrid with this object. He next treats of the slaughter houses, markets, and butchers' shops in Madrid and their deficiencies. After this comes a critical description of the hospitals in Madrid. The author also criticises the theatres, schools, churches, barracks, and public houses in Madrid, and concludes his first volume with the demography of the town, discussing the density of population, the birth rate, the mortality, and the number of marriages during a series of years. He gives a large coloured plan of the town showing the rate of mortality in the various districts

As the first part of this work treated of social hygiene, so the second part, which appeared in December, 1902, treats of medicine from the public health point of view and begins with a general dissertation on the etiology of infectious diseases, proceeding to a description of the mortality from the different varieties of infectious disease, the author expressing a decided opinion that it is the soil of Madrid, not the water or the air, which is the cause of the prevalence of infectious deisases there. From the tables given it would appear that tuberculosis, small pox, and measles are the most fatal diseases in Madrid, typhoid fever, scarlet fever, and puerperal fever have a much smaller death rate than the first-named maladies Dr Hauser doubts whether mosquitoes are the cause of paludism. Syphilis and other venereal diseases are discussed at length, the conclusion arrived at being that police regulation of prostitution is ineffectual for the prevention of venereal disease, which is certainly true in Spain where the regulations are lax and are constantly evaded.

A whole chapter is devoted to the causes of the mortality among the lower orders in Madrid and another to the connexion between the frequency of disease and meteorological conditions The book ends with an account of the sanitary measures which have been adopted by the police in various epidemics In an appendix by Dr Montaldo there is a comparative analysis of the sanitary legislation of France, Italy, Portugal, and Spain.

The book is of necessity large and cumbrous, because the author has been obliged to describe minutely even the simplest sanitary matters which are new to his readers though familiar to us from long experience It is impossible in the limited space of a review to do justice to the amount of care and pains which Dr Hauser has expended on this work or to the excellence of the results in spite of the difficulties which he met with

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Legal Medicine (in India) and Toxicology In two volumes. By Major COLLIS BARRY, I M.S , F R.S Edin., Chemical Analyser to the Government of Bombay , Professor of Chemistry, Medical Jurisprudence and Toxicology, Grant Medical College, Bombay Illustrated by Plates. Vol. I. Bombay Thacker and Co , Limited Pp 685

THIS work was originally undertaken to supply a text-book for the students of the Indian colleges. The author states in his preface that the mass of material collected for the book is so large that it was deemed advisable to transfer the greater number of the illustrative cases to a separate volume As a manual of jurisprudence this publication is certainly deserving of praise. The various subjects are judiciously dealt with , the method of arrangement of the chapters into paragraphs by means of heavy type is useful both for purposes of study and reference , and we believe that students will find the work a trustworthy text-book when preparing for their examinations As the secondary products upon which, according to our view, the question of whether or not the spirit is genuine brandy can be decided the following were the results recorded in grammes per hectolitre of alcohol (100°) acidity, calculated as acetic acid, 82 08 grammes, aldehydes, 14 24 grammes, furfural, 1 36 grammes, ethers, expressed as ethyl acetate, 90 28 grammes, and higher alcohols, 129 96 grammes We have no doubt that this brandy is genuine grape spirit and of a good class, and it is stated that it is a blend of various shipments by well known Cognac growers. The amount of extractives is somewhat high, while the colour is dark rather than pale The sample possessed the pleasing flavour and aroma of mature Cognac brandy

(1) INVALID PORT AND (2) PORT MATURED IN NEWFOUNDLAND

(Hunt Roope Teage and Co 3 and 4 Water lane, Great Tower-street London E C)

1. On analysis the invalid port gave the following results total extractives, 8 34 per cent., mineral matter, 0 18 per cent, alcohol, by weight 18 85 per cent., by volume 23 10 per cent, equal to proof spirit 40 48 per cent., volatile acidity, calculated as acetic acid, 0 072 per cent., fixed acids, calculated as tartaric acid, 0 21 per cent, and sugar, 7 10 per cent This is a good full fruity wine soft to the taste and dark in colour, it is said to be produced in the best district of the Alto Douro An interesting point in regard to the analysis is that we found distinct traces of manganese in the mineral matter The wine is mature yet full bodied and suitable as a restorative in special cases. 2 This wine is of the "tawny" type. Analysis gave the following results extractives, 8 07 per cent., mineral matter 0 22 per cent, alcohol, by weight 18 08 per cent, by volume 22 18 per cent. equal to proof spirit, 38 87 per cent., volatile acid, *nil*, fixed acids, calculated as tartaric acid, 0 15 per cent., and sugar, 7 10 per cent. This is practically a non acid wine It is said to have been matured in Newfoundland. It possesses excellent æsthetic qualities Both specimens are good sound wines and suitable for invalid use.

PENFOLD'S AUSTRALIAN WINES

(J G Thomson and Co 17 Fenchurch street London E.C)

These specimens are interesting in proving that Australian wines imported into this country need not necessarily be of a heavy character The following are the results of the analysis of a specimen of claret and of a specimen of chablis. Claret No 0 extractives, 2 63 per cent., mineral matter, 0 28 per cent, alcohol, by weight 11 15 per cent, by volume 13 81 per cent., equal to proof spirit 24 19 per cent., volatile acids, calculated as acetic acid, 0 096 per cent., fixed acids, calculated as tartaric acid, 0 23 per cent., and sugar, 0 43 per cent. Chablis No 1 extractives, 1 86 per cent., mineral matter 0 2 per cent., alcohol by weight 11 08 per cent., by volume 13 71 per cent., equal to proof spirit 24 03 per cent., volatile acids, calculated as acetic acid, 0 12 per cent, fixed acids, calculated as tartaric acid, 0 35 per cent., and sugar, 0 57 per cent. Both are sound, light, agreeable wines.

CHAD VALLEY PINE PAPER

(Johnson Brothers Chad Valley Works Harborne, near Birmingham)

We have examined specimens of this paper and amongst other things found that ether extracts a resinous oil possessing a smell of fresh sawdust. The addition of this oil is regarded as a sanitary precaution.

BARDELLA BANDAGE.

(Agents: Down Bros 21 St Thomas's-street London S.E.)

The bardella bandage consists of a roll of lint loaded heavily with a mineral powder which, according to our examination, contained chiefly bismuth and zinc. The bandage is well spoken of as an application for burns scalds, and injuries. It certainly has a soothing and healing effect upon burns. The bandage admits, of course, of a number of useful applications.

STERILISING SOAP

(F S Cleaver and Sons 32, 33 34 Red Lion-street Holborn London, W C)

This soap is excellent in use, lathers well, and contains no free alkali In the course of its preparation a volatile antiseptic substance is added owing to which, we assume, the soap is regarded "as a preventative against bubonic plague and malaria." Of course, the free use of soap is always calculated to preserve the cleanliness of the person and the conjoint use of an antiseptic with it is no doubt an advantage in some circumstances. But it is an exaggeration to say that this soap would prevent bubonic plague and malaria.

New Inventions.

A SERVIETTE CASE FOR OPEN AIR SANATORIUMS

Everyone who has experience of sanatorium life is familiar with the table napkin question At many open air institutions the patients are provided with Japanese paper serviettes, but nine out of ten patients object to the sensation of applying the paper napkin to their mouths and the tenth does not like its smell, and nearly all would rather be deprived of serviettes altogether than be dependent upon the paper variety There are objections to the use of the linen napkin in that being used for more than one meal and packed away in a drawer in the interval with only the protection of the napkin ring an undesirable contact between the serviettes of different patients is unavoidable The phthisical patient who not only uses his table napkin in the ordinary manner but instinctively raises it to his mouth when obliged to cough at table cannot fail to infect it with tuberculous bacilli, and since the aim of every sanatorium superintendent must be to achieve the most perfect possible condition of hygiene in his institution he cannot afford to risk infection by serviette. To meet the difficulty which ensued when I had to admit that the paper napkin and the uninclosed linen serviette were unsatisfactory I devised a serviette cylinder made of solid celluloid with smooth surfaces which is easily cleansed and which entirely envelopes the napkin, thus protecting it from all contact with others These cylinders are not unattractive in appearance and they are so much appreciated by patients that many ask to be allowed to take one away when leaving the sanatorium. It would be a decided advantage to visitors at boarding houses, where, unfortunately, so many tuberculous patients are wont to congregate, were some such arrangement adopted to prevent infection by means of tuberculous table napkins, and in families where some member is phthisical the use of the cylinder would be equally advantageous. At my suggestion Messrs. Allen and Hanbury have made a supply of serviette cylinders an illustration of which is reproduced here. They are quite inexpensive.

Charles E Reinhardt M.D Brux., L.S.A. Lond., &c.
Chelsea, S W

A NEW FORM OF FINSEN LAMP

This lamp is designed to meet the demand for a very small lamp automatic in its action, burning iron or carbon electrodes and working direct from the electric supply main These conditions are fulfilled by making the shell of the lamp a water jacket of very small proportions, mounted on a frame which permits motion in all directions and at the same time is rigid when in working position. It is imperative that the diseased area to which the lamp is applied should be rendered anæmic, so that the rays can penetrate

Great Britain and Ireland which contain amongst other articles a particularly valuable one by Arthur Keith, M D Aberd , on the Heart

The Phonographic Record of Clinical Teaching and Medical Science February, 1903 Issued by the Society of Medical Phonographers. London Sir I Pitman and Sons, Limited. Pp 16 Price 6*d* —This number contains an account of three cases of stab wound of the liver in a Chinese and two Malays recorded by Mr R. M Connolly, district surgeon, Batu Gajah, Perak Mr Connolly says that in a country such as this, in which tropical abscess is not uncommon, it may be thought that the surgery of the liver is limited solely to the opening of tropical abscess of that organ, but that a short residence in a district where highway robbers walk the roads would be sufficient to dispel the delusion There are also some notes of clinical teaching by Sir William R Gowers which were taken some years ago on the case of a man, aged 65 years, who suffered from paralysis agitans and senile cerebral degeneration. Sir William Gowers says that it is probable that paralysis agitans consists of a degeneration of the nerve elements of the motor cortex, but that it is an internal change too slight to be expressed by structural decay He adds that only a minority of the cases correspond to the types described in text-books. Dr J C M Given gives particulars of the case of a man, aged 65 years, whom he has had under observation for the last ten years. He had an attack of kidney trouble 30 years ago, and Dr Given has attended him for four attacks The urine contained blood cells, albumin, and casts, both granular and epithelial. He kept to practically a white meat diet and for several months was a pure vegetarian with the exception of milk, but the albumin never disappeared. For the last two years he has been attacked with a severe form of rheumatoid arthritis and on this account he has been allowed a much more liberal diet with plenty of red meat, and now a curious thing is that he has been almost completely free from albumin His general health is now good apart from the crippled state of his joints The secretary of the society reports that the number of members is now 184 against 203 at the commencement of the year, and that another examination will be held this year, in May, although the finances of the society are not sufficiently good to be able to give two £5 prizes, it has been decided to offer two £3 prizes Those thinking of presenting themselves for the examination should write to Dr P G Griffith, Bonhams, Farnborough, Hants There also appears to be some difficulty in collecting the subscriptions, judging from an appeal which is printed in the *Record*

The Practitioner —The February issue of the *Practitioner* contains much weighty food for thought Whether the reader has a medical, a surgical, or a purely speculative bias, he will find something to his taste either in the eloquent writing of Professor T Clifford Allbutt, the deep chemistry of Dr Walter G Smith of Dublin, or the practical suggestion of Mr A W Mayo Robson. A short article by Dr E W Ainley Walker sums up well the present claims of the micrococcus of rheumatism to be admitted as a "specific" agent and points the direction for further investigations. The endless interest and obscurity of the origin of eclampsia in the pregnant woman are treated by Dr W E. Fothergill and articles are contributed by Mr Stephen Paget, Mr Harold L Barnard, and Mr E Treacher Collins amongst others

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HEALTH OF CLEVEDON —Mr W J Hill, the medical officer of health, at the meeting of the Clevedon (Somerset) urban district council held on Feb 4th presented his annual report for 1902. The population of the town was 5896, the birth rate was 18 3 per 1000, and the death rate was 12 9 per 1000

Analytical Records

FROM

THE LANCET LABORATORY.

' MARMITE FOOD EXTRACT

(THE MARMITE FOOD EXTRACT CO LIMITED 40, MINCING-LANE LONDON, E C)

MARMITE extract is prepared from the yeast cell which, as is well known, contains important food constituents The extract is hardly distinguishable as regards appearance, taste, and smell from ordinary extract of meat, while our analysis shows that it has a similar composition. The results were as follows moisture, 28 80 per cent , albumins, 1 10 per cent. , peptone, 4 76 per cent. , albumose, 9 92 per cent , nitrogenous basis, 20 63 per cent. , mineral matter, 25 42 per cent , and non nitrogenous matter by difference, 9 37 per cent The total nitrogen amounted to 5 78 per cent In this analysis attention may be called to the peptone albumose, and the mineral matter, the last being rich in phosphatic salts. This entirely vegetable extract possesses according to these results the same nutrient value as a well prepared meat extract.

GRANALT" PREPARATIONS

(THOMAS CHRISTY AND CO 4 10 AND 12, OLD SWAN LANE UPPER THAMES-STREET LONDON, E C)

As its name implies "granalt" consists of dry granulated malt extract. It is a crisp powder with a pleasant malty taste but exhibits no diastatic action on starch, according to our experiments The preparation of course contains the soluble constituents of malt. Granalt appears to be an excellent vehicle for cascara sagrada, the glycero-phosphates, and even castor oil

THROGMORTON WHISKY

(J LYONS AND CO , CADBY HALL, KENSINGTON LONDON W)

Our analysis of this whisky corresponds very closely with that of a Scotch whisky (known to be all malt and eight years old) which was quoted in the report of THE LANCET Special Analytical Commission on Brandy published in THE LANCET of Nov 29th, 1902, p 1503. Thus the figures in regard to the secondary products were as follows, given in grammes per hectolitre of alcohol (100°) volatile acids, calculated as acetic acid, 42 08 grammes , fixed acids, calculated as tartaric acid, 19 00 grammes , aldehydes, 26 30 grammes , furfural, 4 25 grammes , ethers (ethyl acetate), 72 19 grammes , higher alcohols, 212 80 grammes These results are in perfect accord with the statement that the whisky is an all malt spirit and without the addition of grain spirit, moreover the results indicate age. Further results of analysis were as follows extractives, 0 11 per cent , mineral matter, 0 02 per cent. , absolute alcohol, by weight 40 15 per cent., by volume 47 51 per cent., equal to proof spirit, 83 26 per cent. The whisky thus contains a minimum of extractives and saccharine matters and is pale in colour and although an all malt spirit is delicate in flavour The presence of fixed acids and a notable proportion of ethers indicate storage in a sherry cask

COGNAC BRANDY

(BROWN AND PANK, 16, MARK LANE, LONDON, E C)

On submitting this specimen of brandy to analysis the following were the results extractive matters, 1 08 per cent., mineral matter, *nil* , and alcohol, by weight 50 39 per cent., by volume 58 23 per cent., equal to proof spirit 102 05 per cent. The samples were taken directly from bond and therefore the alcoholic strength shown is about 10 per cent in excess of the usual strength of brandy on the market. In other words, this is the analysis of the brandy before it has been "broken down" As regards

THE LANCET.

LONDON SATURDAY, FEBRUARY 21, 1903

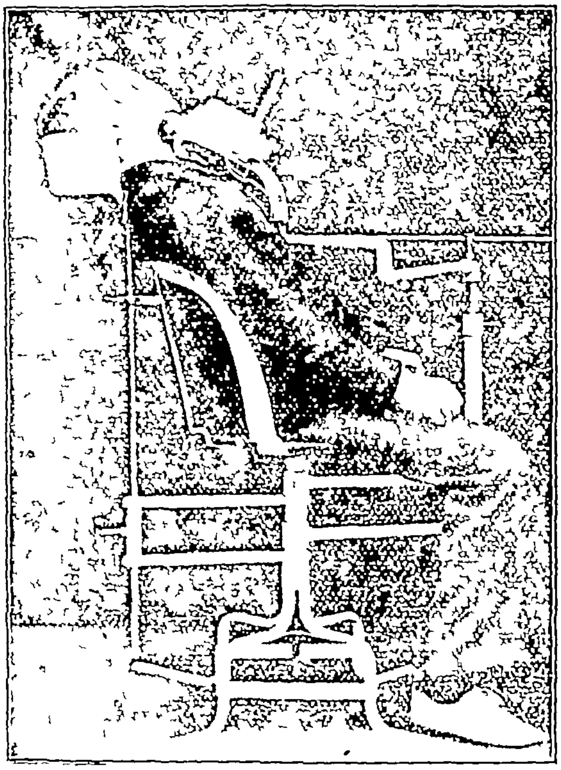
The Hunterian Oration of the Royal College of Surgeons of England

THE Biennial Hunterian Oration was delivered on Feb 14th by Sir HENRY G HOWSE, the President of the Royal College of Surgeons of England, in the theatre of the College This oration was founded in 1813 by Dr BAILLIE, JOHN HUNTER'S nephew, and Sir EVERARD HOME, his brother in law and was intended to perpetuate the memory of JOHN HUNTER by the delivery on Feb. 14th in every second year of an oration dealing with his work and the labours of others in the field of natural science and its relation to the healing art Feb 14th (St. Valentine's Day) was chosen for the occasion because HUNTER celebrated that day as his birthday, though the register of the parish where he was born gives Feb 13th as the day of his birth. With such great latitude in the choice of a subject many Hunterian orators have very variously interpreted their functions and as a result the orations have varied greatly This year Sir HENRY HOWSE spoke chiefly of HUNTER'S life and work with which many of our readers may be familiar but his career offers such an excellent example of brilliant genius supported by indomitable industry that it will bear recurring recital.

JOHN HUNTER was the youngest child of a small Lanarkshire farmer, and as his father died when the boy was only ten years old he was allowed to run wild and his education was grievously neglected. To this absence of parental control the orator attributed much of the passionate nature which HUNTER displayed in his later life. There is probably some truth in this view, but there is another aspect also from which we may regard the free, open, and unconventional life led by the boy till his twentieth year It is certain that while he ran wild on the farm he was acquiring that love of the study of the ways of beasts and birds which was so strikingly manifested later, he was gaining the habit of close and accurate observation of nature which is seldom learnt or fostered within the four walls of a school. When about 20 years old he came to London and was allowed to assist his brother WILLIAM HUNTER, his talent for dissection soon showed itself and his progress was rapid He might have become a dry as dust professor but circumstances again conspired to broaden his views, to vary his experiences, and to render his work unconventional and progressive He was appointed to the Belleisle expedition as an army surgeon and served also in Portugal, and in this way obtained opportunities for many new observations. After his return to London his original bent had full opportunity to display itself. His powers of investigation were exceedingly great, his mind well stored with facts was quick to perceive unexpected relations between facts, while theories were ever ready to spring up to explain the correlation between two phenomena, for he had an enormous range of accurate knowledge upon which to frame them As a collector he was remarkable. Though he was primarily an anatomist and a surgeon he collected not merely anatomical and pathological specimens, but also those illustrating zoology, botany, geology, and mineralogy He was willing to enlist the aid of his friends in his observations, but in investigations thus undertaken by different observers it is not surprising that differences of opinion as to priority in discovery should arise and of such disputes he had more than most men. He quarrelled at one time or another with many of those with whom he had to do and even with his brother WILLIAM. Both the HUNTERS were keen controversialists and neither could brook contradiction. WILLIAM HUNTER is said to have explained this by saying that all anatomists were impatient of contradiction because they were accustomed to the passive submission of the dead body

We hear much of HUNTER'S lack of skill in teaching, we are told by Sir HENRY HOWSE, and others have said the same, that his style was involved and that his phrases were obscure. His books, indeed, do not excel in clearness of diction, but the lucidity of his writings must not be the test of his power of teaching By his fruits must a teacher be known. Men do not gather grapes of thorns, nor can successful pupils result from bad teaching It may with confidence be affirmed that rarely, if ever, have so many brilliant men been the pupils of one surgeon. The majority of the great surgeons in London for some years after his death had been the pupils of JOHN HUNTER. ABERNETHY ASTLEY COOPER, CARLISLE, LYNN, EVERARD HOME, and BLIZARD may be mentioned as examples. On the substance of lectures rather than on the presence of flowery periods depends their success and if the hearers learn what the lecturer would teach them the exact words employed are only a matter of secondary importance And what HUNTER'S pupils learned may be summed up by saying that he laid a foundation of physiology as the basis of pathology and so furnished a true guide to treatment. Modern surgery dates from JOHN HUNTER. The importance of his museum was recognised by HUNTER, to it he devoted many years and much money almost exhausting his pecuniary resources In his will he left directions that the museum should be offered for sale to the Government The British Government can never be accused of over-estimating the claims of science on the national purse—and this is equally true of both political parties, but occasionally it happens that it does support a valuable project, and after years of hesitation the Government purchased the museum. No small credit, too is due to the then Corporation of Surgeons, the Royal College of Surgeons of England, consenting to undertake the custody of this invaluable collection.

The founders of the Hunterian Oration recognised that mental food was not the only nutriment needed by man. So when they founded the Oration they founded at the same time a biennial Hunterian Dinner to which the President of the Royal College of Surgeons of England invites eminent members of the medical and other professions. At the dinner which followed the late oration Earl ROBERTS the tissues," merely application of the lamp being futile unless sufficient pressure be exercised to produce this effect. For this purpose I obtained the chair upon which the patient is seated from Berlin and had the lamp attached to it by means of a powerful bracket, steady pressure of the lens against the patient being maintained by a rack and pinion adjustment and counter pressure by the head rest. From 15 to 20 minutes are sufficient to produce a good reaction. It is noiseless On the score of economy this lamp is a distinct advance on all modifications of Finsen's apparatus. The current is two ampères at a pressure of 40 volts across the arc The rubber water tube connexions have been removed so as not to obscure the lamp I am indebted to Messrs. John Hunter and Co of Liverpool for their skill in carrying out my suggestions. The illustration shows the lamp applied under the chin. This is one of the most difficult positions to reach, but it can be easily treated with this lamp



The lamp at work

Liverpool G G STOPFORD TAYLOR, M.D Durh

THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND

A GENERAL meeting of the Medico-Pyschological Association of Great Britain and Ireland took place at the County Asylum at Mickleover, near Derby, on Feb 12th. There was a large attendance of members from all parts of the United Kingdom

The proceedings commenced in the forenoon with meetings of the council and various committees At 1 30 P M Dr R J Legge, medical superintendent of Mickleover Asylum entertained the company at luncheon. Replying to the toast of his health, which was proposed by Dr. J WIGLESWORTH, Dr LEGGE said that he was greatly obliged to the visiting committee for the readiness with which it had consented to the meeting of the association being held at Mickleover Asylum Colonel GASCOIGNE, the chairman of the asylum committee, whose health was proposed by Dr T OUTTERSON WOOD, said that his committee regarded it not only as a pleasure but as a duty to give every assistance in its power to an association the objects of which were so beneficent as its were.

The general meeting commenced at 3 P M under the presidency of Dr WIGLESWORTH, medical superintendent of the county asylum at Rainhill, Liverpool. The first business was the election of ten new members.

The PRESIDENT then said that there was a motion on the agenda paper in the name of Mr F J Stuart concerning the work of the tuberculosis committee of the association. It would be within the recollection of all present, he remarked, that that committee presented a report which was adopted, but the accuracy of the statistics which it contained was afterwards challenged and the secretary of the committee thereupon wrote to the *British Medical Journal* accepting personal responsibility for them. This, the President thought, was unfortunate, because every member of that committee was equally responsible for what the report contained The council had gone fully into the matter at its meeting that morning , the facts were being examined by an expert whose report, when it appeared, would be presented to the association and all the circumstances would be considered very fully

Mr STUART then moved —

> That a committee be appointed to reconsider and to report on the statistics obtained by the late tuberculosis committee of this association

He proceeded to criticise the statistics, asserting that they exemplified every fault both of omission and of commission that the mind of the most ingenious statistician could devise.

Dr A. S L. NEWINGTON moved as an amendment that the matter should be for the present left in the hands of the committee.

Dr DAVID YELLOWLEES, in seconding the amendment, acknowledged that they were indebted to Mr Stuart for pointing out the errors contained in the report and he believed that the chairman of the committee deplored the errors as much as anyone

After some further discussion the amendment was carried by a large majority

Dr W LLOYD ANDRIEZEN then delivered an address on the Stereoplasm of the Nerve Elements, a Study in Nerve Dynamics. The address was illustrated by lantern views.

Dr ERNEST W WHITE next read a paper entitled "Lunacy and Law the Care and Treatment of Persons of Unsound Mind in Private Houses and Nursing Homes," which was published in THE LANCET of Feb 14th, p 427

Dr OUTTERSON WOOD then read a paper on Lunacy and the Law which we hope to publish on a future occasion.

At the conclusion of the reading of the papers the PRESIDENT said that in the limited period at their disposal it would be impossible to have a discussion which would do justice to the subjects.

It was then moved by Dr OUTTERSON WOOD, seconded, and resolved that the discussion of the papers should be adjourned until the next meeting

In the evening the members dined together at the Midland Hotel at Derby The toast of "The Visitors" was replied to by Colonel GASCOIGNE, Dr C A GREAVES, and Dr E VAUDREY The health of the President was proposed by Dr YELLOWLEES

BRITISH ELECTRO-THERAPEUTIC SOCIETY —The annual meeting of this society was held on Jan 23rd, Dr W S Hedley, the President, being in the chair —Mr Edmund Owen was unanimously elected an honorary member —Dr Hedley then delivered his Presidential Address on Medical Electrology and Radiology in 1902 and also showed a double high frequency installation —The following members were duly elected officers for 1903 —President Dr H. Lewis Jones (London) Vice Presidents Mr W F Brook (Swansea) and Dr Donald Baynes (London) Council Mr W Armstrong (Buxton) Dr J Allan (Chislehurst) Dr David Arthur (London), Dr G B Batten (London), Dr James Barr (Liverpool), Dr J A. Codd (Wolverhampton), Dr S Sloan (Glasgow) Dr George Herschell (London) Mr C R C Lyster (London), Dr E. R. Morton (Taunton), Dr R. Milne Murray (Edinburgh), Dr S P Sunderland (London), Mr E W H Shenton (London) Dr E Solly (Harrogate), and Dr Hugh Walsham (London) Treasurer Dr H. W McClure (London) Honorary Secretaries Mr Chisholm Williams (London) and Mr. J F. Hall Edwards (Birmingham)

A number of important questions were raised at this meeting and many valuable facts were reported which ought to affect the attitude of the medical profession and of legislators alike towards this important matter

The question of the single care of persons of unsound mind is fraught with many difficulties. The forms of certification and the order for admission of a patient into the single charge of a responsible person are identical with those for admission of a private patient to an asylum or registered hospital with the exception that the medical attendant in the former case takes the place of the medical officer of the asylum The patient is visited at stated intervals and reports have to be made by the medical attendant to the Commissioners in Lunacy who periodically visit the patient. Thus abuses are guarded against and efficient official supervision is maintained There are undoubted advantages in the certified single care of private patients of unsound mind. First, there is the privacy which the rich as well as the poor desire alike, while facilities are given for the visits of friends. Secondly, there is the possibility of placing the patient in bright and home-like surroundings Thirdly, there is the avoidance of the "stigma" of treatment in a lunatic asylum. The defects and disadvantages of the treatment of lunatics as individual charges are few and remediable. The chief of these may be the absence of special medical treatment, since the medical attendant who visits the patient is, as a rule, a general practitioner or a physician with no particular experience in the treatment of mental diseases But the general health of the patient may gain by the attendance of a practitioner who is not a specialist. Unskilled nursing is another drawback, as the nurse (male or female) placed in charge of the solitary patient in the private house may be devoid of asylum training and experience The undue interference of friends or relatives is a source of trouble which is well known to retard recovery and which can hardly be avoided except in asylums But whatever may be the drawbacks met with in the system of certified single care they are remediable in many cases. This cannot be said of uncertified single care—the illicit and clandestine treatment of insane patients without certification. Being carried out secretly, without the cognisance and supervision of the Commissioners or Visitors in Lunacy, this system lends itself to abuses and dangers Dr WHITE and Dr OUTTERSON WOOD both cited in the papers read to the Medico-Psychological Association cases of abuse and even of barbarism in the treatment of patients under the system of uncertified single care. A joint committee of the Medico-Psychological Association and of the British Medical Association, which waited on the Lord Chancellor in 1899 gave information that numerous cases of insanity, including many so-called "borderland cases," were clandestinely treated in the country and in the Channel Isles to avoid certification, and showed that many cases of inhumane treatment had been found to exist owing to this, with the result that the chances of recovery for the patient were imperilled thereby As a consequence the Lord Chancellor introduced into the Lunacy Bill of 1900 a clause adapted from the existing Act in the Scottish lunacy law, of which the first section was as follows "If a medical practitioner certifies that a person is suffering from mental disease but that the disease is not confirmed, and that it is expedient with a view to his recovery that he be placed under the care of a person whose name and address are stated in the certificate, for a period therein stated not exceeding six months, then during that period the provisions of Section 315 of the principal Act shall not apply" The rest of the clause made provision for the notification of the fact to the Commissioners in Lunacy who could thus visit the patient, while on the other hand, the publicity of inquiry and the need of making a reception order by a magistrate were obviated. The patient had all the advantages of single care and incurred no "stigma" of publicity or of admission to an asylum. Incipient and unconfirmed cases of insanity could thus be placed and treated under conditions favourable to the patient, agreeable to the relatives, and consistent with the law of the land.

Similar advantages might be extended to patients suffering from insanity or mental unsoundness of a degree not demanding detention and treatment in an asylum or other institution Certain cases of acute and sub-acute alcoholic insanity, many types of borderland insanity, and those cases of insanity which depends upon definite and severe stress and which tends to pass away as the exciting cause disappears, constitute the class of cases suitable for care and treatment without certification and the publicity of a magistrate's order Notification to the Commissioners, as in the class of cases of incipient and unconfirmed insanity, would be sufficient to bring these cases under official cognisance and supervision and would thus prevent illegal and inhumane abuses, and a clause to this end could be introduced into the forthcoming Lunacy Bill The modification suggested by the Medico-Psychological Association in this matter is that in all cases of mental unsoundness in which certification and compulsory detention seem needless, and in borderland cases there should be a system of notification to the Commissioners in Lunacy to the effect that "A. B is a person of unsound mind and is *not* a proper person to be detained.' Such notification would be followed by a visit of a Commissioner in Lunacy or by someone deputed by the Commissioners. If a clause could be inserted into the forthcoming Lunacy Bill to give effect to this scheme another step would be taken in promoting rational and humane treatment and in diminishing the abuses of the law which are still prevalent in connexion with the clandestine treatment of the insane.

Annotations.

"Ne quid nimis."

THE ROYAL LONDON OPHTHALMIC HOSPITAL.

THE question of pulling down hospital buildings upon valuable sites that they may be rebuilt on other and less valuable sites has of late received a great deal of attention the attention not always being supported by accurate knowledge. Consequently when it was announced that the reasons which caused the committee of the Royal London Ophthalmic Hospital, known all over the world as the Moorfields Eye Hospital, to sell the site in the City and to rebuild elsewhere would be publicly discussed considerable had conferred on him the Honorary Fellowship of the College to which he was elected two years ago Lord ROBERTS, as will be seen by our report of his speech in another column, took the opportunity of bearing eloquent testimony to the work in South Africa of the Army Medical Service and its many and distinguished civilian coadjutors. We are grateful to the Commander in Chief for recalling that work to the public mind, and we would beg him to believe that in the Royal Army Medical Corps the country has a body of men who, if they receive fair and sensible treatment and proper opportunities for keeping abreast with scientific developments, can become some of the most valuable public servants possessed by the Empire. We are proud to welcome Lord ROBERTS as a titular member of our profession

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The Etiology of Cancer

IN THE LANCET of Dec 6th, 1902, p 1558, we published a leading article which drew attention to the arguments in favour of the contagiousness of cancer and pointed out the desirability of taking all possible precautions to prevent the spread of the disease. We have received a copy of a presidential address which Mr W GIFFORD NASH delivered at the annual meeting of the South Midland Branch of the British Medical Association in June of last year, in this address Mr NASH discussed the whole question of the causation of cancer Much of the evidence brought forward was quoted in the article to which we have referred, but there were several new facts of interest and importance. A striking case of auto infection which he observed is the following Mr NASH performed an abdominal hysterectomy for malignant disease of the uterus and at the time of the operation the vagina appeared to be healthy, but two months later numerous secondary nodules appeared in the mucous membrane where sutures had been inserted to close the upper opening of the vagina. He quotes some instructive observations of Dr BEHLA. The town of Luckau in Germany consists of a central portion with 3000 inhabitants, and eastern and western suburbs called Kalau and Sando, each of the suburbs having a population of 1000, thus making 5000 in all. From 1875 to 1898 no cases of cancer occurred in the western suburb, Sando, in the main portion of the town cases were not infrequent, while in the eastern suburb, Kalau, 73 deaths from cancer occurred out of a total of 663 deaths The soil of Kalau and of the main portion of the town was flat, low, and moist, that of Sando was elevated, sandy, and dry A stream or ditch encircled the main part of the town and the suburb Kalau, and it appeared that the cases of cancer followed the course of the ditch, and in Kalau, the suburb where cancer was very prevalent, all the gardens were watered from this ditch. The data are insufficient for the expression of any certain opinion, but there is great probability in the view that the semi stagnant stream was somehow causally connected with the great frequency of cancer in the suburb of Kalau The portion of Mr NASH'S address which was of special interest dealt with some investigations which he had made as to the distribution of cancer in Northern Bedfordshire. The total population of the district was a little over 100,000 and so afforded ample material for statistics of value. The period investigated comprised the ten years 1890 to 1899 With regard to the alleged increase in cancer in recent years Mr NASH thinks that the increase is apparent rather than real, and he bases this opinion on the fact that the earlier death certificates were frequently very inexact For instance, many deaths were attributed to "natural causes," "senile decay," and "consumption" Now it is not unreasonable to think that many of the cases of "consumption" in old people were cases of cancer Be this as it may, good cause is shown for thinking that some of the apparent increase in cancer is due to error Some very strong evidence in favour of the infectivity of cancer is supplied by facts collected by Mr NASH "Duplicate cases" are instances of cancer occurring in two or more patients in a house, or in near relatives who are in the habit of visiting one another, or in a person who has been nursing or waiting on a patient suffering from cancer 872 cases of death from cancer were investigated by Mr NASH and he found 30 houses in each of which two or more cases of cancer had occurred A good instance was seen in the village of Tingrith in the practice of Dr J WAUGH A man, T G, died from cancer of the lip in 1894 He was waited on by S D who died in 1897 from cancer of the ovaries. T G's wife died from cancer of the stomach in June, 1899 These were the only cases of cancer which occurred in that village during the ten years In another important series, W O, aged 71 years, died from cancer at Campton in 1876 His wife had cancer of the breast for eight or nine years and died in another house in 1886. M. S., aged 74 years, nursed Mrs. O and died in an adjacent house from cancer of the liver in 1893 Mrs. B, aged 73 years, occupied the same cottage as Mrs O after her death, and died from cancer of the umbilicus in 1892, and her daughter, aged 43 years, who slept in the same bed with her, died from cancer of the breast in 1896 From observations as to the altitude of the various villages in the district Mr NASH finds that there are more cases at heights above 300 feet than below 150 feet These results are important, as they do not accord with other observations He considers that the nature of the soil has very little influence on the occurrence of cancer but that the large number of instances where two or more cases occur in the same house or in persons intimately associated points to the disease being infectious. He urges that all the clothes and bedding used by a patient suffering from cancer should be destroyed and that care should be taken to disinfect thoroughly the room which the patient has inhabited

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Lunacy Law and Practice in Regard to Private Patients

THE address given at the meeting of the Medico-Psychological Association in November last by Sir WILLIAM GOWERS, upon Lunacy and the Law,[1] has served to bring out important papers presenting other points for consideration These papers were read at the last meeting of the Medico-Psychological Association of Great Britain and Ireland held at the County Asylum at Mickleover, near Derby, on Feb 12th, and one of them by Dr ERNEST W WHITE was published in THE LANCET of Feb 14th, p. 427

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[1] THE LANCET, Nov 22nd, 1902 p 1369

about and spread disease," and he thought there should be power to enforce vaccination or revaccination among them unless they had a certificate of recent vaccination. If they would not submit they might be incarcerated until they had a proper mind on the subject Mr F Vacher, medical officer of health of the Cheshire County Council, thought that not only hawkers but all tramps should be licensed, an expedient somewhat difficult to carry out. Dr J B Wilkinson, medical officer of health of Oldham, illustrating the value of isolation, said that the stamping out of typhus fever would have been impossible if the cases had had to be treated in the slum dwellings where they most frequently occurred. In his opinion the majority of the 'return' cases of scarlet fever were due, not to premature discharge from hospital, 'but to the absence of proper precautions and thorough disinfection of all clothing at the patient's house" It is well to bear this in mind when considering the length of time that clothing is known to retain infection. Several lay members took part in the discussion. One gentleman thought that to make all tramps carry a licence would be considered too great an interference with the liberty of the subject and no doubt many may be found to hold that the subject ought to be allowed to be a nuisance and a danger to his fellow subjects. Alderman McDougall said that the tramp question caused great concern to members of sanitary authorities and he was glad to know it was engaging the attention of so many capable minds. Mr Wynter Blyth promised that Dr Young's suggestion that a sub-committee might draw up lines as to the investigation respecting scarlet fever would be considered by the institute.

THE FREEZING POINT OF MILK.

In a recent paper read before the Medical Society of Bologna and reported in *Il Policlinico* of Jan. 31st Dr Giuseppe Bellei discussed the application of cryoscopy in the analysis of milk. The freezing point of milk, he said, has been determined by many observers who have for the most part obtained concordant results, as it varied within very narrow limits there was an obvious interest in discovering how far it would be affected by ordinary and recognised modifications of the quality and the composition of milk. The thermometer used for this purpose is divided into hundredths of 1° C The apparatus has already been described and figured in THE LANCET by Dr Alexander Ogston [1] Dr Bellei examined 50 samples of milk obtained from different cowkeepers in the vicinity of Bologna, determining in each case the freezing point, the specific gravity the milk sugar, and the ash. He found that in the normal milk the freezing point varied from −0·53° C to −0·57°, the specific gravity varied from 1029 to 1033 without showing any relation to the freezing point, the milk sugar varied from 3·70 to 5·77 per cent., and the ash varied from 0·58 to 0·85 per cent. When the milk became sour the freezing point fell and continued to fall as the souring process progressed. Addition of water raised the freezing point, 10 per cent. of added water might raise it to −0·51° and could be determined with certainty by means of cryoscopy Simultaneous additions of water, starch, and dextrine produced no effect beyond that due to the admixture of water The freezing point of scalded milk was lower than that of normal milk, the addition of water in quantity sufficient to bring the specific gravity to 1030 or 1032 gave a freezing point of from −0·53° to −0·55°, so that it was not possible to distinguish scalded milk by cryoscopy The freezing point was not affected by the presence of small amounts of bicarbonate of sodium, salicylic acid, or boric acid, but it was lowered by the addition of two parts of formalin per 1000 of milk. Some further information relative to the behaviour of milk at temperatures near to its freezing point will be found in Mr. Henry Droop Richmond's "Dairy Chemistry"

THE DISTRIBUTION OF PLAGUE

DURING the week ending Feb 1st 4 cases of, and 2 deaths from plague occurred throughout all Egypt. Of the above cases 2 occurred at Barshoum el Koubra and 2 at Tant-el Ghezireh, Toukh district, Galoubieh Province. For the week ending Feb 8th 4 cases of plague occurred throughout all Egypt. Of these 3 cases occurred at Tant-El Ghezireh and 1 at Barshoum-el Koubra. As regards the Mauritius a telegram received at the Colonial Office on Feb. 13th states that for the week ending Feb 12th there were 4 cases of bubonic plague and 1 death from the disease. As regards the Cape Colony, the medical officer of health for the colony states that for the week ending Jan. 24th no case of plague in any human being has been discovered at any place in the colony At the end of the week one case of plague remained under treatment at the Plague Hospital, Port Elizabeth. Plague-infected rats have been found at Port Elizabeth during the week, the last being discovered on Jan. 18th.

THE ROYAL MEDICAL BENEVOLENT COLLEGE

THE council of the Royal Medical Benevolent College is about to make a determined effort to put the finances of the charitable side of the institution on a sound basis. For some years the absence of a small reserve of cash upon which to draw has been greatly felt, in consequence of which year after year money has had to be borrowed from the bankers at interest. At the end of the year 1900 £2500 were owing, at the end of 1901 £400 and at the end of last year £2900 In order to pay off a portion of this loan, and to meet current pressing liabilities, a part of the small amount of funded property of the institution was recently sold, and, unfortunately, since then expensive structural repairs have had to be undertaken at the College which will make the task of managing the finances still more difficult. The foundation stone of the institution was laid in July, 1853, and the scheme of the council is to raise a jubilee fund of £10 000 which would enable it to pay off the balance of the loan from the bankers, to meet all other liabilities, to re-purchase the stock which has recently been sold, and to put by a sum of money upon which to draw when, as will happen with all charitable institutions, a lean year occurs. The prospects of this jubilee special appeal are excellent, since H.R.H. the Prince of Wales has graciously consented, as has already been announced in these columns, to preside at the festival dinner on Wednesday, June 10th, in aid of the funds of the charity We are confident that nothing would please His Royal Highness more than to know that, as a result of his decision to select this dinner for his presidency the finances of the charity had been placed on a sound footing and that the system of practically living from hand to mouth had disappeared for many years to come Medical men, for whose benefit the institution exists, should, therefore, leave no stone unturned to make the dinner a financial success £10,000 is a large sum to collect, but considering that there are 37 000 members of the medical profession the work ought easily to be accomplished. Almost all should give something many ought to contribute liberally and a few could give largely Those who have wealthy patients might appropriately take this opportunity of enlisting their sympathy, since many persons realise that the payment of the medical attendant's bill rarely recompenses him for the anxiety and risk which he incurs. It behoves the profession to prove to His Royal Highness that his kindness in coming forward to help an important medical charity is fully appreciated. We are quite sure that whatever the treasurer, Dr interest was felt by the medical profession On Monday last, Feb 16th, the Lord Mayor opened 30 more beds at the new building of this institution in the City-road and occasion was taken to make a statement upon circumstances of very great medical and public concern. With regard to the general question of the removal of hospitals from old sites to new ones but little was said, which in itself showed that the speakers knew what they were talking about, for the wisdom or folly of removing hospitals must be judged on the individual merits of each case. There can be no general principle. With regard to the removal of the old Moorfields Hospital to its present site it can be pointed out against the policy which has been adopted that a big hospital unable to open its beds because of its heavy rates is, as far as the public is concerned, not so satisfactory an institution as a small but efficient hospital having all its beds occupied This is true, but in the case of Moorfields the hospital is said to have been quite unsuitable to the growing demands which were made upon it, and moreover it was intimated to the authorities by King Edward's (then the Prince of Wales's) Hospital Fund for London that a grant was given to the hospital only by reason of the fact that it was being removed to a new site. That the management of the hospital has been everything that could be desired is shown by the fact that the last annual grant of the Fund was £1100, with a special donation of £2500 towards the 30 beds which the Lord Mayor of London has now formally declared open In discussing the reasons which actuated the committee of management to remove to a new site the vice chairman of the committee, Mr H. Davison, admitted that the hospital had been removed from a site where they had lived almost rent free, and where they were subject to only a nominal amount for rates, to a new site where with a much larger building heavier expenses and rates were incurred. He pointed out, however, that though the committee was prepared for increased expenditure it did not expect that the rating authorities would treat the hospital on a different basis from that of similar institutions in the same district The rates paid by the Royal Ophthalmic Hospital were heavier than those paid by any hospital in London except St. Thomas's Hospital and Guy's Hospital. The old hospital was totally inadequate to deal with the increasing number of cases requiring relief, it was not in accordance with the requirements of modern surgery, and it was also insanitary Moreover, the old site did not cover a sufficient area for the erection of a new and adequate building Whatever might be said of its policy in removing, he claimed that no one could say that the committee had not acted in a businesslike way the last bill for the rebuilding had been paid and there was a credit balance of £600 The Lord Mayor, in reply to a vote of thanks, said with regard to the rating of hospitals that the time was coming, and coming very soon, when the question of some aid to the hospitals from the rates would have to be considered. If the authorities would not exempt hospitals from taxation but insisted upon exacting from them every farthing they possibly could the question would have to be considered whether the local authorities should not be made to contribute to these institutions. Our readers know that we are not in favour of rate-supported hospitals for several obvious reasons, the first and principal of which is that the rating authorities would not be able to obtain medical service comparable to that which is now given gratuitously to our noble medical charities But although we do not desire to see our hospitals supported out of the rates and therefore placed under the jurisdiction of the rating authorities we certainly consider that the debt of the community to the charities should be acknowledged by some remission of the rates upon hospitals and similar institutions. The question is a very large one and, as the Lord Mayor said, is one that calls for immediate consideration. We hope that he will assist to keep it before the public eye.

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[1] THE LANCET Nov 9th, 1901, p. 1253.

SESSIONAL MEETING OF THE SANITARY INSTITUTE

IT was suggested at the congress of the Sanitary Institute in Manchester last September that occasional meetings should be held in large centres of population for the discussion of questions relating to sanitation. The first of these meetings was held in Manchester on Feb 7th at the Municipal School of Technology, under the presidency of Mr A. Wynter Blyth, chairman of the council of the institute. There was a good attendance Dr Meredith Young, medical officer of health of Stockport, opened a discussion on the Removal and Isolation of Infective Patients in Populous Districts With regard to such diseases as small pox and typhus fever there was no question as to the usefulness of segregation Scarlet fever was a disease requiring "peculiar delicacy and care in the matter of isolation." Referring to Dr O K. Millard's recent writings on the subject and to the untoward occurrence of "return" cases, he said that his indictment might now be looked upon as an attack, not so much upon hospital isolation *per se*, as upon isolation hospital administration, and he believed that when care was bestowed on the lines laid down by Dr J Niven and Dr W J R. Simpson the benefits ensuing on the isolation of other infectious diseases would manifest themselves in connexion with scarlet fever. He urged that all investigations as to hospital isolation and its effects on the occurrence of complications and on mortality should be carried out on similar lines, so that a greater accumulation of facts and figures might be available. He submitted, therefore, that lines of inquiry and suggestions as to the mode of investigations should be drawn up by a sub-committee of the Sanitary Institute, and sent out to all medical officers of health willing to carry out an investigation. He advocated a more extensive course of instruction for medical students in infectious diseases and asked if it were not almost a scandal that a training of only a few weeks' duration should be given in a branch of knowledge on the possession of which the safety of large populations frequently hung He spoke with no uncertain voice as to the measures for the repression of small pox. If asked "to choose one, and one only, he would unhesitatingly throw to the winds notification, isolation, disinfection, quarantine, 'Leicester' system, or any other system, and pin his faith wholly and solely to universal vaccination." In these days of vacillation and timidity as to vaccination, of yielding to the tyranny of the minority, to which we owe the present widespread epidemic of small pox, with its many deaths, the trouble and distress that accompany it, and the expenditure on account of it going on all over the country—which in the aggregate must be enormous—it is refreshing to have a definite statement from one whose position and experience lend weight to his opinion Mr T W H. Garstang, medical officer of health of Bucklow, said he was satisfied that in country districts hospital isolation reduced the prevalence of scarlet fever and that hospital nursing was infinitely preferable for any individual patient to the casual home treatment in the houses of the working classes Mr E. Sergeant, medical officer of health under the Lancashire County Council, agreed as to the advantages of isolation in scarlet fever and said that there should be the same medical supervision over the admissions as over the discharges, for he had known of cases admitted where the patients were not suffering from scarlet fever at all. He attributed the spread of small pox largely to the vagrants who went about the country 'These tramps, these parasites, who were a nuisance to society, were allowed to go that would come away easily was removed and during the dressing there was no bleeding but three-quarters of an hour later there was severe hæmorrhage. Gauze packing was performed and two and a half pints of saline solution were injected into a vein. Death occurred four hours later The necropsy showed a greatly dilated right ureter blocked at its vesical end by a calculus of about the size of a large bean. The kidney was converted into a sac containing purulent urine The bladder contained purulent urine and showed signs of inflammation There was an aneurysm of the abdominal aorta above the cœliac axis which had burst into the cellular tissue about the right kidney, forming a false sac, which was strengthened by a deposit of clot. The wound in the loin communicated with the sac, into which the gauze had been packed The vertebræ were eroded. The accident during the lumbar operation was different from that in which an aneurysm is opened by mistake for an abscess. Here a condition of the kidney requiring operation was known to exist and the correct route was adopted But on the way to the kidney was the false aneurysmal sac, the opening of which was unavoidable.

INTERNATIONAL CONGRESS OF THE MEDICAL PRESS

THE Second International Congress of the Medical Press will open at Madrid on Monday, April 20th under the personal presidency of the King of Spain. Dr Cornil, President of the International Association of the Medical Press, M. Cortezo, chairman of the organising committee, Dr Larra y Cerezo, secretary general of the congress, and the Spanish Minister of Instruction are expected to take part in the opening ceremony Among many interesting papers promised may be mentioned one on the Education of the Medical Journalist, by Dr Rodrigues Mendez, the Rector of the University of Barcelona, and a History of the Spanish Medical Press by Dr Larra y Cerezo Dr R. Blondel, secretary general of the International Association of the Medical Press, will make a communication upon the formation of an international bureau of scientific information and many important questions affecting the conduct and ethics of medical journalism are also set down for debate. Gentlemen desirous of attending the congress should communicate with Dr Larra y Cerezo 17, Léganitos, Madrid, concerning their subscription (25 pesetas, or 16*s* 8*d*) their lodging accommodation in Madrid, and reduced railway fares The same gentleman should also be informed immediately by anyone who desires to read a paper at the congress. All questions regarding the International Association of the Medical Press should be addressed to Dr R. Blondel, 8, Rue de Castellane Paris.

AN EPIDEMIC OF INFANTILE PARALYSIS

ONLY in recent years has the occurrence of infantile paralysis in epidemics been recognised In the *Boston Medical and Surgical Journal* of Dec. 11th, 1902, Dr Charles F Painter has described an epidemic which occurred in 1900 in Gloucester a seaport of Massachusetts with a population of 25,000 He gives notes of 31 cases which he examined in the months of June July and August, but some other cases also were observed by the local practitioners. Only one death occurred There was paralysis of the leg Three days later cerebral symptoms ensued and the child died in 36 hours from what seemed to be cerebro-spinal meningitis Unfortunately, a necropsy could not be obtained No definite cause for the epidemic could be traced but the majority of the cases occurred at, or more frequently from 24 to 36 hours after, periods of extreme heat. Sometimes the symptoms followed bathing in the sea. The following statistics of the epidemic are of interest. There were 23 males to nine females. The youngest patient was of the age of 13 months and the oldest of 10 years, 21 patients were of the age of three years or younger, eight were of the age of two years or younger, and seven were of the age of four years or older Dr. P Marie cites foreign epidemics of infantile paralysis as proof of the infectious nature of the disease. The following are the principal epidemics reported In the *American Journal of the Medical Sciences* in 1843 Colmer has described an "epidemic of teething paralysis From eight to 10 cases occurred within a radius of three miles in three months In 1881 Bergenholtz observed 13 cases in Umea, Sweden, in a period of six weeks Onhohm, in Mendal, Norway reported about the same time nine cases which occurred in six weeks in a small community In 1885 Cordier reported 13 cases near Lyons which occurred in June and July Calverly reported the greatest epidemic on record in the valley of the Otter river—126 cases with a mortality of 18. But some neurologists doubt the nature of the epidemic as the mortality was so high and there were symptoms suggestive of epidemic cerebro-spinal meningitis

NATIONAL HEALTH AND PHYSICAL EDUCATION

IN THE LANCET of Feb 14th, p 471, we published a letter under the above heading from Sir Lauder Brunton which commenced with a quotation from Burns. After we had gone to press we received another communication from Sir Lauder Brunton saying that he had doubts as to the accuracy of his quotation but that being away from his books he had no means of checking his reference. We have had neither the time nor the opportunity to collate all the editions of Burns but the passage is generally printed as follows —

> O wad *some* pow r the giftie gie us
> To see oursels as ithers see us.

Sir Lauder Brunton makes two additions to his letter which are as follows The first is with reference to the passage quoted near the end of his former letter, from Mr Francis Palmer's book, "Russian Life in Town and Country" and concerns the word 'artel." The meaning of this word is a small guild. Sir Lauder Brunton then goes on to say ' Since writing my former letter I have seen in the *Daily Telegraph* of Thursday, Feb 5th, p. 9, under the title 'Boy Smokers,' a still more staggering statement than Sir Frederick Maurice s At a meeting of the British Anti Tobacco and Anti Narcotic League on Tuesday, Feb 3rd, Dr T P Smith said that out of 11,000 young men who volunteered for active service during the late war less than 1500 passed the test of medical examination.

THE CURABILITY OF TABES DORSALIS AND OTHER PARA-SYPHILITIC AFFECTIONS BY THE INTENSIVE MERCURIAL TREATMENT

DR. LEREDDE of Paris, in a contribution to the *Philadelphia Medical Journal* of Jan 10th calls attention to this most important matter The "intensive ' mercurial treatment of tabes dorsalis and of general paralysis is one of the most recent developments in the treatment of cerebro-spinal diseases and an account has already been given in THE LANCET of some interesting results achieved in this respect by Dr Lemoine in the treatment of general paralysis[1] Dr Leredde declares that after having successfully treated a case of tabes dorsalis by this method and investigated thoroughly several cases of general paralysis which have recovered or improved markedly under treatment he is now convinced that these diseases may be regarded as essentially curable. The unsuccessful cases he points out, are due to incorrect treatment or to overlooking the presence of gross and irremediable organic lesions of the nervous

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[1] THE LANCET Sept. 6th 1902, p 690

C Holman, and the officials can do to make this jubilee special appeal a success will be done, but their efforts will be of little avail if medical men fail to make a serious effort to help. A promised donation spread over a number of years will be almost as welcome as the money given down, and, needless to add, contributions of 5*s* and 10*s* will be gladly received. Most of our readers are doubtless aware of the work carried on by the institution. Pensions of £30 a year are given to 50 aged medical men or to the widows of those deceased and 50 foundation scholars, the sons of medical men in necessitous circumstances, receive free of charge an education of the highest class with board and clothing. To maintain the benevolent side of the institution a sum of over £6000 a year is required, the greater part of which is derived from voluntary contributions. To obtain this sum every effort of the treasurer and the officials has to be employed, so that we trust soon to be able to congratulate them upon the placing of their finances upon a sound basis, at any rate, for some time to come.

WHAT IS BAD AIR?

IT would seem to be a reproach to chemical science that at the present time we are not able to ascertain by its application the exact nature of the vitiating constituent of the human breath. Certain it is that the chief constituent added to the air by respiration—namely, carbonic acid gas—*per se* has little or no effect upon the health. Indeed, it has been stated that men can breathe for two or three hours without marked discomfort air which contains—with, of course, its full complement of oxygen—as much as 20 per cent. of carbonic acid and the presence of 1 per cent has not the slightest effect. But if the carbonic acid in the air be raised only to one-tenth per cent by human respiration the resulting air is most unwholesome and detrimental. There is no chemical difference, of course, between the carbonic acid gas of the human breath and the carbonic acid gas obtained from chalk or from the combustion of carbon or coal gas. The obvious deduction is that the carbonic acid gas of respiration has a poisonous companion and this companion has so far eluded all attempts at isolation and recognition. This poisonous constituent may occur as a constant quantity in relation to the carbonic acid gas, possibly it does not. We do not know, although it is very important that this point should be determined. We are content, however, to judge the impurity of air by measuring the amount of carbonic acid in it and to some extent this measure is a valuable guide. It is not satisfactory that the evidence of impurity is not obtained more directly than this. Everyone knows that air vitiated by human respiration is offensive and poisonous. In other words, bad ventilation—that is, a condition in which the products of human respiration are not removed—sooner or later produces toxic symptoms. There are usually loss of appetite discomfort, severe headache, and malaise which cannot be traced to infective organisms any more than the absence of such organisms can explain the curative effects of fresh air. Moreover, it is a common experience that a sojourn in a badly ventilated room occupied by a great number of people predisposes to disease. There seems little doubt that the impurity of the air has some connexion with the "catching of a cold." The presence of respiratory products is declared by an offensive smell and it seems odd that chemical analysis is not able to lay bare what actually the nose readily detects. The effect of bad air upon the health cannot simply be that of an offensive smell, though that undoubtedly plays a part. Quite recently chemical analysis and bacteriological analysis have at the instance of the London County Council been directed to the examination of the air of the tube railways. The results as might be expected, showed a considerable increase of carbonic acid gas in the air of the "tube" over that found in the air above ground, while micro-organisms appeared to be present in "tube" air in only a slightly greater proportion than in fresh air, and certainly the result was no worse than is shown by the examination of the air of an ordinary inhabited room. In other words, the carbonic acid of the air of the tube railways and the bacteriological flora found offer no satisfactory explanation of the admitted fact that that air is decidedly unwholesome and offensive. It not only is absolutely devoid of the vitalising effect of fresh air but it has also a most sickening smell and sooner or later gives rise to a sense of oppression. What is this poison? It seems to us that the whole question needs a much more extended inquiry than has been hitherto carried out, for surely chemistry and physiology hand in hand could eventually elucidate this matter. One point in regard to the smell of the air of the tube railways is, however, often forgotten—namely, that it is, in part at any rate, derived from the oil on the bearings of the engines and the machinery. We are certain that, however effectual the ventilation of the tube railways may ultimately become the air will never be free from the smell of machinery in motion.

CALCULUS IMPACTED IN THE LOWER END OF THE URETER WITH ANEURYSM OF THE ABDOMINAL AORTA RUPTURED INTO THE PERI-RENAL CELLULAR TISSUE

IN the *Intercolonial Journal of Australasia* for December Mr W Moore has recorded an extraordinary case in which two very rare conditions co-existed, rendering diagnosis impossible. A man, aged 44 years, was admitted to hospital on Oct. 20th complaining of pain in the abdomen and back which had confined him to bed for a week. Four days before admission he suffered much from vomiting. For three years he had suffered a good deal and for the last year had been almost continuously ill. Attacks of pain came on suddenly and generally were attended at the onset with vomiting. Sometimes he had a slight aching pain on micturition. He was wasted and sallow and his conjunctivæ were yellowish. The abdomen was full, especially above the umbilicus. The epigastric and right hypochondriac regions were slightly tender. With much misgiving Mr Moore performed exploratory laparotomy on Oct 27th, making an incision over the appendix which was found to be very long but not diseased and which was removed. This incision was closed and another one was made obliquely below the right ribs. The gall bladder and ducts were explored and were found to be normal. A large cyst in the region of the right kidney was tapped and fluid looking and smelling like urine was drawn off. The incision was closed, leaving a gauze drain. After the operation a small quantity of albumin was found in the urine. On Nov 3rd pus was found in the urine. On the 24th the right kidney was exposed by a lumbar incision. After dividing the aponeurosis and exposing the cellular tissue the finger was introduced and a sensation of something giving way was noticed. A little dark soft clot escaped and then there was such a gush of bright blood as to suggest that an aneurysm had been opened. The finger was kept in the opening and counter pressure was made on the abdomen, controlling the hæmorrhage. The wound was packed with iodoform gauze and sutured. When the wound was dressed on the next day the gauze plugs pulsated. There had been a little oozing of blood. On Nov 29th the patient could not pass urine which subsequently had to be drawn off. On Dec 3rd all the gauze addition to commencing the year with a deficit of £14 000 incurring, as they apparently intend to incur, an extra ordinary expenditure of over £30,000

THE PROFESSOR OF ANATOMY IN THE UNIVERSITY OF EDINBURGH

Professor D J Cunningham, F R.S. late Professor of Anatomy in Trinity College, Dublin, has been appointed Professor of Anatomy in the University of Edinburgh in the room of Sir William Turner, now Principal of the University Professor Cunningham's excellent practical and literary work are too well known to our readers to need any insistence upon from us, but it will be interesting to mention his obvious claims to his new post Professor Cunningham, the youngest son of the Principal of St. Mary's College, St. Andrews, was educated at the University of Edinburgh, where after taking his medical degree he became demonstrator of anatomy under Sir William Turner for six years, afterwards being elected Professor of Anatomy at Dublin, a post which he has now held for 20 years The Universities of Oxford, Cambridge, Edinburgh, and London, and the Victoria University, have all utilised his services as an examiner, while he has sat upon more than one Royal Commission. Professor Cunningham is one of those rare people, a thorough expert in his subject with wide knowledge outside it, and the loss to Trinity College, Dublin, is a heavy one

EXPENSES FOR MAINTENANCE OF PAUPER LUNATICS IN ASYLUMS

UNDER the provisions of the Lunacy Act, 1890, Poor law guardians are required to pay a certain sum per head per week for the maintenance of their insane poor in the county asylums. The amount of this weekly sum is fixed by the visiting committee of the asylum and it is subject to a revision every six months Changes are chiefly due to variations in the contract price of foods, clothing, and necessaries It is customary for the committee to supply the guardians with statements of the amounts to be charged during the following half year, but to the power of the committee there are limits They are indicated in the sub-clauses of section 283 of the Act above mentioned. To understand these limits it must be remembered that lunatics in an asylum may be grouped in two classes—those who have a "settlement in the county to which the asylum belongs and those who have settlements in other counties. For patients in the first named class the committee may fix the weekly cost per head at a sum not exceeding 14*s*, but sub-clause 2 gives power to the authority to whom the asylum belongs to increase the amount to any sum that 'seems necessary' provided that the order for such increase be published in a local newspaper For patients in the second class—namely, those who are in an asylum for a county in which they have not a settlement—the committee may fix under the terms of sub-clause 3, a sum not exceeding 14*s* It was to this second class that Eliza Whent belonged. She was a patient in the Essex county asylum, but she had a settlement in the Samford union, Suffolk. At the Brentwood county court an action was brought on Jan. 28th by the committee of the Essex county asylum against the guardians of the Samford union for recovery, for the maintenance of Eliza Whent, of a sum based on a weekly charge of £1 1*s*. The defendants declined to pay at a greater rate than that of 14*s*. per week, alleging that the committee could not legally charge, and that they, the defendants could not legally pay, any sum in excess of 14*s* for each week of maintenance. They contended that sub-clause 3 of section 283 of the Lunacy Act prevented the committee of the asylum from fixing a greater weekly sum than 14*s* His Honour (Judge Tindal Atkinson) gave judgment in favour of the defendants and he also gave leave to the committee to appeal. His Honour held that the resolution of the committee fixing the weekly cost of maintenance of each "out-county" patient at £1 1*s* was *ultra vires* We think that this decision is an important one. Unless it be reversed upon appeal or unless sub-clause 3 of section 283 be modified in the lunacy legislation expected in the near future a very anomalous state of matters will continue. We shall see authorities of county asylums charging guardians of their own county for their own county patients any weekly sum which 'seems necessary," while for patients who have settlements in other counties no greater charge than 14*s* per head per week can legally be made. From consideration of the above case we gather that to the list of faulty, contradictory, and indefinite clauses in the Lunacy Act of 1890 one more must be added.

WE understand that the report of the departmental committee on poisons has been issued, in which it is suggested that certain alterations relating to the regulation of the sale of arsenic tobacco extracts, and carbolic acid should be made. It is not surprising that a minority report is added, since the proposal to allow greater latitude in regard to the sale of poisons may be fraught with serious issues We hope to deal with this important report next week.

DR J S. Macdonald, professor of physiology at the University College, Sheffield, will lecture on "Nerve as a Concentration Cell" on Friday Feb 27th, at 5 P M, in the Physiological Laboratory of the University of London. Professor C S. Sherrington, Dr E. H Starling, Dr A. D Waller, and other physiologists are expected to join in the discussion of the subject.

THE annual meeting of the Coal Smoke Abatement Society will be held, by permission of the Duke of Westminster, at Grosvenor House, at 3 o'clock on Tuesday afternoon, Feb 24th. The Duke of Argyll, K.T, has consented to preside over the meeting and the speakers will include Lord Robert Cecil, K C, Sir James Crichton Browne, and Mr Shirley Murphy

THE next meeting of the Epidemiological Society will take place at 11, Chandos-street, Cavendish square London, W, on Wednesday, Feb 25th, at 8 30 P M. when a discussion will be opened by Dr Patrick Manson C M G, F R.S, on the Panama Canal and the Introduction of Yellow Fever into Asia.

A MEETING of the Neurological Society will be held on Thursday next, Feb 26th, at 8 P M., at 11, Chandos street, Cavendish square, London, W, and will be devoted to the exhibition and discussion of cases of Myopathic Muscular Atrophy

THE medical department of the Local Government Board has issued a report of an investigation which has been in progress for some years as to lead poisoning by means of water

WE regret to hear of the death of Mr W J C Miller, who was for over 20 years registrar of the General Medical Council.

CLIFTON DISPENSARY —The ninetieth annual meeting of the subscribers to this institution was held on Feb. 3rd under the presidency of the Rev Canon Wallace. The medical report stated that 3579 patients had been treated during 1902, including 73 midwifery cases, being an increase as compared with the preceding year The financial statement showed that the total income amounted to £755, and a small favourable balance remained.

system In the earlier stages of tabes dorsalis and of general paralysis when the symptoms are definite and the lesions have not involved actual destruction of nerve tissue—that is, when the morbid process consists mainly of vascular changes in the nervous system and of early nutritive degenerations of the nerve cells—the improvement obtained by cases under treatment which he cites has been so constant and enduring that he is confident in regarding them as cured. With Fournier of Paris Dr Leredde regards nine tenths of all cases of tabes dorsalis and of general paralysis as parasyphilitic affections and he cites the observations recently made by Professor Renaut on the morbid changes of the blood vessels in the early stages of syphilis which are curable under mercurial treatment. Similar changes mark the onset of tabes and of general paralysis and thus an anatomical basis, he considers, is found for the curability of these affections also

THE PREVALENCE OF SMALL-POX

THE following circular letters were recently issued by the Local Government Board for Scotland to the border counties and burghs , it may be of importance to other local authorities to be made aware of the present danger —

To the County Clerk.

SIR,—I am directed by the Board to request your serious attention to the rapid spread of small pox in the northern counties of England and to the probability of the introduction of infection to Scotland through the agency of vagrants.

It is a matter of observation by English local authorities at the present time that the disease is being conveyed from point to point by tramps. I am therefore to suggest for the consideration of the local authorities of your county the expediency of addressing a general warning to this effect to the inspectors of poor and parochial medical officers of the parishes adjacent to the border and also of communicating with chief constables with a view to securing the observation of such persons by the police I am, Sir, your obedient servant

(Signed) A. MURRAY,
for Secretary

To the Town Clerk.

SIR,—I am directed by the Board to request your serious attention to the rapid spread of small pox in the northern counties of England and to the probability of the introduction of infection to Scotland through the agency of vagrants

It is a matter of observation by English local authorities at the present time that the disease is being conveyed from point to point by tramps I am therefore to suggest for the consideration of your local authority the expediency of bringing this fact to the knowledge of your inspector of common lodging houses and of officials who have relations with the class in question including the police so that they may bear in mind the likelihood of encountering this disease

I am Sir your obedient servant,
(Signed) A. MURRAY,
for Secretary

A copy of the above circular letter was sent to the medical officer of health of each of the local authorities concerned.

THE EMBRYO-PATHOLOGY OF TUMOURS

A PAPER on the cause of cancer and other tumours, with suggestions as to the line of research to be taken up for the discovery of a cure for cancer, was read before the Royal Society of Edinburgh on Feb 16th by Dr John Beard, lecturer on embryology and vertebrate zoology in the University of Edinburgh. He showed that tumours are referable (1) to abnormal attempts at development on the part of one or more vagrant or aberrant germ cells, and (2) to the bizarre pathological manifestation by such of some greater or less portion of the life cycle of normal animal development. He is altogether opposed to the hypothesis of "rests" of embryonic organs, according to which many pathologists, following Cohnheim have attempted to explain the formation of tumours by a sudden awakening of such "rests" into activity He maintains that germ cells never arise at the first division of the fertilised egg and that there must always be a number of cleavage products not concerned in the formation either of an embryo or of germ cells These products give rise to an asexual foundation upon which the germ-cells, and with them an embryo, take their origin In human development this foundation, the chorion, is always present before any trace of an embryo appears. It is never the task of the fertilised egg to give rise directly to an embryo, but rather to a set of germ cells, each and every one of which may develop an embryo If in the human subject two such germ cells develop with abnormalities on the part of one there may result a more or less rudimentary embryo, or what has been called an embryoma by Professor Max Wilms—i.e., a tumour It apparently never happens that all of the primary germ cells find their way to the normal position for furnishing the foundation of the reproductive products A portion of them come to lie in one or other of very many abnormal positions, so that hardly a single organ of the body is free from the risk of possible "infection" by such vagrant germ-cells which are endowed with great potentialities for mischief Dr Beard has already explained his views in an article published in THE LANCET of June 21st, 1902, p 1758, and has there made the suggestion that if a vagrant germ cell skips the part of the cycle immediately before it its normal development may lead to the pathological formation of the representative of a chorion possessed of unlimited powers of growth, a cancer The continuation of his argument is somewhat as follows. In every normal development the chorion or syncytium commences to degenerate at a well-defined epoch, the so-called "critical period," and if it did not do so its further unrestricted growth would lead to a form of cancer—deciduoma malignum or chorion epithelioma. The degeneration of the chorion and with this the arrest of its growth are in all probability brought about by some substance either contained within the fœtal allantoic placenta or present in the blood of the fœtus, and just as the fœtal allantoic placenta or the fœtal blood can induce degeneration of the chorion, so it ought to be possible from allantoic placentæ or fœtal blood of animals such as the pig to prepare an extract or a serum with potent workings upon the cells of cancer

CHARING CROSS HOSPITAL

THE eighty second annual report of the council of Charing Cross Hospital lies before us and from it we learn that the nurses' new home is practically complete whilst the rest of the new buildings are making good progress. The two notable events of the past year were the laying of the foundation stone of the new buildings with full masonic ceremony by the Grand Master of England, H.R.H the Duke of Connaught, and the festival dinner at which the Duke of Fife presided. At this dinner the total sum collected was £5477 and we can cordially indorse the Duke of Fife's words in which he expressed the urgent need for new buildings and new arrangements for the hospital. Also it is certain that the hospital does admirable work and is obviously a boon to the neighbourhood in which it is situated. It has been said that the hospital should be moved. We do not think so, but the concluding sentences of the report of the council give cause for reflection The council says that it "cannot but view the present financial situation of the hospital with considerable anxiety The past year has been unfavourable for obtaining money The year 1903 begins with a deficit of £14,000 The amount required for the maintenance of the hospital and convalescent home is £17,000, of which £15,000 has to be raised from benevolent sources. In 1902 the extraordinary expenditure amounted to £33,000 It is not likely that a less sum will be required this year, making a total of £62,000" In the year 1900 we see by Burdett's 'Hospitals and Charities' that the extraordinary expenditure amounted to £3573, so we take it that the addition of some £29,000 to the extraordinary expenditure is due to charges for sites and for building We have no doubt that new accommodation and increased space are urgently required if the hospital is not to fall back in its good work, but we think that the authorities might well pause before, in people preferring margarine to butter or chicory to coffee gives no excuse to dealers to sell a mixture of the two as butter or coffee respectively We are inclined to favour the view that a thoroughly matured all malt spirit is, physiologically speaking, better than a grain spirit. Grain spirit can undergo but little change with age because there is nothing in it practically but alcohol, although, of course, there can be little doubt that when it is stored in sherry casks it may take up vinous principles and ethers may be gradually formed. One reason why the choice of a whisky may fall upon an all malt spirit is that when grain spirit is added to swell the volume of the blend there is no protection against the use of a very physiologically bad spirit for the purpose and there is no guarantee that the diluent employed is free from reproach. Indeed, we suspect strongly that bad whiskies owe their origin to this practice Bad whiskies are probably never all malt whiskies

What is the remedy? For one thing we should like to see it insisted that upon the label of the bottle of all spirits there shall be printed a clear statement of the nature of the contents whether the spirit be an all malt whisky or partly malt and partly grain spirit, or an all grape brandy or partly grape and partly grain spirit, and so forth. There can be no valid objection to the sale of mixtures so long as they are sold as such, but obviously it is fraudulent to sell a mixture when a pure unmixed spirit is expected or asked for Again, it seems to us that it would not be adding very much to the duties of the Excise authorities if they were to undertake the control of this labeling and accurate description of spirits, for the Inland Revenue Department must know exactly the pedigree and history of all the spirit produced in the United Kingdom We understand that certain distillers have approached the Inland Revenue Department upon this point, with the view of that department exercising a system of control by which the age and nature of spirits could be guaranteed to the public. In this connexion our attention has been drawn to a system of municipal control which has been adopted in Schiedam. In order to prevent the mixing of cheap spirit with "hollands" the municipality of Schiedam, in which town about 98 per cent. of the genuine hollands is made, has instituted special guarantee labels to be used on the bottles cases, and casks of the distiller who makes and sells nothing but the genuine article and places his distilleries under the control of the municipality The distiller who is desirous of enjoying the privilege of the system must allow the officials to inspect not only his different distilleries and refineries but also his Excise accounts as entered by the Government inspector concerning the spirit brought in or taken out of the premises He further must keep a register of the labels which he has received from the municipal authorities showing how they have been used and this must correspond with the Excise documents The effect of such a system, even although it has only been in operation for a short period, has been, it is stated very satisfactory in spite of the opposition of certain exporters who were naturally averse to the innovation, since it was calculated to deprive them of the great profits which they made by mixing the genuine article with a very large proportion of cheap spirit

All honest merchants and dealers in spirits in this country would, we are convinced welcome the introduction of a similar system of control. In the light of recent revelations some such step is urgently needed, it would harass the dealers in cheap spirit of course, but it would be of unquestionable benefit to the community to have the assurance that the label on the bottle describes correctly its contents. In such a case the truth about the public taste would soon become evident.

MEDICINE AND THE LAW

The Camberwell Murders.

EDGAR EDWARDS, or Edwin Owen as his name was stated to be by the one witness called on his behalf at his trial, was on Feb 13th sentenced to death by Mr Justice Wright at the Old Bailey He was convicted of murdering William John Darby, with his wife and child upon evidence that allowed no shadow of doubt as to his guilt, although, to use a term of which the late Sir James Fitzjames Stephen strongly disapproved, it was entirely circumstantial, for no one ever saw the murderer in the company of any of his victims or had ever heard him express ill will against them. The defence raised, so far as the thankless task of raising a defence was attempted by his counsel was that of insanity It was supported by no medical evidence, but a witness who said that he was the prisoner's uncle by marriage informed the court that the prisoner's mother's brother lived and died a lunatic, that the prisoner's maternal grandfather had a married sister who had been in a lunatic asylum, and that one of the witness's daughters—that is to say a first cousin of the prisoner—was now under control. He added that the prisoner's father died a confirmed dipsomaniac, having squandered in drink the fortunes of himself, his wife, and his two sisters. This is the kind of family history which, if it had been so given that its truth could have been tested and relied upon, might well have paved the way for medical evidence of insanity in the prisoner himself had the defence been able to call any It was, however, unsupported by any medical evidence and Dr James Scott, medical officer at Brixton Prison, who had kept the accused under close observation went into the witness box and said that he had seen nothing to indicate mental derangement. The prisoner's counsel dwelt upon the smallness of the motive that prompted the crime, but smallness of motive is no new thing in murder cases. The prisoner apparently tried to support the suggestion of insanity by a demeanour which no doubt seemed to him appropriate and by the exhibition of callous insolence even when sentence was being pronounced upon him. Probably the learned judge was right when he said that there might be some unsoundness of mind to account in a measure for his acts He is an able bodied and apparently not unintelligent man who might have earned an honest livelihood, but instead has lived a life of crime and spent nearly 15 years of his life in prison This fact was kept from the public until the trial was over Such a life and such an act as the murder of the Darby family are not characteristic of normal moral instincts and inclinations, there is nothing, however, in them to indicate that the convict who has now reached the end of his career did not do all that he did with full knowledge of its wickedness, deliberately accepting the possible consequences, while he took all the steps in his power to avoid them.

Physical Infirmity as an Incentive to Almsgiving

Beggars have probably made a living out of the exhibition of physical infirmities and deformities, real or simulated, ever since mendicancy has existed and others have increased their gains by taking with them children because those who give without thought or inquiry have a vague idea that to give to the ostensible parent benefits the unfortunate child It is to be hoped that some of these promiscuous almsgivers will have had brought to their notice the case of a man whom Mr Justice Grantham has sentenced to a richly deserved term of ten years penal servitude at Manchester Assizes A little girl, six years of age, living with her mother at Manchester, had had the misfortune to lose a leg which had been amputated, and this condition of the child appears to have excited the cupidity of the prisoner, himself a one-armed man and no doubt accustomed to excite commiseration on that account, for he made some sort of offer for the child to the mother which was naturally refused. Failing to secure his victim in this way he deliberately kidnapped the little girl who had been left outside a shop in a perambulator by her parent, and he also eluded the police, to whom complaint was forthwith made. For three months he dragged the child round with him, making her go on crutches so as to secure the full measure of compassion that he desired and sleeping with her at common lodging houses. His tour was presumably not unprofitable for having exploited Scotland as far as Edinburgh he seems to have crossed to Ireland and to have gone, at any rate to Dublin before returning to the North of England. At last, however he attracted the attention of an officer of the National Society for the Prevention of Cruelty to Children, or of someone who had the good sense and humanity to inform that organisation, with the result that he was arrested and sentenced to three months imprisonment for exposing the child to unnecessary suffering His offence would have been cruel enough if the matter could have been allowed to rest there. It was discovered however after he had been committed to gaol that he had added to his inhumanity by outraging his poor little victim and it was for this crowning iniquity that he was tried and sentenced at Manchester. Why he should have been allowed to be at large so long we

THE PRACTICE OF SUBSTITUTION IN THE SPIRIT TRADE

NOWADAYS the art of substitution would appear to permeate every trade, and it is usually justified on the apparently philanthropic ground that it is all for the public good, although any reference to the effect that the substitute is invariably a much cheaper article than the original product is seldom made For example, it is urged that jam can no longer be made with cane sugar because it crystallises and therefore a certain amount of glucose must be added in order to keep the preserve in a more or less fluid condition. Again, beer, we are told, can no longer be made from hops and all malt and so glucose must be introduced in order to prevent, it is asserted, a muddy product. Some, again, such is their taste, are said to prefer chicory to coffee, while others would have us believe that butter is inferior to margarine.

The latest controversy upon the subject of substitution has centred round whisky and a good deal has been said as to the merits and demerits of grain and malt whisky It is significant perhaps that this discussion should have arisen almost immediately after the results of THE LANCET Special Analytical Commission on Brandy were published, in the report of which the addition of grain spirit to whisky was incidentally referred to, and several communications upon the question from distillers in this and other countries have lately reached us. Doubtless to a great section of the public the recent discussion has appeared to them to be something of the nature of a revelation They will have realised that the trade done in so-called grain spirit is very considerable and that the destination of this spirit is largely whisky They must admit, also, in the light of our own inquiries, that a similar expedient is adopted with regard to brandy, and the conclusion is irresistible that a very demoralised state of things has overtaken a large section of the spirit trade. We are told that this practice of substitution is the outcome of a public demand but it is more probable that its adoption introduced a much wider margin of profit than was possible before Upon this point we may usefully quote the candid opinion expressed in an editorial article which appeared in connexion with this controversy in a leading journal of the spirit trade "The fact is that there has been—and the sooner it is confessed and amended the better —a great deal too much misdescription and mendacity even in the trade. Look at the labels which respectable houses put on their whiskies, particularly their cheap ones. Foaming cataracts tumbling through rocks and mountains and 'fine Highland' boldly put upon stuff that has not a 'fifth' of even 'malt' to bless itself with, let alone 'Highland' Then the plea that is put forward to palliate all this deception, 'The public prefer grain' Well, suppose they do, who taught them to prefer grain by giving them plenty of it? Let those who have been making such huge profits all these years answer the question It is the conveying of false impressions to the consumer at other people's expense to which we object. For all this masquerading of whisky in plaids and kilts and sporrans is done at the expense of the Highland distiller" Nothing could be more straightforward than the opinions thus expressed and it is to be hoped that they will appeal to the honest sense of the industry which this journal represents

The present position of the whisky business, according to this graphic description of its own representatives, is not without interest to our medical readers and it may be instructive to recapitulate the chief points of the controversy It is contended on the one hand that grain spirit is necessarily an impure spirit—that is to say, is unwholesome—and that, on the other, an all malt spirit duly matured is without prejudice to health. There can be no question that whisky originally was an all malt spirit grain spirit being a comparatively modern production Grain spirit in fact is the product of a patent still which effects a much more rapid separation of alcohol than does the old pot still, not only from the weak liquor in which it is generated, but also from the by products of fermentation Chemically speaking, therefore, grain spirit is a purer alcohol than all malt spirit because the latter contains volatile substances other than alcohol. It should be pointed out that the era of whisky began as soon as brandy fell into disrepute, which happened when the vineyards in the Charentes were ruined by disease in the late "seventies" Rightly or wrongly, the medical profession is generally credited with having brought whisky into favour by suggesting that well diluted, honest whisky was more to be trusted as a pure and wholesome form of stimulant than the wines and brandies at that time, which were undoubtedly the subject of considerable sophistication. But it is very important to bear in mind that in recommending the use of whisky for a specific purpose medical men could have had no other spirit in view but that made entirely from malt and matured by storage, for at that time the addition of grain spirit was not practised When whisky was ordered therefore an all malt whisky was prescribed.

"In cases of profound nervous and cardiac exhaustion one does not want merely an action upon the heart, but that stimulating influence upon the brain and vital centres which the volatile bye products seem to be alone capable of exerting Pot-still whisky, rum, and genuine brandy possess these bye products"[1] The substitution of grain spirit for an all malt spirit or the blending of malt with a large proportion of grain spirit thus raises a question of some medical importance, the physiological merits and demerits of grain spirit and all malt spirit respectively have, in short, to be considered. To begin with, the physiological effects of grain spirit must be referred practically to alcohol alone, since it contains little else. It is a pure spirit, without even *finesse*, it is flavourless or "silent," evidencing, that is to say, no clue to its origin. On the other hand, there is decided character in a malt spirit, it possesses a perfectly distinct flavour and a carefully conducted chemical analysis reveals certain products which are quite distinct from alcohol and to which its special characteristics as regards palatability, flavour, and bouquet may be ascribed. It is probable that these secondary or by products of fermentation and distillation modify in some peculiar way the physiological action of alcohol. They are even said to expedite the maturing process, or it may be that the secondary products of pot-still whisky yield more readily to oxidising influences than does "silent" whisky Certainly a young or raw malt whisky will create more physiological mischief than will raw grain spirit But a well matured all malt spirit is for some reason or other more wholesome and less harmful than either We are therefore led to suspect that there is a molecular rearrangement in the malt spirit containing secondary products by which the physiological action of the spirit is modified for good. In the same way young brandy is admittedly objectionable, while old brandy is acceptable, and yet the latter accumulates quite a high proportion of secondary products, such as aldehydes, ethers, and higher alcohols It is conceivable again that these secondary products may concentrate to such an extent as to render the spirit excessively potent though it may still be agreeable and mellow to the taste. Very old sherry or brandy, or even beer, are physiologically very powerful, while the taste is singularly mellow Again, what is described as "fat whisky" may have disagreeable effects in some individuals and on this account its dilution with a featureless spirit such as grain spirit is considered to be desirable in order to reduce the full bodied character of the all malt spirit. It does not follow, however; that an all malt spirit cannot be delicate in character or cannot possess *finesse* without recourse to attenuation with a foreign spirit Grain spirit, however, was introduced presumably to "break down" the "fulsomeness" of an all malt spirit, in reality it proved to be a cheap way of increasing the volume of a true whisky without diminishing its alcoholic strength, whilst preserving some of its malty flavour A similar practice prevails in regard to brandy, mixtures of a little genuine brandy with cheap grain spirit being very largely sold as the pure product.

Is the practice fraudulent? Is it likely to lead to injury to health? Of course, all alcohol from whatever source is, speaking generally more or less injurious to health but, at any rate, the consumer has a right to have some guarantee as to the nature or origin of the alcohol that is supplied to him. Otherwise he might as well buy common rectified spirit as spend a good deal more on an article with a fanciful or worse a misleading description. However opinions may differ as to the relative wholesomeness of all malt and grain spirit there can be no justification whatever for the substitution of the latter, or a mixture of the two, for the former The fact of some people preferring margarine to butter or chicory to coffee gives no excuse to dealers to sell a mixture of the two as butter or coffee respectively. We are inclined to favour the view that a thoroughly matured all-malt spirit is, physiologically speaking, better than a grain spirit. Grain spirit can undergo but little change with age because there is nothing in it practically but alcohol, although, of course, there can be little doubt that when it is stored in sherry casks it may take up vinous principles and ethers may be gradually formed. *One reason why the choice of a whisky* may fall upon an all malt spirit is that when grain spirit is added to swell the volume of the blend there is no protection against the use of a very physiologically bad spirit for the purpose and there is no guarantee that the diluent employed is free from reproach. Indeed, we suspect strongly that bad whiskies owe their origin to this practice. Bad whiskies are probably never all-malt whiskies.

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[1] Foods and the Principles of Dietetics, by Robert Hutchison M D M R C P

What is the remedy? For one thing we should like to see it insisted that upon the label of the bottle of all spirits there shall be printed a clear statement of the nature of the contents whether the *spirit* be an all malt whisky or partly malt and partly grain spirit, or an all grape brandy or partly grape and partly grain spirit, and so forth. There can be no valid objection to the sale of mixtures so long as they are sold as such, but obviously it is fraudulent to sell a mixture when a pure unmixed spirit is expected or asked for. Again, it seems to us that it would not be adding very much to the duties of the Excise authorities if they were to undertake the control of this labeling and accurate description of spirits, *for* the Inland Revenue Department must know exactly the pedigree and history of all the spirit produced in the United Kingdom. We understand that certain distillers have approached the Inland Revenue Department upon this point, with the view of that department exercising a system of control by which the age and nature of spirits could be guaranteed to the public. In this connexion our attention has been drawn to a system of municipal control which has been adopted in Schiedam. In order to prevent the mixing of cheap spirit with "hollands" the municipality of Schiedam, in which town about 93 per cent. of the genuine hollands is made, has instituted special guarantee labels to be used on the bottles, cases, and casks of the distiller who makes and sells nothing but the genuine article and places his distilleries under the control of the municipality. The distiller who is desirous of enjoying the privilege of the system must allow the officials to inspect not only his different distilleries and refineries but also his Excise accounts as entered by the Government inspector concerning the spirit brought in or taken out of the premises. He further must keep a register of the labels which he has received from the municipal authorities showing how they have been used and this must correspond with the Excise documents. The effect of such a system, even although it has only been in operation for a short period, has been, it is stated, very satisfactory in spite of the opposition of certain exporters who were naturally averse to the innovation, since it was calculated to deprive them of the great profits which they made by mixing the genuine article with a very large proportion of cheap spirit.

All honest merchants and dealers in spirits in this country would, we are convinced, welcome the introduction of a similar system of control. In the light of recent revelations some such step is urgently needed; it would harass the dealers in cheap spirit of course, but it would be of unquestionable benefit to the community to have the assurance that the label on the bottle describes correctly its contents. In such a case the truth about the public taste would soon become evident.

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THE PREVENTION OF CONSUMPTION AND OTHER FORMS OF TUBERCULOSIS

LONDON OPEN AIR SANATORIUM, NEAR WOKINGHAM

A DEPUTATION of the National Friendly Society Conference has for some time been collecting information relative to sanatoriums for tuberculous patients and paying visits to various establishments of that description. In the autumn of 1902, soon after the holding of the first International Conference on Tuberculosis in Berlin,[1] the members of the deputation went to Germany to inspect the various sanatoriums and institutions provided by the State Sick Insurance Fund, and on Feb 7th they visited the London Open air Sanatorium near Wokingham which was inspected by the three winners of the King's prizes, and the plan of which closely resembles that laid down in Dr A. C Latham's essay The deputation was received in the absence of the chairman, Mr Rube, by Mr Malcolm A. Morris, the vice chairman, Dr A. P Hillier, one of the visiting physicians, and Dr C C Chidell, the medical superintendent. The sanatorium, which was built at a cost of £36,000, is mainly intended for tuberculous patients of the middle and poorer professional classes, who pay the low inclusive charge of three guineas a week The buildings are in the midst of 80 acres of pine woods and stand on sandy soil at an altitude of 220 feet. Each patient occupies a separate bedroom facing south and shelters, some of them lighted by electricity, are placed about the grounds. The visitors appeared to be very favourably impressed with the arrangements Two resident medical officers are in charge of the patients in the sanatorium. The secretary's office in London is at 20, Hanover square, W

HAILEY OPEN AIR SANATORIUM, IPSDEN, WALLINGFORD

In Germany there are hundreds of sanatoriums maintained by insurance societies which find it financially profitable to cure their subscribers rather than to pay the claims which the societies would have to meet were the disease allowed to run its course. In England there are a few municipal and gratuitous sanatoriums and a few others where the treatment is provided at a nominal fee Many patients, however, who return to their former unhealthy surroundings and dangerous occupations run great risks of relapse Sanatoriums may therefore be advantageously combined with working colonies where poor patients can be put in the way of fitting themselves for a useful out-door life after the cure has been effected An industrial sanatorium farm colony has just been opened at Ipsden, near Wallingford, by Dr C E. Reinhardt and Mr Frank Fowler, who conduct the Hailey Sanatorium, near Wallingford, and the Stourfield Park Sanatorium, Bournemouth, for wealthier patients At the Farm Colony Sanatorium patients are received at a small charge and are expected to work at such employment as the resident physician may find them physically and otherwise fit for , amongst other avocations they have the opportunity of learning pheasant-farming, poultry rearing, gardening, and various agricultural operations, in order to gain experience in such out-door occupations as may be useful to them after they leave the sanatorium.

DIDWORTHY SANATORIUM FOR CONSUMPTIVES.

On Jan. 23rd the Devon and Cornwall Sanatorium for Poor Consumptive Patients at Didworthy, Brent, was inspected by representatives of the urban and rural district councils of the two counties. At present it is intended to use the sanatorium for 14 patients—seven male and seven female—with a resident medical officer and nurses It is hoped that accommodation for 60 patients may be provided in course of time. The house and estate have been purchased by voluntary subscriptions for £4000 The additional cost of alterations, additions, laying out the grounds, and furnishing will be about £2500 Towards this sum there are £1000 in hand, leaving £1500 still to be raised, and the committee trusts that this sum will soon be forthcoming so as to enable it to open the institution in the spring free from debt.

WINSLEY SANATORIUM

A deputation from the Gloucestershire, Somerset, and Wilts Branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis recently made an application to the Gloucester city council for a contribution towards the Winsley sanatorium scheme A sub committee of the council was appointed to consider the matter, when a motion was proposed to the effect that in view of the inadequacy of the Winsley scheme to meet the requirements of the city of Gloucester and the expenses connected therewith the council should take into consideration the question of using its power under the Public Health Act and of making its own provision for patients within the area of its control. Mr H. E. Waddy, surgeon to the Gloucester Infirmary, moved an amendment that the council should be recommended to accede to the application of the deputation to the extent of contributing £250 for the provision of one bed at the sanatorium and of paying £65 a year for maintaining it so long as the council may think fit to do so The amendment was lost and the original motion was carried. When the matter afterwards came before the city council for discussion Mr Waddy's amendment to give the contribution proposed was altered by the addition of the words "subject to a formal agreement being entered into containing terms satisfactory to this council," and in that form was adopted *nem. con*

RAILWAY COMPANIES AND SPITTING

The Great Eastern Railway Company has recently placarded Liverpool street station and other stations on their line with large posters printed in bold type, as follows —

> *Prevention of Consumption*
>
> To aid in the prevention of consumption and in their own interests, all persons are earnestly requested not to spit on the floor of any vehicle railway station or other public resort
>
> London December, 1902 J F S GOODAY General Manager

In the smoking carriages of the Central London Railway there are placards with the words "Please do not spit."

THE "STETHOSCOPE"

The first number of the *Stethoscope*, "a journal devoted to the cure or prevention of consumption," has just been published at 6, Duke-street, Adelphi, London, W C We wish our contemporary every success, but we nevertheless think that on ethical grounds there are some objections to articles headed "The Man of the Moment" as well as to the embellishment (!) of articles by likenesses of medical practitioners.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

MEETING OF THE COUNCIL.

AN ordinary meeting of the Council was held on Feb 12th, Sir HENRY G HOWSE, the President, being in the chair

It was resolved that diplomas of Membership should be issued to 96 candidates and that diplomas of Public Health should be issued jointly with the Royal College of Physicians of London to 18 candidates.

It was resolved that arrangements should be made for the delivery of six Hunterian lectures in November and that an advertisement should be issued inviting applications for election to the office of Hunterian Professor

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[1] THE LANCET, Nov 1st (pp 1204, 1216) and Nov 8th 1902 (p 1276)

A report was received from the Committee of Management formulating a reply to the report of the visitor and the inspector of the General Medical Council upon the examinations in chemistry and biology of the Conjoint Board. The report was approved and adopted

The Council appointed Mr. Bernard Pitts a member of the Board of Examiners in Dental Surgery in the vacancy caused by the retirement of Sir William H. Bennett, K.C.V.O

The PRESIDENT reported that in pursuance of the provisions of the Bradshaw bequests he had chosen Mr Henry Morris as Bradshaw lecturer for the ensuing collegiate year

A report was read from Mr. REGINALD HARRISON upon the Cairo medical school and hospital. It was referred to the Committee of Management to consider in reference to the application by that school for recognition and a cordial vote of thanks was given to Mr. Harrison

A letter was read from the secretary of the Sanitary Institute reporting that the twenty first congress and exhibition of the institute would be held at Bradford from July 7th to 11th, 1903, and inviting the Council of the College to send delegates. It was resolved to leave it to the President to appoint delegates.

It was resolved to appoint a committee to consider and to report as to whether any and if so what, honorarium should be given to members of the Council called upon on behalf of the College to read essays submitted in competition for prizes

THE HUNTERIAN ORATION.

The biennial Hunterian Oration was delivered on Feb. 14th in the theatre of the College by Sir Henry Howse who in the later part of his address drew attention to Hunter's prevision of some of the results of modern geological inquiry The conditions under which fossil bones were preserved convinced him that animal life had existed on the earth for thousands of centuries, an opinion which was so much at variance with the accepted doctrines of the day that a geological friend advised him to alter the phraseology into "thousands of years." Rather than accept this compromise he withdrew the paper from being read before the Royal Society, as originally intended, and it was only published in 1859

THE BANQUET

The banquet in the evening was held in the library of the College. The President was in the chair and the company included Lord Roberts (the Commander in Chief of the Army) Lord Shand, Sir William Church, Sir Arthur Rücker, Sir Harry Johnston, Sir Thomas Smith, Sir Douglas Powell, Sir Henry Norbury Sir William Taylor, Professor James Dewar, Signor Marconi, and Professor Clifford Allbutt After the toast of 'The Memory of John Hunter" the PRESIDENT proposed the health of Lord Roberts whom he was about to admit to the Honorary Fellowship of the College. The Honorary Fellowship, he said, was not one of the old-established diplomas, in fact, it was only created by the Royal Charter which was granted on the occasion of the centenary of the College in 1900. Prior to the granting of this charter the College had not at its disposal any honorary title or mark of distinction which could be conferred on the foreign surgeons invited to attend the centenary celebrations. The list of foreign Honorary Fellows was augmented by the names of a few eminent personages in this country who were not surgeons. The present King, while still Prince of Wales, had been graciously pleased to accept a Fellowship and a similar distinction had also been conferred on two Prime Ministers. This Fellowship was honorary in the full meaning of the word, for the holders of it were not entitled either to practise surgery or to vote in the College. The Council had decided to offer it to Lord Roberts in view of the great services which he had rendered to his country as the general commanding in the South African war There were also special reasons for the medical profession feeling grateful to Lord Roberts, because it was doubtful if there had ever been a commander who had felt a greater interest in the medical organisation of the army or who had done more to help the military surgeons in meeting the unavoidable difficulties which they encountered. The President at the conclusion of his speech formally conferred the Honorary Fellowship on Lord Roberts.

Lord ROBERTS thereupon said that he had been for a long time looking forward with pleasurable expectation to this event and he now felt not only honoured by his new distinction but quite overcome by the cordiality of his reception. More than two years ago he had received a letter informing him that on the proposition of the late Sir William Mac Cormac the Council had agreed to offer him the Honorary Fellowship of the College, but as the war was still in progress he felt some reluctance to be the recipient of honours or rewards. Now that peace was secured he was delighted to be the guest of the College and the postponement of the ceremony had only served to add to the gratification which he experienced in being present. He was deeply sensible of the compliment which had been paid him and very proud to have inscribed his name on the rolls of the College. He accepted the honour not only for himself but for the navy, the army, and the auxiliary forces, to whom all the success that he was able to gain in South Africa was owing In speaking of the navy, the army, and the reserve forces it was not usual to particularise any section of them, but in the circumstances he could hardly avoid making special reference to the services of the Royal Army Medical Corps. Only those who took part in the war could thoroughly appreciate the devotion of the officers and men of that corps to their work, the arduous nature of the task which they had to undertake, and the admirable manner in which they fulfilled it. He was at Bloemfontein when enteric fever broke out there and for some time it seemed to him that it would hardly be possible to deal adequately with the enormous number of sick who had to be treated during the two months that the army was in that place. At Kroonstad, a few weeks later, the state of the case was perhaps worse, because the only available accommodation consisted of the church and one or two small hospitals and houses, but the way in which the medical officers coped with these emergencies excited his admiration. The Royal Army Medical Corps were greatly encouraged by the presence among them of the eminent civilian surgeons who came to South Africa, such as Sir William Mac Cormac, Sir William Stokes, Sir Frederick Treves, Mr. G L. Cheatle, Mr Watson Cheyne, Mr John Chiene, Mr. Clinton T Dent, Sir Thomas Fitzgerald, Mr. G H Makins, and many others. The skill and advice of these gentlemen were of very great service to the army in South Africa. In conclusion Lord Roberts said that he would always do his best to assist any scheme which might be for the benefit of the sick and wounded.

Mr JOHN TWEEDY proposed the health of "The Visitors," to which the Bishop of ROCHESTER and Sir HARRY JOHNSTON replied.

Sir A. RÜCKER proposed "The President and Orator" and the response by Sir HENRY HOWSE brought the proceedings to a close

Looking Back.

FROM

THE LANCET, *SATURDAY*, FEB 19, 1825

SIR ASTLEY COOPER AND THE BOROUGH PUPILS

SIR ASTLEY COOPER, after having been a Lecturer on Surgery at St. Thomas Hospital almost thirty years, has felt it necessary to resign the important duties connected with that office to others, who, being much younger in life, are more competent, physically to discharge those duties, and with whose scientific qualifications he is sufficiently satisfied to appoint them his successors.

It has been the practice, at the Borough School, to present each of the lecturers with a piece of plate on his resignation, and a meeting of the pupils was called to consider of the propriety of presenting Sir Astley with a similar proof of their respect. The meeting was held, and the proposition was negatived. The truth of the matter is this the pupils now attending the practice of the Borough Hospitals feel themselves aggrieved, because Sir Astley announced, by advertisement, his intention of continuing the anatomical lectures *jointly* with Mr Green. This has not been done, and we believe the indisposition of the worthy Baronet has been the principal cause of the non-performance of his pledge. Many of his pupils say 'we have not had the pleasure even of hearing Sir Astley once, and why should we become subscribers to a piece of plate?"

It is then, simply, because the students have not been made acquainted with the causes of the sudden resignation of Sir Astley as a lecturer, *in propria forma*, after his name had appeared in the advertisement, that they have to complain, and on this account only has any public opposition been manifested to the proposed measure.

We understand that, at a subsequent meeting, a paper was handed round for those gentlemen to subscribe who felt inclined, which was afterwards directed to be left at Mr Cox's library for signatures

According to a curious statement in the Philosophical Magazine, the extraordinary number of cases of cancer and schirrous complaints, in that part of Kent and Sussex bordering on Tunbridge Wells, has engaged the attention of several medical men in that district, who are endeavouring to ascertain its cause. A similar remark seems to apply to many other counties, where the poor feed much upon dried hogsflesh, and can get but little vegetable food.

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN 76 of the largest English towns 8806 births and 4948 deaths were registered during the week ending Feb 14th. The annual rate of mortality in these towns, which had been 20 1, 18 1, and 17 9 per 1000 in the three preceding weeks, further declined last week to 17 1 per 1000 In London the death rate was 17 0 per 1000, while it averaged 17 2 per 1000 in the 75 other large towns. The lowest death rates in these towns were 5 7 in King's Norton, 8 0 in Barrow in Furness, 8 2 in Handsworth, 9 1 in Bournemouth, 9 2 in Derby, 9 3 in West Hartlepool, 9 4 in East Ham, and 10 0 in Coventry, the highest rates were 21 4 in Newcastle-on Tyne, 21 5 in Rochdale, 22 4 in Wallasey, 23 1 in Manchester, 23 2 in Bootle, 24 2 in Huddersfield, 26 4 in Hanley, and 28 8 in Tynemouth The 4948 deaths in these towns last week included 457 which were referred to the principal infectious diseases, against 540, 493, and 512 in the three preceding weeks, of these 457 deaths 131 resulted from whooping-cough, 91 from measles, 70 from diphtheria, 65 from diarrhœa, 59 from scarlet fever, 32 from "fever" (principally enteric), and 9 from small pox. No death from any of these diseases was registered last week in Bournemouth, Reading, Ipswich, Devonport, Burton on Trent, Wolverhampton, Handsworth, King s Norton, Bury, Stockton on Tees, or Swansea, while the highest death rates from the principal infectious diseases were recorded in Smethwick, Grimsby, Stockport, Wigan, Blackburn, Rotherham, Tynemouth and Merthyr Tydfil The greatest proportional mortality from measles occurred in Wigan and Manchester, from scarlet fever in Aston Manor and Stockport, from diphtheria in Northampton, Hanley, Blackburn, and Merthyr Tydfil, from whooping cough in Willesden, Great Yarmouth Smethwick, Grimsby, Stockport, and Rotherham, from "fever" in Walsall, and from diarrhœa in Middlesbrough Six fatal cases of small pox were registered last week in Liverpool and one each in London, Manchester, and Leeds, but not one in any other of the 76 large towns There were six small pox patients under treatment in the Metropolitan Asylums hospitals at the end of last week, against four, seven, and six at the end of the three preceding weeks, one new case was admitted during the week, against none, six, and four in the three preceding weeks The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had declined from 2528 to 1941 on the seven preceding Saturdays, had further decreased to 1919 on Saturday, Feb 14th, 246 new cases were admitted during the week, against 227, 226, and 189 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 411, 355 and 315 in the three preceding weeks, further declined last week to 267 and were 179 below the corrected average number The deaths directly attributed to influenza in London last week numbered 24, having been 43 25, and 39 in the three preceding weeks The causes of 62, or 1 3 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner All the causes of death were duly certified in London, West Ham, Leicester, Nottingham, Salford, Bradford, Leeds, and in 38 other smaller towns, the largest proportions of uncertified deaths were registered in Hanley, Aston Manor, Coventry, St. Helens, Halifax, Sunderland, South Shields, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 24 6, 21 3, and 21 7 per 1000 in the three preceding weeks, declined again to 18 1 per 1000 during the week ending Feb 14th, but was 1 0 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 10 8 in Perth and 14 9 in Edinburgh to 22 2 in Leith and 22 3 in Aberdeen The 594 deaths in these towns last week included 32 which were referred to whooping cough, 16 to diarrhœa, 15 to measles, 11 to "fever," eight to scarlet fever, and three to diphtheria, but not one to small pox. In all, 85 deaths resulted from these principal infectious diseases last week, against 102, 81, and 80 in the three preceding weeks. These 85 deaths were equal to an annual rate of 2 6 per 1000, which was 1 0 per 1000 above the mean rate last week from the same diseases in the 76 large English towns The fatal cases of whooping cough, which had been 52, 32, and 28 in the three preceding weeks, rose again last week to 32, of which 22 occurred in Glasgow, three in Edinburgh, two in Dundee, and two in Leith The deaths from diarrhœa, which had been 13 and 19 in the two preceding weeks, declined again to 16 last week, and included eight in Glasgow, three in Dundee, and two in Greenock. The fatal cases of measles, which had been 20 and 16 in the two preceding weeks, further declined last week to 15, of which 11 were registered in Aberdeen, two in Glasgow, and two in Edinburgh. The deaths referred to different forms of "fever," which had been eight, five, and six in the three preceding weeks, further rose to 11 last week, and included 10 in Glasgow The fatal cases of scarlet fever, which had been five, four, and four in the three preceding weeks, increased last week to eight, of which four occurred in Glasgow and two in Paisley The deaths referred to diseases of the respiratory organs in these towns, which had been 183, 173, and 134 in the three preceding weeks, further declined last week to 112, and were 99 below the number in the corresponding period of last year The causes of 21, or nearly 4 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN

The death rate in Dublin, which had been 28 1, 24 8, and 26 4 per 1000 in the three preceding weeks, declined again to 25 0 per 1000 during the week ending Feb 14th During the past four weeks the death rate has averaged 26 1 per 1000, the rates during the same period being 18 3 in London and 18 1 in Edinburgh. The 182 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 10 from the number in the preceding week, and included 14 which were referred to the principal infectious diseases, against 10, 10, and nine in the three preceding weeks, of these, four resulted from diarrhœa, three from scarlet fever, three from whooping-cough, two from measles, one from diphtheria, and one from "fever," but not one from small pox. These 14 deaths were equal to an annual rate of 1 9 per 1000, the death rates last week from the same diseases being 1 8 in London and 1 3 in Edinburgh The fatal cases of diarrhœa, which had been six and one in the two preceding weeks, rose again last week to four The deaths from scarlet fever, which had been two, three, and two in the three preceding weeks, increased again to three last week. The three fatal cases of whooping cough corresponded with the number in the preceding week The 182 deaths in Dublin last week included 26 of children under one year of age and 46 of persons aged 60 years and upwards, the deaths both of infants and of elderly persons showed a considerable decline from the numbers recorded in the preceding week. Six inquest cases and three deaths from violence were registered, and 61, or one third, of the deaths occurred in public institutions The causes of 10, or more than 5 per cent., of the deaths registered in Dublin last week were not certified.

VITAL STATISTICS OF LONDON DURING JANUARY, 1903.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs.

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING JANUARY, 1903

(*Specially compiled for* THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1903	NOTIFIED CASES OF INFECTIOUS DISEASE. Small pox.	Scarlet fever	Diphtheria.*	Typhus fever	Enteric fever	Other continued fevers.	Puerperal fever	Erysipelas	Cholera.	Total.	Annual rate per 1000 persons living	DEATHS FROM PRINCIPAL INFECTIOUS DISEASES. Small pox.	Measles	Scarlet fever	Diphtheria.*	Whooping cough.	Typhus fever	Enteric fever	Other continued fevers.	Diarrhœa.	Total	Annual rate per 1000 persons living	Deaths from all causes.	Death-rate per 1000 living	Deaths of Infants under one year to 1000 births.
LONDON...	4,613,812	14	1030	681	—	174		19	386	—	2306	6·5	2	156	37	63	272	—	31	—	68	629	1·8	6455	18·2	127
West Districts																										
Paddington	146 032	—	14	8	—	2	—	1	10	—	35	3·1	—	—	—	—	13	—	1	—	1	15	1·3	185	16·5	157
Kensington	178 409	—	17	7	—	7	—	1	21	—	53	3·9	—	—	—	—	16	—	—	—	5	21	1·5	246	18·0	142
Hammersmith	115 803	—	40	12	—	8	—	—	9	—	69	7·8	—	—	1	1	9	—	1	—	2	14	1·6	148	16·7	157
Fulham	147 780	3	38	34	—	3	—	2	5	—	85	7·5	—	1	1	3	11	—	—	—	3	19	1·7	171	15·1	129
Chelsea	74 169	—	14	12	—	—	—	—	5	—	31	5·4	—	1	—	3	3	—	—	—	1	8	1·4	117	20·6	113
City of Westminster	179 052	1	38	17	—	8	—	—	6	—	70	5·1	—	1	—	1	4	—	—	—	4	10	0·7	228	16·6	150
North Districts																										
St. Marylebone	131 234	1	18	13	—	7	—	—	14	—	53	5·3	—	2	—	3	16	—	2	—	2	25	2·5	218	21·7	107
Hampstead	85 107	—	18	7	—	2	—	—	2	—	29	4·4	—	—	—	—	3	—	—	—	—	3	0·5	79	12·1	96
St. Pancras	235 716	—	49	42	—	3	—	—	16	—	110	6·1	—	12	2	1	10	—	1	—	3	29	1·6	342	18·9	116
Islington	339 137	2	61	56	—	12	—	2	21	—	154	5·9	—	7	2	3	34	—	4	—	3	53	2·0	408	16·1	167
Stoke Newington	52 069	—	6	3	—	1	—	—	1	—	11	2·8	—	—	—	—	—	—	—	—	—	—	—	70	17·5	116
Hackney	224 082	—	41	43	—	12	—	2	19	—	117	6·8	—	3	3	7	13	—	3	—	1	30	1·7	276	16·1	126
Central Districts																										
Holborn	57 845	—	9	6	—	2	—	1	5	—	23	5·2	—	—	1	—	3	—	—	—	—	4	0·9	90	20·3	64
Finsbury	99 717	—	26	8	—	6	—	—	9	—	49	6·4	—	2	—	1	16	—	1	—	3	23	3·0	205	26·8	103
City of London	24 539	—	8	2	—	1	—	—	1	—	12	6·4	—	—	—	—	—	—	—	—	1	1	0·5	41	21·8	37
East Districts																										
Shoreditch	117 513	—	14	10	—	16	—	2	15	—	67	6·3	—	8	—	2	4	—	2	—	2	18	2·0	196	21·7	85
Bethnal Green	130 028	—	19	25	—	7	1	—	20	—	72	7·2	—	6	1	2	5	—	—	—	2	16	1·6	205	20·5	121
Stepney	302 183	2	51	50	—	16	—	—	40	—	168	6·6	—	14	3	1	16	—	2	—	3	39	1·7	462	19·9	127
Poplar	169 550	2	23	32	—	12	—	1	16	—	86	6·6	2	6	2	5	11	—	2	—	6	34	2·6	260	20·0	120
South Districts																										
Southwark	207,369	—	67	34	—	4	—	2	27	—	134	8·4	—	9	4	1	9	—	1	—	7	31	1·9	351	22·1	152
Bermondsey	129 801	—	37	14	—	4	—	1	15	—	71	7·1	—	11	5	—	2	—	1	—	4	23	2·3	207	20·8	172
Lambeth	307 711	—	59	31	—	9	1	2	14	—	116	4·9	—	11	3	5	25	—	3	—	3	50	2·1	402	16·9	131
Battersea	173 422	—	66	38	—	5	—	—	16	—	125	9·4	—	3	—	2	10	—	1	—	3	19	1·4	195	14·7	141
Wandsworth	249 678	1	83	51	—	11	—	1	21	—	168	8·8	—	3	2	6	13	—	3	—	3	30	1·6	285	14·9	83
Camberwell	265 602	—	67	40	—	9	—	—	28	—	144	7·1	—	18	—	6	10	—	3	—	2	39	1·9	361	17·7	140
Deptford	112 637	—	42	24	—	1	—	—	10	—	77	8·9	—	27	3	3	9	—	—	—	2	44	5·1	198	22·9	177
Greenwich	99 624	—	36	18	—	1	—	—	7	—	62	6·8	—	5	2	3	2	—	—	—	2	14	1·8	108	14·1	72
Lewisham	136,405	—	63	28	—	4	—	1	6	—	102	9·7	—	4	1	3	2	—	—	—	—	10	1·0	118	11·3	76
Woolwich	121,478	—	16	15	—	—	—	—	7	—	38	4·1	—	2	1	1	3	—	—	—	—	7	0·8	133	14·3	85
Port of London	—	2	—	1	—	2	—	—	—	—	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup

With regard to the notified cases of infectious diseases it appears that the number of cases reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 6·5 per 1000 of the population, estimated at 4,613,812 persons in the middle of the year In the three preceding months the rates had been 10·0, 9·1, and 7·4 per 1000 respectively The rates were considerably below the average in Paddington, Kensington, Hampstead, Stoke Newington, Lambeth, and Woolwich, while they showed the largest excess in Hammersmith, Southwark, Battersea, Wandsworth, Deptford, and Lewisham. The prevalence of small pox showed a slight increase over that recorded in the preceding month, of the 14 cases notified during January, three belonged to Fulham and two each to Islington, Stepney, and Poplar, while two others were notified by the Port sanitary authority The Metropolitan Asylums hospitals contained seven small pox patients at the end of last month, against 19, 17, and 14 at the end of the three preceding months, the weekly admissions averaged three, having been three in each of the three preceding months also The prevalence of scarlet fever, which had shown a considerable decline during the preceding month, further decreased last month, this disease showed the highest proportional prevalence in Hammersmith, the City of London, Southwark, Battersea, Wandsworth, Deptford, and Lewisham. The number of scarlet fever patients under treatment in the Metropolitan Asylums hospitals, which had been 2820, 2705, and 2327 at the end of the three preceding months, had further declined to 1980 at the end of last month, the weekly admissions averaged 212, against 358, 301, and 236 in the three preceding months The prevalence of diphtheria showed a slight diminution from that recorded in the preceding month, among the various metropolitan boroughs this disease was proportionally most prevalent in Fulham, Battersea, Wandsworth, Deptford, and Lewisham. There were 936 diphtheria patients under treatment in the Metropolitan Asylums hospitals at the end of January, against 941, 1019, and 981 at the end of the three preceding months, the weekly admissions averaged 131 last month, against 149, 157, and 136 in the three preceding months. Enteric fever showed a considerable decrease last month as compared with the prevalence recorded in recent months, the greatest proportional prevalence of this disease occurred in Hammersmith, St. Marylebone, Hackney, Finsbury, Shoreditch, Bethnal Green, and Poplar The number of enteric fever patients in the Metropolitan Asylums hospitals, which had been 401, 339, and 210 at the end of the three preceding months, had further declined to 172 at the end of January, the weekly admissions averaged 24 last month, against 59 37 and 30 in the three preceding months. Erysipelas was proportionally most prevalent in Kensington, St. Marylebone, Shoreditch, Bethnal Green Stepney, Southwark, Bermondsey, and Camberwell The 19 cases of puerperal fever notified during the month included two each in Fulham, Islington, Hackney, Shoreditch, Southwark, and Lambeth.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in public institutions having been distributed among the several boroughs in which the deceased persons had previously resided. During the four weeks ending Jan. 31st the deaths of 6455 persons belonging to London were registered, equal to an annual rate of 18·2 per 1000, against 16·0, 17·4, and 18·2 per 1000 in the three preceding months. The lowest death rates last month in the various metropolitan boroughs were 11·3 in Lewisham, 12·1 in Hampstead, 14·1 in Greenwich, 14·3 in Woolwich, 14·7 in Battersea, and 14·9 in Wandsworth, the highest rates were 21·7 in St. Marylebone and in Shoreditch 21·8 in the City of London, 22·1 in Southwark, 22·9 in Deptford, and 26·8 in Finsbury The 6455 deaths from all causes included 629 which were referred to the principal infectious diseases, of these, two resulted from small pox 156 from measles, 37 from scarlet fever, 63 from diphtheria, 272 from whooping cough, 31 from enteric fever, and 68 from diarrhœa, but not one either from typhus or from simple continued fever No death from any of these infectious diseases was recorded in Stoke Newington, among the other boroughs they caused the lowest death rates in the City of Westminster, Hampstead, Holborn, the City of London, and Woolwich, and the highest rates in St. Marylebone, Finsbury, Poplar, Bermondsey, Lambeth, and Deptford. The two fatal cases of small pox both belonged to Poplar The 156 deaths from measles showed a decline of 50 from the corrected average number, among the various metropolitan boroughs this disease was proportionally most fatal in St. Pancras, Shoreditch, Bermondsey, Camberwell, Deptford, and Greenwich. The 37 fatal cases of scarlet fever were 20 below the average number in the corresponding periods of the ten preceding years, this disease showed the greatest proportional mortality in Hackney, Holborn, Southwark, Bermondsey, Deptford, and Greenwich. The 63 deaths from diphtheria were 114 less than the corrected average number, among the various metropolitan boroughs this disease was proportionally most fatal in Chelsea, Hackney, Poplar, Wandsworth, Deptford, and Greenwich, The 272 fatal cases of whooping cough were 91 in excess of the average number in the corresponding periods of the ten preceding years, among the various metropolitan boroughs the greatest proportional mortality from this disease occurred in Paddington, Kensington, St. Marylebone, Islington, and Finsbury The 31 deaths from enteric fever showed a decline of 21 from the corrected average number, the highest "fever" death rates last month were recorded in St Marylebone, Islington, Hackney, Shoreditch, Poplar, Wandsworth, and Camberwell. The 68 fatal cases of diarrhœa were slightly in excess of the average number in the corresponding periods of the ten preceding years, among the various metropolitan boroughs this disease was proportionally most fatal in Kensington, the City of Westminster, Finsbury, Poplar Southwark, and Bermondsey In conclusion, it may be stated that the aggregate mortality in London last month from these principal infectious diseases was nearly 15 per cent. below the average.

Infant mortality in London during January, measured by the proportion of deaths among children under one year of age to registered births, was equal to 127 per 1000 The lowest rates of infant mortality were recorded in Holborn, the City of London, Shoreditch, Wandsworth Greenwich, Lewisham, and Woolwich, and the highest rates in Paddington, Hammersmith, Islington, Southwark, Bermondsey, and Deptford

THE SERVICES

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified —Fleet Surgeon J S Lambert to the *President*, for Survey of Stores at the Royal Victoria Victualling Yard, Deptford Staff Surgeons P B Handyside to the *Vengeance*, C S. Woodwright to the *President*, for three months' course of hospital study, and N L Richards to the *President* for Survey of Stores at the Royal Victoria Victualling Yard at Deptford. Surgeons H. E. Tomlinson to the *Egeria*, C A. G Phipps to Plymouth Marines (temporary), and H A. Julius to the *Pembroke*

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel J W Robinson assumes command of the Depôt and Training School at Aldershot, in succession to Colonel H. E R. James Lieutenant J A Black joins at Woolwich Captain F E Gunter is to be employed in China with the Legation Guard. Lieutenant-Colonel H R. Whitehead joins at Woolwich. Captain T J Crean, V C, joins at Aldershot and is posted to the 3rd Station Hospital for duty

ARMY MEDICAL RESERVE OF OFFICERS.

Captain William K Clayton, South Yorkshire Volunteer *Brigade Bearer Company*, to be Surgeon Captain. Dated Feb 14th, 1903.

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers) The Tynemouth Surgeon Captain H. R. Bramwell to be Surgeon Major Dated Feb 14th, 1903 *Rifle* 2nd Volunteer Battalion the Suffolk Regiment Surgeon Lieutenant-Colonel J S Holden resigns his commission, with permission to retain his rank and to wear the uniform of the battalion on retirement. Dated Feb 14th, 1903 1st Volunteer Battalion the South Staffordshire Regiment Surgeon Lieutenant T Thompson to be Surgeon Captain Dated Feb 14th 1903. 21st Middlesex (the Finsbury) Surgeon Lieutenant Colonel J Adams to be Brigade-Surgeon Lieutenant-Colonel on appointment as Senior Medical Officer to the 5th London

Volunteer Infantry Brigade. Dated Feb 3rd, 1903. 4th (Donside Highland) Volunteer Battalion the Gordon Highlanders Brigade Surgeon-Lieutenant Colonel W Paterson resigns his commission with permission to retain his rank and to wear the uniform of the battalion on retirement, vacating at the same time the appointment of Senior Medical Officer of the Gordon Volunteer Infantry Brigade. Dated Feb 14th, 1903.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS)

Glasgow Companies Lieutenant J Wright resigns his commission. Dated Feb 14th, 1903.

THE CLOTHING AND EQUIPMENT OF THE MODERN SOLDIER.

In a recently published pamphlet[1] Professor Krocker gives his views regarding the modern soldier's dress and equipment. The exigencies of military discipline impose on the soldier a form of dress which takes no regard of individual peculiarities and can only partially counteract atmospheric and climatic vicissitudes. The well being of the soldier's body under the greatly varying conditions induced while at work or reposing, in peace time or during war cannot be entirely safeguarded, and too often the requirements of hygiene have to give place to those of fashion. Formerly the protection of the wearer from the assaults of the enemy had to be taken into consideration by the uniform makers, but the soldier of the present day only wears armour by way of ornament. When he is ordered on active service cuirasses, epaulettes &c., are left behind. From the hygienic point of view two chief modifications should be aimed at by those responsible for the soldier's dress simplification and diminution of weight. For 40 years laudable efforts in this direction have been made throughout the military world, but it is in the German army especially that ornament has been sacrificed to utility In the brigade of occupation on duty in China the latest and most advanced ideas regarding hygienic clothing and equipment have been given effect to. It is manifestly impossible to devise a single suit of clothing which shall act as efficaciously in summer as in winter which shall maintain the temperature of the body within its physiological limits irrespectively of that of the air, while at the same time it protects the wearer from all atmospheric variations In a hot climate the clothing should absorb the least possible amount of solar caloric, but should not interfere with the free elimination of body heat, particularly in the form of sweat, whereas in a cold climate solar absorption should be encouraged and the heat of the body retained, but with the least possible impediment to both aeration and transpiration. Military clothing does not, as a rule, respond to these contradictory requirements. It is true that each man has a cloak and a segment of tent-cloth and also canvas trousers and jacket. He can likewise substitute a forage cap for his helmet and a pair of shoes for his boots, but hygienically speaking it would be well if he could be provided with two complete sets of clothes, inclusive of underclothing In the brigade of occupation already mentioned each soldier's kit was composed as follows three shirts and three pairs of drawers of light cotton, a pair of trousers and a blouse of khaki-coloured cotton three pairs of semi cotton hose, a cork helmet with neck protector and a khaki coloured cotton forage cap with peak. The above were for wear during the hot season For winter the following were provided two woollen shirts and two pairs of woollen drawers, trousers and coat of iron grey cloth lined with calico three pairs of woollen socks leathern helmet, and cloth forage cap. Extras one flannel vest and two flannel waist belts, two shawls and a pair of gloves. In addition fur pelisses and foot-warmers were served out to cavalry soldiers, the foot-warmers being attachable to the stirrups. Each soldier was also supplied with a hooded cloak, a canvas section, and a waterproof sheet. Professor Krocker's further remarks on the quality of military clothing and underclothing the influence of colour and cut foot gear, and equipment will repay perusal

THE ROYAL VISIT TO THE HERBERT HOSPITAL, WOOLWICH.

On Feb. 16th the King and Queen paid a visit to the Herbert Hospital, Woolwich and inspected the new nurses' quarters and the arrangements which have been made for the treatment of the patients. Their Majesties arrived at Well Hall Station at 3 20 P.M., where the King was presented with an address by the Mayor of Woolwich The Royal party then drove to the Herbert Hospital and on alighting at the entrance to the new nurses' quarters the King and Queen were received by the matron in-chief and members of the Advisory Board of Queen Alexandra's Imperial Military Nursing Service, Earl and Countess Roberts, General Sir T. Kelly-Kenny Surgeon General Sir William Taylor K C B, Director General A.M.S., Surgeon General A. H. Keogh, C B., Sir Frederick Treves, Bart., K.C V O, C.B, Major W G Macpherson, C.M.G, R.A.M.C, Lieutenant-Colonel H. R Whitehead, R A.M.C, in charge of the hospital, Lieutenant Colonel J J Lamprey, A.M.S (retired) Major M. O D Braddell, R.A.M C, registrar and secretary Major and Brevet Lieutenant-Colonel S. Hickson, R A.M.C Major Wilson, R.A.M.C, Major Cottel, R.A.M.C (retired), Captain K. M Cameron, R.A.M.C, and others After being shown through the re-constructed nurses' home Her Majesty expressed herself as being greatly pleased with all that she had seen and then examined the new uniforms of the nurses. The matrons, sisters, and nurses were afterwards presented with the badge of Queen Alexandra's Imperial Military Nursing Service by Her Majesty and the King and Queen then visited the surgical wards and conversed with the patients. In the operating theatre Sir Frederick Treves explained to His Majesty the use of some recent surgical appliances Before the Royal party left the building the King presented to members of the Royal Army Medical Corps the medal for South Africa.

DEATHS IN THE SERVICES.

Surgeon General Edward Baily Tuson, A.M.D (retired) at Chelston Manor, Torquay, on Feb 4th. He entered the army as assistant surgeon in 1844 became surgeon in 1854, surgeon major in 1864 deputy surgeon general in 1872, and retired with the honorary rank of surgeon general in March 1879 He served with the 12th Lancers in the Crimea in 1855 (medal with clasp and Turkish medal)

Surgeon Major William Venour, A.M.D (retired), on Feb 4th, at Netherwood, Saundersfoot, in his sixty ninth year He entered the army as assistant surgeon in 1858, became surgeon in 1873 and attained the rank of surgeon-major in 1875 He served in the Ashanti campaign in 1873 and was attached to the 15th Hussars during the Afghan war of 1878–80 and took part in the advance to Khelat-i-Ghilzie He was present at the affair at Takht-i Pul, in medical charge of a squadron of the 15th Hussars and a half battery of Royal Horse Artillery (medal). In the Soudan expedition of 1884 he was in charge of a hospital at the base, and in the Burmese expedition of 1886–87 he was in medical charge of a field hospital (mentioned in despatches for services in the Soudan and Burma)

NEW REGULATIONS FOR PROBATIONERS OF THE INDIAN MEDICAL SERVICE.

According to an order which has just been issued probationers of the Indian Medical Service will be placed on the same footing as those of the Royal Army Medical Corps. We hope to find room for these regulations in an early issue.

Correspondence.

"Audi alteram partem."

THE RISE OF BLOOD PRESSURE IN LATER LIFE

To the Editors of THE LANCET

SIRS,—Like Sir Douglas Powell, who has written in your issue of Jan 24th p 265 I much regret that I was unable to be present on the occasion of the reading of Professor T Clifford Allbutt's paper before the Royal Medical and Chirurgical Society on Jan. 13th. It affords me much consolation, however that I have been able to read not only the paper of Professor Allbutt but the comments thereon of Sir William H Broadbent, Dr Alexander Haig, Dr Newton Pitt, Dr H D Rolleston, Sir R Douglas Powell, and Dr William Russell and himself. I join in the chorus of thanks to Professor Allbutt who has conveyed to us lessons of scientific truth (*truth as I so interpret it*) in striking phrases and has given me (at any rate) much opportunity for thought in the future

It seems to be generally acknowledged that there is a condition of increase above the normal mean of intra arterial pressure in later life, but the causes of this increase are interpreted in a different manner by different observers The author of the paper, Professor Allbutt, considers that the chief factor is viscosity of the blood—I presume a condition brought about by a perverted metabolism which renders it difficult to circulate through the arterioles, capillaries, and venules. Sir William Broadbent and Sir Douglas Powell, however, consider that the chief cause of the obstruction which leads up to the increased intra arterial pressure is in the arterioles or the capillary network. It is all very well for Professor Allbutt to contend that vaso constriction cannot be a chief cause because it has been proved to be transitory[1] This would, no doubt, be valid if it were contended that it was the primary and only cause, but what if it is a partial cause coöperating with the blood change which he calls viscosity? Sir Douglas Powell says, as, I think, very pertinently, "Arterial contraction has also a more common cause, probably in the central nervous system." It is partly because I believe this doctrine to be true and partly because I desire to retain my inquiring mind that I venture to address you on this occasion For in the first place, though the arteriole contraction may be, according to the evidence of rigid scientific investigation, in the normal organism fitful and transitory it may be quite otherwise when perverted metabolism inducing a morbid blood change is in existence as a concurring or reinforcing cause. In this communication it is my earnest desire to be *practical* I know that for this sentence I deserve to be castigated by all those who have taken part in the discussion, from Professor Allbutt through the whole list As if they also were not practical! By practical this time I mean brief and perhaps unsatisfactory because not developing sufficiently the arguments in proof of the views I hold Let this therefore, be a mere statement, not an apology, nevertheless, I will, if cross examined, give reasons for the faith that is in me

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[1] Jena: G Fischer 1902.

First of all I inquire of myself whether diseases, especially abnormalities of blood pressure and anomalies of circulation, have not in my own experience considerably changed within the last 12 years? My answer is Yes, they have. Is there a notable cause for this if true? I think so It is the presence or the frequent manifestation of a disease which we know as influenza What is the nature of the disease? It is infectious and due to a special microbe—the minute bacillus of Pfeiffer Has it, or have its toxins, any special manifestations which may go to elucidate the problem before us? In my opinion, emphatically yes. Its special manifestations are upon the nervous mechanism, on the peripheral nerves inducing neuritis varying and variable, on the spinal cord as I have myself traced,[2] and on the central nervous system as shown by the records of a host of observers The evolution of the disease process in influenza is extremely slow The degree of the initial symptoms bears no relation to the gravity of the symptoms of disease of the nervous mechanism which follow in its wake. In this regard we see, as was pointed out by the late Dr Althaus "an analogy with syphilis where the primary symptoms may be so slight that they attract very little attention and yet are followed by severe secondary and tertiary manifestations" Moreover, it is a matter of common experience that one individual may be infected many times. Immunity seems to be obtained with difficulty if at all, and furthermore the microbes and toxins of influenza appear to reinforce and to aggravate the effects of other microbic diseases and not in any sense to antagonise them. The bearing of these observations on the question at issue is that conditions of heightened arterial pressure have been greatly increased according to the observations of some men of experience in these later days in which influenza has been rife and in many of them the causal relation can be traced, as some of us believe, to the vaso motor mechanism

The question whether there has been, or may have been, any disturbance from this cause inducing a perversion of metabolism, wherefrom an increased viscosity of the blood may be at first sight more obscure I myself think, from clinical observation that there has been such a cause of perversion. It seems to me that in many persons of a later period of life in whom vices of metabolism might be looked for infection by influenza has come as a determining or aggravating cause. Of course this may be considered as a *petitio principii*, or a pious opinion mainly But in my mind the conclusion is forced on by a formidable series of clinical experiences. The sum of the whole matter, then, in my opinion, *quantum valeat*, is that Professor Allbutt is right in his conclusion that intra arterial pressure is raised in later life—a comforting conclusion in that it makes recovery from the earlier conditions hopeful and does not postulate an inevitable future arterio-sclerosis and that the causes of such condition of heightened arterial pressure are probably two-fold—a contraction of arterioles due to some morbid condition of the vaso-motor mechanism and a blood-change which may be termed "viscosity" The principles of treatment of the condition have been so ably though sententiously laid down by Professor Allbutt that I can serve no good purpose by attempting to add to them.

I am, Sirs, yours faithfully,

Harley-street W, Feb 11th, 1903 A. E Sansom.

To the Editors of The Lancet

Sirs,—I am gratified by the interesting and instructive letters which my comments upon Professor Clifford Allbutt's paper have brought forth and I would not have intruded further in the correspondence, for I agree with Professor Allbutt that the main points raised require further work for their elucidation, only I desire to explain what appears to have been an obscure sentence in my letter My argument was that inelasticity of degenerated vessels wasted the cardiac force and so tended to lower blood pressure. In order therefore to maintain the circulation at due pressure increased cardiac action was necessary and hypertrophy of the heart ensued. I think Dr Harry Campbell and I are at one in regard to arteriole contraction being the important cause of increased blood pressure, I used the more comprehensive, if less exact, term arterial contraction because it is very certain that arteries of medium calibre partake in the contraction and furnish the clinical index of it, although the resistance to circulation would chiefly exist in the smaller arterioles I have never been able to understand the mechanism of increased capillary resistance from altered conditions of blood which I remember was much insisted upon by the late Sir W Savory

In my poor attempt to interpret Professor Allbutt's term "increased viscosity" I implied that the altered blood so described brought about arterial contraction through excitation of the vaso motor nerves producing the hypertonus of vessels referred to by Dr Campbell, and I agree with his argument on this head, tonus and hypertonus being merely a matter of degree, indeed, in my Lumleian Lectures I spoke figuratively of the blood as being held in the grasp of the vessels to be tightened or relaxed at the behest of the nervous system. In bringing about this tonus and hypertonus, maintaining and regulating the blood pressure in varying and sometimes in morbid degrees, the suprarenal bodies would seem on clinical evidence to have an important function, witness the remarkable fall of blood pressure in Addison's disease and the toxic effects of adrenalin upon the vessels.

I am, Sirs, yours faithfully

Wimpole-street, W Feb 16th 1903. R. Douglas Powell.

To the Editors of The Lancet

Sirs,—Medical and scientific discussion ought to have two objects first, an attempt to see eye to eye, and, second, the clear and unambiguous defining of the points on which there is diversity of opinion For some time I have been contemplating a second paper on "hypertonus" and I thought that I could glean support from Professor T Clifford Allbutt's Lane lectures I wish to thank him fo making it quite clear that he and I do not look at th vascular phenomena under consideration from the sam standpoint. He looks from the physical standpoint, look from the vital, he is attracted by the behaviou of fluid in tubes, I am by the response of the *livin* tubes to their contained fluid I think it no mea gain to have positions so clearly determined. One furth word I should like to add, and that is to assure Profess Allbutt that in my choice of a word to express my apprec tion of his high literary faculty and attainments I regret have taken a word to which he attaches an unsavoury mea ing With reference to Dr Harry Campbell's valuab letter, while I agree with much of it I think that he pays t little regard to the action of the capillaries. He makes perfectly clear that he holds by the arterioles exclusively also note that he recognises hypertonus without rais pressure only "when the heart has come to the very end of its tether", in my experience it is much more common. These points can, however, be reserved for further discussion.

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[1] The Lancet Jan 31st 1903 p 329

[2] Liverpool Medico-Chirurgical Journal, 1896

I am, Sirs, yours faithfully,
WILLIAM RUSSELL.
Edinburgh Feb 14th 1903

THE ABUSE OF MEDICAL CHARITY

To the Editors of THE LANCET

SIRS,—The defence of the administration of the Bradford Children's Hospital, published by the honorary secretary, Mr H J Jeffery, in THE LANCET of Feb 7th, p 398, to the charges made by the chairman of the Bradford board of guardians, calls for notice. It is not a little remarkable that Mr Jeffery does not make the slightest reference to your leading article on the abuses at that hospital, but only refers to the charges of the chairman of the guardians. The same policy of silence was pursued in 1898 when your Special Commissioner made a report on the hospital abuse in Bradford, the Children's Hospital being very severely criticised Then, as now, the board of that hospital took no notice whatever of your criticism and the abuses have continued unabated Such tactics may to some extent prevent that attention being drawn to the flagrant abuse of the charity which would be caused by an attempted defence of the hospital management against your criticism. But it cannot fail to suggest the idea of inability to make a successful defence, and it certainly produces a very unfavourable opinion of the board when one sees that it is content to lie under the serious charge of mismanagement of trust funds without one word of protest. There may be times when "silence is golden" but to preserve the attitude of deaf mutism when one is publicly charged with allowing charitable funds to be recklessly squandered is not usually regarded as dignified or proper Such an attitude is indeed startling

It is rather clever of Mr Jeffery not to mention in his letter to you the charges brought against his board. This careful suppression tends to obliterate them from memory, and on reading his defence cursorily one might imagine that an injured innocent had been accused of—nothing in particular But on contrasting his defence with the accusations it will be seen how inadequate it is. Indeed, Mr Jeffery virtually admits the truth of all Mr F H Bentham's charges. What Mr Bentham is reported to have said about the Children's Hospital, in his general condemnation of the management of all our hospitals, is as follows "The Children's Hospital has no recommendations Children were taken into the institution without inquiry into the circumstances of the parents, though they were required afterwards, if able, to contribute. He was told that in every case the parents word was taken, and he was not aware that any inquiries had been made through the C O S [Charity Organisation Society]. The committee received £104 from that source in 1901 for 213 children with an average attendance of 37 2 days In the out-patient department 2308 cases were dealt with. No inquiries were made into the circumstances and all comers were dealt with indiscriminately"

As Mr Jeffery does not make any reference in his defence to any of these various points except that as to 'inquiry into the circumstances of applicants for medical charity it may be assumed he admits they are all correctly stated—viz, (1) that the paltry sum of £104 was collected from parents of children who spent 7781 sick days in hospital, (2) that there were 2308 out-patients and that no inquiry is made about them unless deemed necessary by the board, (3) that the board does not avail itself of the assistance of the Charity Organisation Society, (4) that all comers are indiscriminately treated, and (5) the parents' word is accepted in practically all cases. It requires some attention to see that in Mr Jeffery's letter he is throughout only dealing with the 213 in patients, except where he once refers to 'all' patients

Now, what is Mr Jeffery's defence? 1. He says '*Very many* of the cases treated at the hospital [i e., in patients T W H.] are received on the recommendation of medical gentlemen in the town who naturally satisfy themselves that the position of the families is such as to justify an appeal to the charity In other words the board makes no inquiry as to "very many of the cases' The assumption that the medical men who send these cases act as inquiry officers could be no justification for the board's neglect. The assumption is further no doubt quite unwarranted. Medical men do not act as inquiry agents as to their own patients and certainly will not do it to relieve the board of its duty What "very many" cases means is uncertain. I would ask Mr Jeffery if it means as much as 1 in 100, until I have his assurance I must doubt if it means so many 2. "The bulk of the in patients," he says "are drafted into the hospital by the honorary medical staff from the out-patients' department, after careful examination and inquiry as to the circumstances of each family", in other words, he says, the honorary staff are the inquiry officers of the hospital, their inquiries are made while prescribing for the applicants, and their investigations are thorough and satisfactory How completely is the nature of a proper inquiry understood by Mr Jeffery and his board if he thinks such an inquiry sufficient! How utterly has the medical staff sunk from the dignity of their profession, if as Mr Jeffery alleges, while actually prescribing for the sick and suffering they engage in a minute inquisition of the means of the sufferers. I can say of one member of the staff that he indignantly repudiates having ever acted such an odious part as that of combined medical officer and charity organisation officer Supposing the medical officers did stoop to this meanness, which I will not readily believe, they must accept the statements of the parents alone, as Mr Bentham said.

It is obvious that the board does not take proper steps to safeguard the charitable funds intrusted to it. No doubt the staff will take occasion to repudiate the statement that they act as inquiry officers. I believe Mr Jeffery is misinformed as to the facts. No reference was made by Mr Bentham to the great abuse arising from the enormous number of quite trivial cases treated at this hospital (and at all the Bradford hospitals) or of the unnatural rate of increase of the number of patients, which has been out of all proportion to the increase of the population and the wealth of the city

I am, Sirs, yours faithfully,
Bradford Feb 10th, 1903 THOS. WHITESIDE HIME.

THE ANATOMY OF GLÉNARD'S DISEASE

To the Editors of THE LANCET

SIRS,—Dr John Knott has been good enough to criticise in your pages[1] and at considerable length a recent effort of mine to explain the manner in which the abdominal viscera become displaced. The explanation which I offered has proved entirely unsatisfactory to Dr Knott, especially in so far as it has upset certain preconceptions of his regarding the nature and action of the diaphragm. Amongst these preconceptions is that of the "relative immobility" of the central or cordiform tendon of the diaphragm. On the solitary occasion in which Dr Knott had an opportunity of studying the movements of the diaphragm by the aid of the x rays he would have found had he fixed the screen and divided it into inch squares, that it was he and not the "accomplished physicist' that was deceived by the movements of the ribs If he will take the trouble to examine the first ten subjects that come to hand he will find that the movements of the middle and lateral leaflets of the diaphragm correspond to the measurements given in my lecture. The experience will also convince Dr Knott that it is a dangerous thing to generalise from a rough guess made on a single instance.

Dr Knott cites the phenomena to be seen in a hiccoughing boy as irrefutable evidence of the relative immobility of the central tendon of the diaphragm. I followed minutely his directions for the production of hiccoughing as regards boy, bribe, and oatmeal, but failed to produce it in any one of the six individuals investigated. Whether the failure was due to the inhibition of expectancy or to some further error of observation on the part of Dr Knott I cannot say There can be no doubt, however, that he is perfectly right in asserting that in *hiccoughing* the central part of the diaphragm is relatively immobile although he is apparently quite unaware of the cause of the immobility At the commencement of a hiccough, as may be seen in the illuminated body, all the muscular fibres of the diaphragm, both costal and spinal, suddenly contract and attempt to jerk the central tendon downwards. Its descent is arrested and it remains locked by the sudden closure of the glottis When the glottis is opened the central tendon again resumes its ordinary respiratory mobility I am indebted to Dr Knott for calling my attention to the phenomena of hiccoughing, for it provides another instance of the accuracy of my "preposterous explanation" of the action of the diaphragm On inspiration the diaphragm expends its force in three directions (1) in pushing the abdominal viscera forwards and downwards, (2) in drawing the viscera of the thorax in corresponding directions, (3) in raising the abdominal ends of the lower six pairs of ribs (with the exception of the twelfth) In normal respiration the diaphragm assists the external intercostals in elevating the costal margin, but if, as in hiccoughing, the thoracic and abdominal viscera are rendered immoveable, the force of the diaphragm is spent, as Dr Knott so clearly demonstrates, in drawing the abdominal ends of the lower ribs upwards and inwards—that is to say, the diaphragm draws its moveable costal insertion towards its firm spinal margin, a movement which Dr Knott says is impossible to understand

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[1] THE LANCET Feb 7th p 394

In dealing with the cause of the variability in the position of the diaphragm in dead subjects I inferred that the diaphragm after death represented the phase of complete expiration. To that inference Dr Knott apparently takes no exception, but my statement that "the elasticity of the lungs draws the diaphragm up as far as it will yield" appears to him "in the present state of physical and anatomical knowledge to read rather funny" "It is unnecessary,' he proceeds, "of course, to point out that the lungs, or their elasticity, have no *direct* connexion with the diaphragm" Thereupon Dr Knott makes certain observations on the standard of physiological knowledge he would require of tyros and rapidly becomes mathematical. Now when a man, in dealing with some simple problem in physiology or natural history, becomes mathematical it will be found that in nine cases out of ten, he is trying to prove the existence of something that is not, and to this rule my critic is no exception. I need not quote for Dr Knott that the elasticity of the lungs after death, if modern text-books on physiology are trustworthy, is enough to support a column of mercury from two to five millimetres high, I would rather beg him to leave his study chair for the post-mortem room and to verify certain experiments which I have carried out there for his benefit The experiments are designed to show that the elasticity of the lungs have a great deal to do with the position of the diaphragm. In five subjects varying in age from six months to 52 years the trachea was connected with a manometer In each case there were no pleuritic adhesions Three long hat-pins were inserted in a row perpendicular to the surface of the chest, one with its point buried in the viscera of the right dome, one in the left dome, and one in the middle inserted only in a costal cartilage so as to serve as an index of the movements of the other two when the chest was opened. Dr Knott knows as well as I do that the very partial collapse of the lung which follows an incision in the walls of the thorax was not due to atmospheric pressure, for on opening the chest the pressure is then the same on both surfaces of the lung, but is due entirely to its elasticity The only factor annihilated by opening the chest is the elasticity of the lung In the five cases I measured the elasticity varied from 0 5 to 3 Hg mm As the lungs collapsed and their elastic traction disappeared the domes of the diaphragm and the abdominal viscera within them descended from two to five millimetres. The degree of descent roughly corresponds with the amount of pulmonary elasticity Perhaps when Dr Knott comes to repeat those experiments the idea of the elasticity of the lungs having something to do with the position of the diaphragm may strike him as less "funny" than it did

My description of the diaphragm as a fan shaped digastric muscle, rising from the upper lumbar region of the spine and inserted on the abdominal ends of the lower six ribs appears to Dr Knott a "preposterous" and "physico-metaphysical statement." The statement will strike him in quite a different sense when he becomes better acquainted with the origin, nature, structure, and action of the diaphragm If he approves of the name "digastric" for the muscle which goes by that designation in the neck he cannot legitimately withhold it from the diaphragm, for in nature, in origin, in manner of developement and in action these two muscles correspond point for point.

I have tried to show Dr Knott that "preposterous" is a dangerous word to employ, its use denotes ignorance more frequently than knowledge.

I am, Sirs, yours faithfully,
Feb 16th 1903 ARTHUR KEITH

THE VIRCHOW MEMORIAL

To the Editors of THE LANCET

SIRS,—Allow me to inform your readers that the subscription list for the Virchow memorial will close at the end of the present month. So far, 97 subscribers have contributed £225 1*s* 6*d* Further contributions should be sent before Feb 28th to the honorary treasurer of the Virchow Memorial, care of Messrs Robarts, Lubbock, and Co, 15, Lombard street, London, E C

I am, Sirs, yours faithfully,
FELIX SEMON,
Wimpole-street, W Feb 16th 1903 Honorary Secretary

A QUESTION IN INEBRIETY

To the Editors of THE LANCET

SIRS,—In our dealings with inebriates it is an interesting question for us to consider whether we have really to deal with a class of individuals whose will power is a weak or a strong feature of their minds The accepted belief is that the inebriate is a weak willed creature, but a good deal of experience of inebriates has led me to doubt that idea and rather to believe that which I consider to be a fact—i e., that the inebriate is possessed of a will which over rides the other faculties of his mind in so far at least as his appreciation of his moral obligations is concerned, and therefore that his will is the strongest feature in his mind

From a psychological standpoint we may admit that when the will and the other faculties of the mind act in unison we have as the result a properly balanced intellect In the inebriate we frequently observe these other faculties of the mind tending towards a high class of intellect, the latter form being, indeed, often fully revealed together with the tendency to inebriety Should, however, those other faculties of the mind outrun the will to any great extent coördination of the whole is lost and the reasoning powers justify to the mind acts and conceptions which the will is unable to restrain within recognised proper bounds and those aberrations of intellect occur which cause eccentricity and lunacy On the other hand, should the will override these other faculties of the mind the balance again becomes lost and the inebriate the spendthrift, the fanatic *et hoc genus omne* stalk in. We hear constantly of the inebriate who is desirous of giving up drink but that "his will is too weak." It really is that his will is too strong, his will to drink entirely outstrips those other faculties of his mind which present to him his moral obligations not to drink, the result being that such individual s act is the outcome of a major force of will and not that of a minor quantity of it It is in this light, therefore, that I consider that the inebriate is possessed of an unfortunately strong willed temperament and not, as generally accepted, a weak willed one. I would be glad of the views of some of your readers as to this heterodox opinion which I beg to submit to you.

I am, Sirs, yours faithfully
Feb 13th 1903 C E MACNAMARA

THE LARGE INTESTINE AS AN INTERMITTENT SYPHON

To the Editors of THE LANCET

SIRS,—The publication of my paper on this subject has aroused so much interest that I should like to solicit the coöperation of your readers in helping me with some side issues and I am encouraged to do so by the signal success that has followed a similar attempt,

In the notes which I added to the reprint of the article in the *Edinburgh Medical Journal* and again in the address an abstract of which appeared in THE LANCET of Feb 7th, p 374, I proved as far as could be done by reasoning that the longitudinal bands of the large intestine are normally in a state of continuous tonic contraction. But, having no facilities for observation, I wrote to Dr T G Brodie, of the Examination Hall physiological laboratories, and requested him to look out for this phenomenon I received his answer on Jan. 31st and his conclusion was expressed in these words "I think there is no question whatever but that the longitudinal bands of the colon are tonically contracted" his tonic contraction with its concurrent shortening would e quite enough to produce the rigidity necessary for syphon ction, and it cannot be denied that the large intestine with ts short ascending and long descending tube fulfils in other espects the conditions of a syphon

One of my points was that, on completely filling the olon by injection from the cut ileum, the 20 inch ransverse colon leaves its nine inch bed and becomes longated and tortuous, the same thing must happen in igmoid obstruction. Thus the question arises Is the V shaped colon sometimes a post-mortem change? When a erson is found dead in a sitting position, therefore, should like the maker of the necropsy to notice whether the transverse colon has dropped from its sual site If empty perhaps this could not be expected. Again, I have a suspicion that the constipation and colic of lead poisoning are due to paralysis of the longitudinal bands with the consequent elongation, kinking, and loss of rigidity of the bowel This should not be very difficult to determine Further, since I have shown that hydraulic power is a factor in the propulsion of the intestinal contents, I should like to know with what average force the stream from the ileum enters the cæcum

I am, Sirs, yours faithfully,
R. W Leftwich M D

Buckingham gate S W Feb 9th 1903

THE UNIVERSITY OF LONDON AND THE ENGLISH ROYAL COLLEGES OF PHYSICIANS AND SURGEONS

To the Editors of The Lancet

Sirs,—I would like to make a few remarks upon "Africander's" letter in The Lancet of Feb 7th, p 399 He states that "Hitherto the whole crux of the question has been taken to be not a matter of personal ability but of opportunity," and I quite agree with him I contend that opportunity should exist in London, as in other university towns It seems anomalous that out of 60 entries at a London hospital only four should contemplate taking a degree. I submit that out of the same number of students entering, say, at Edinburgh, a very much larger percentage would contemplate and, as a matter of fact, take the degree Further, however judicial the mind of South Africa is in respect to the practitioner of medicine (a country by the bye just now perturbed by political and racial hatred), there is I submit a very great advantage in possessing a degree in the old country, and the opportunity to obtain the same in London would be forthcoming were the Royal Colleges to join the University for examination purposes under the Act of Parliament which contemplated the possible desirability of such a union

I am, Sirs, yours faithfully,
Fredk W Collingwood

Devonshire street W Feb 7th 1903

NOTES FROM INDIA

(From our Special Correspondent)

Mr Jonathan Hutchinson's Leprosy Tour —The Jamsetjee Jejeebhoy Native Hospital in Bombay —The Government Grant to the Pasteur Institute at Kasauli —The Plague Epidemic

The advent of Mr Hutchinson to the principal cities of India is announced by letters in the local papers. Besides asking for information and promising to attend meetings Mr Hutchinson gives a *résumé* of his views upon leprosy He holds that the disease is caused by a bacillus which gains access to the body through the stomach, that there is great danger in eating food directly from the hands of a leper that in the majority of grown up lepers the disease is caused by eating badly cured fish, and that a long period is necessary before results will be observed. It remains to be seen how the profession in India will receive these opinions which many consider are advanced on very imperfect scientific data.

The public appeal for money in aid of the nursing establishment of the Jamsetjee Jejeebhoy Native Hospital in Bombay is accompanied by the announcement of an extraordinary condition of the nursing staff Here we have the largest native hospital in Bombay of no less than 460 beds which are always full, with 15 wards totally unnursed and seven others only nursed during the day There is no complaint about the buildings and the staff is for the most part drawn from the Indian Medical Service. Treatment can hardly be conducted with much satisfaction to the medical men and the patients are without one of the main advantages of a hospital It is stated that the Bombay Government is prepared to assist to the extent of half the expenditure necessary

The increase in the Government of India grant to the Pasteur Institute at Kasauli is not marked by excessive liberality Hitherto Rs 9500 have been contributed, but in future Rs. 12,000 have been promised Considering that 119 European and 33 native military patients were treated last year and that if the institute had not been established a very much larger sum than the above would have been incurred in sending British soldiers to Paris, the apparent generosity is in reality a sharp stroke of business. The institute is dependent in part upon private subscriptions and is necessarily hampered in its work by uncertainty in income As other scientific work than the treatment of rabies is conducted at this institute it is of the highest importance that its expenses should be completely covered and Rs 20,000 at least should be the annual grant made from the Government of India alone

Every week now records rapidly rising figures in the plague mortality throughout India. Last week 22,954 deaths were recorded, as compared with 19,231 for the previous seven days and with 11,445 for the corresponding week last year In the Bombay Presidency 10,747 deaths were returned, in Bombay city 495, in the Madras Presidency 848, in the Bengal Presidency 3060, in Calcutta 76, in the United Provinces 2954 in the Punjab 2627, in the Central Provinces 850, in the Hyderabad State 446, and in Berar 596 For some extraordinary reason the Poona figures are not included in the published returns, but local papers show that it is raging in this town with extraordinary virulence, over 100 deaths occurring daily The disease is still severe in Karachi and is also severe in Allahabad, Meerut, Benares, and Lucknow, while the Cawnpore district continues to suffer very badly In Bombay city the rate of mortality is about 90 per 1000 per annum In Calcutta the recrudescence is rapidly developing Madras has shown some indigenous cases and other cases are reported from Simla

The mass of poor humanity which assembled in Calcutta upon the large Maidan to be fed in celebration of the King's Coronation numbered probably 50,000 The wretched physique of the majority of these beggars was painfully evident and the collection offered many opportunities of seeing external diseased conditions Skin diseases were very common, especially the different forms of parasitic origin, and numerous lepers moved amongst the crowd. Deformities paralytic states, and conditions produced by chronic diseases such as malaria and elephantiasis were everywhere evident The Hindu portion consisted largely of professional beggars A few years ago such a gathering would have been condemned as conducive to the spread of plague, but subsequent knowledge has shown that a plague patient would be either too ill to go or not in a stage of contagion.

Jan. 30th

Literary Intelligence —The Scientific Press, Limited, announces the publication of a cheap edition, price 10*s* 6*d* net, of Dr R. Sisley's work, "The London Water-Supply" Messrs W B Saunders and Co announce the immediate publication of two new volumes in 'Saunders's Medical Hand Atlas Series"—viz., "Atlas and Epitome of Diseases of the Mouth, Pharynx, and Nose," by Dr L. Grünwald of Munich, edited, with additions, by Dr J E Newcomb, and Atlas and Epitome of Human Histology and Microscopical Anatomy," by Professor Dr J Sobotta of Würzburg, edited with additions, by Dr G C Huber Messrs. Saunders and Co have in preparation for early publication two new volumes in their English edition of Nothnagel's Practice—viz, 'Diseases of the Pancreas, Suprarenal Capsules and Liver," and 'Diseases of the Stomach' —Mr Henry Frowde announces the approaching publication by the Oxford University Press of Dr A. J Ewart's treatise on "The Physics and Physiology of Protoplasmic Steaming in Plants," of which an abstract was communicated to the Royal Society

THE
ORGANISATION OF THE PROFESSION

(FROM OUR SPECIAL COMMISSIONER.)

(Continued from p 480)

The Swansea Single Men pay for Medical Attendance on the Wives and Children of the Married Men —Figures demonstrate the Charitable Aspect of Club Practice — Complaints against the Medical Officers

IT has been seen that at Swansea the custom is that men only pay for medical aid. Their wives and children have to be attended without the member of the club or society being called upon to make any extra payment on their account. A member who has no wife or child pays the same subscription as the member who has a large family This is a strange and unusual arrangement, but when viewed from the workmen's standpoint it has a beautiful, a poetical, and altruistic appearance Are we not told, they say, to bear each other's burdens? and who can better afford to pay for the *married man's family than the bachelor?* In his turn, if a married man has only two children should he not contribute something for the man who has half a dozen children? With such principles there should be no decrease in the birth rate, but the medical practitioner objects to these theories, however beautiful they may be, when they are not put into practice except at his expense If the bachelors will pay for married men's children, well and good, but then they should pay and not merely talk about it *It is not an average of* 6*s* 6*d* per member that will cover the cost of attending numerous families But the workmen challenge these figures and have tried to demonstrate that the single men pay enough to make up for the acknowledged insufficiency of the payments effected by the married men. One case, for instance, is cited of a married man who pays 6*s* a year to his lodge but has two unmarried sons who subscribe to two other societies, and altogether his household pays about £1 13*s* 4*d* per annum It is obvious that no argument can be based on such a case as this. No one desires that any individual family should contribute *too* much, but what were the payments of this family before the children had grown up and what will happen when they marry? Again, the workmen say that they often belong to several societies and that they therefore pay for several medical men. This unsatisfactory state of affairs is not, however desired by the members of the profession , they would wish that only one medical man should be engaged but that he should be properly remunerated. Besides, this simply means that the most popular medical man has the *most* work *to do and does not* get proportionate pay Dr John D Davies has calculated that the medical profession is overworked at Swansea He says that there are 44 practitioners in the town and this means, in round numbers the population being 97,000, one practitioner for every 2000 persons At Cardiff there are 113 practitioners and this is equal to one for every 1143 persons and at Newport there is one practitioner for every 1800 of the population To make a decent living from club practice alone at the old Swansea rate of payment it would be necessary, Dr Davies reckons, to see about 100 patients per day and this is not possible short of defrauding the patient and converting the practitioner into a mere machine.

Dr T D Griffiths, who is to preside over the next meeting of the British Medical Association, is of opinion that there should be one medical practitioner for every 1100 persons According to figures derived from the Order of Foresters the average number of members on the club funds at a time amounts to 3 per cent of the total membership So if there are 1100 members this means that there would be an average of 33 patients per day to attend To do such work properly and including the time required to go from house to house it is not possible to see more than four patients per hour and this means 32 patients in a day of eight hours But this calculation under estimates the position, for it is based on the health of members of a friendly society—that is to say, of adult males —and it may well be estimated that for one member who requires medical attendance there are at least two women or children who are also ill. Dr Griffiths makes, however, another calculation He says if 100 members pay 4*s* a year each this yields £20, or £6 13*s* 4*d* for each of the three members who are ill all the year round, and this amounts to 2*s* 6*d* per week for attending a patient. The chief registrar of friendly societies has based the sick pay to be allowed on calculations extending over some millions of members and he concludes that the average amount of sickness equals 12 days per annum per member This confirms the previous estimate, for the 4*s* annual subscription divided by the 12 days of sickness does amount to about 2*s* 6*d* per week for attending the patients. These figures are taken from the statistics of the friendly societies themselves

Though the insufficiency of the pay is thus very clearly demonstrated the members of the friendly societies found it difficult to believe that their medical officers had good cause for dissatisfaction. Why, they urged, was such work accepted and why, when a vacancy occurred, were there so many applicants for the vacant post? At Swansea an answer was made, or was said to have been made, that greatly startled—not to say shocked—the members of the friendly societies It has been admitted that some club medical officers merely gave value for value; in other words, they did not do as much for patients who, on on average, only paid from 3*d* to 6*d* per consultation as they did for those who paid 2*s* 6*d* This frank admission has caused quite a scandal Some local leaders promptly replied that if this was the case they would dismiss all their medical officers, they would amalgamate all their clubs, and found a large medical institute, where they would employ their own medical officers who should be entirely at their service. Furthermore, they would buy their own drugs and thus insure that they should be of the best quality A lengthy circular was issued to this effect It states, among other things —

> That the grievance is that under existing conditions club patients do not get the proper attendance and medicine which they have a right to expect. In saying this we only state what is a well known fact to most friendly society members How often do we hear the complaint from our members as to the indifference and inattention *of doctors to* club patients Is it infrequent that we hear of members protesting that rather than go to a club doctor to whom they pay their contributions ungrudgingly they go to another and pay him fees which in many cases they can ill afford to pay? Why these complaints have become so common that the name of club doctor is a reproach among the members

This is an important statement and perhaps was considered by its author as an attack against the medical profession, but it, on the contrary, confirms the arguments so frequently brought forward in these columns. The circular containing the above passage is addressed to the friendly societies and the opening paragraph explains that—

> In pursuance of a resolution passed at a general meeting of delegates representing the various branches of the friendly societies of Swansea and district held at the lodge room of the Bird in Hand Hotel High street on Friday evening Nov 28th we beg to submit the following for your consideration

The circular is therefore and in its way an official document and it distinctly proclaims what has always been urged in these columns that club practice must inevitably tend to degrade the profession Undoubtedly, patients do not always obtain proper attendance and medicine, but they have only the "right" to expect this on one of two conditions. They must pay for it or else they must be considered fit and proper subjects for the receipt of charity But the members of the friendly societies seek to avoid both these issues , they do not subscribe enough to constitute a payment and yet they are very indignant when told that they are in receipt of charity Nevertheless, the fact remains that whenever a club patient is properly attended he is in receipt of charity, but as medical men cannot spend all their lives and substance in works of charity the complaints made in the circular are sometimes based on fact

Dr Griffiths has explained that when he first commenced to practise at Swansea he took a club and its members paid him 5*s* a year He contracted with a druggist to dispense for him at the average charge of 6*d* per bottle of medicine and 2*d* per box of pills. At the end of his first year Dr Griffiths found that his drug bill exceeded by £11 the amount he had received from the club Was not this charity to the amount of £11 in cash and all the labour of attending the patients? The practical upshot is that to make the 5*s* subscription yield some small remuneration the drug bill must be reduced from an average of 6*d* to about 1*d* per bottle. This club met at the "Adam and Eve" in High street and Dr Griffiths promptly resigned his position as their medical officer He then received a deputation from a club that met at the "Bird in Hand" and had about

500 members He carefully studied the figures they submitted to him as to the number of members and their families he would have to attend and found that the remuneration offered was equal to 1½*d* for each attendance. Therefore if he resigned himself to spending a large portion of his time in dispensing his own medicines and resorted to expedients necessary so as to reduce the average cost of the medicines to 1*d* per bottle, he would receive a net profit of ½*d* for each attendance in payment for his skill and knowledge as a physician and also as a dispenser Yet the men who made Dr Griffiths this munificent offer would deny that they were asking for charity Dr Griffiths has consequently and publicly proclaimed that he preferred to give up the clubs. He has urged that no respectable man could accept such conditions and that if those who did accept such terms resorted to disreputable practices the primary blame rested with the clubs which sought to sweat the profession. As the subscriptions were insufficient to remunerate the medical officer, it would not be surprising if various stratagems were invented to induce the members to order or to purchase some special drug or in some other way to incur an outlay not comprised in the terms of the contract. The tendency to push the sale of such extras was inevitable so long as the medical officers were not properly remunerated.

Under such conditions the complaints made in the passage of the circular quoted above are only just what might be expected, but in thus complaining the circular unwittingly acknowledges that the medical officers could be properly remunerated There has never been any objection to attending the genuinely poor for little or nothing The objection is against giving what practically amounts to medical charity to those who can afford to pay, and here we find it acknowledged that the members of the friendly societies not infrequently go to a private practitioner and pay him fees which "in many cases they can ill afford." Therefore the members of the friendly societies can pay the ordinary fees since it is here publicly admitted that they do pay the ordinary fees. This we are told they can ill afford in many cases, therefore they can afford to pay the proper fee in some cases Why, then, do they attempt to avoid doing so? Have we not in this sentence an official acknowledgment made and indorsed by the friendly societies themselves that the complaint of the medical profession is well founded? that there is abuse in the club system and that there are members who can afford to pay the usual fee and who have therefore no right to claim the semi charity if not the absolute charity, associated with the system of contract work?

Nevertheless and immediately after this admission that abuse does exist the circular goes on to quote a letter written to the medical journals by the Registrar of Friendly Societies, saying —

> Do the friendly societies ask for medical relief as a charity? or do they wish to sweat the medical profession, or are they willing to pay a fair price for the services rendered to them by it. I know them well enough to answer the question without hesitation They desire to pay a fair price for the services rendered to them. They are neither beggars or sweaters

The circular commenting on this letter states —

> The friendly societies have always been willing to pay a fair price, but if the price has not been satisfactory to the medical profession in Swansea then they themselves are to blame. The present low rates are due to the undercutting that has been going on amongst themselves for some years past. In spite however of these rates which they consider to be low we know that when a vacancy for a medical officer occurs in a branch that the competition for the vacancy is very keen, and the methods resorted to in order to obtain the office are not, in all cases such as add to the dignity of the medical profession.

This, again, confirms much of what has been said in the course of this series of articles. Many a time have the "undercutting tendencies of certain practitioners been denounced It is to prevent such practices that the organisation of medical unions throughout the country is advocated. As a result of this movement the competition for vacancies in club practice is now not so keen as it was some years ago Indeed, there are cases where it has been impossible to obtain any medical officer to fill a vacant post. Some of the insurance companies which organised medical aid in the same manner as the friendly societies have now abandoned this phase of their business There can be no doubt that progress has been achieved within the last five or six years. Still there are weak kneed members of the profession At the joint meeting of medical representatives and the delegates of the friendly societies at Swansea Mr Lake, secretary of the latter organisations is, according to the shorthand notes taken at the time, reported to have declared that some medical officer had said to the members of the societies, "Never mind, we understand each other, do not trouble," and another said, "I will give you back so much if this increase comes about." At this there were loud cries of "Name," but Mr Lake replied, "No, it is enough for me to say I was in the lodge when the offer was made." It is not surprising if some of the workmen are still under the impression that they pay a sufficient subscription to medical officers of their clubs. Then when they find that they are not attended to with sufficient care or if they suspect the quality of the medicine given they complain that they are being robbed right and left, and that though they subscribe to a club medical officer they are constantly compelled to seek the advice of a private practitioner There is in this a rough justice which it would be to the material advantage of the friendly societies to take into more serious consideration If such complaints are well founded—and it is generally admitted that there is some truth in them—what would be the consequence? Simply that patients would remain longer on the sick list and therefore draw larger sums as sick allowance. Consequently the drain on the societies' funds for sick pay is likely to exceed the sum necessary to remunerate sufficiently their medical officer The attitude of the friendly societies is that they give insufficient remuneration to their medical officers and trust that, in defence of the honour of their profession, the medical officers will nevertheless give back in exchange sufficient and efficient attendance and medicine. It sometimes happens, however, that the medical officer adopts the commercial rather than the professional point of view and therefore returns tit for tat and only gives his patients their money's worth. Then there are sounds of lamentation the medical officer's behaviour is denounced as most scandalous, and the friendly societies make big threats of discharging all the medical officers and founding a medical institute solely under the control of the friendly societies

(To be continued.)

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT)

Royal Southern Hospital Grave Financial Situation.

THE sixty first annual report of the working of the Royal Southern Hospital states that the balance due to the bank had now reached the high figure of £5601. The number of patients treated during the year was 13 355, of which 2431 were in patients, the number of attendances was 47 103, making a total of 60 458 and showing a considerable increase on previous years. The services of the horse ambulance were called for in 458 emergencies. The average number of beds occupied was 192. The number of cases in the tropical diseases ward was 137 as compared with 131 last year Dr W Permewan, in seconding a vote of thanks to the Lord Mayor for presiding at the annual meeting, said that the time would come before long when the city would not only feel it its duty but its plain interest to keep up and to maintain an efficient system of hospitals. It was now by a recent decision of the Local Government Board, within the power of the corporation to establish and to maintain a hospital for any purpose and not only for the treatment of infectious diseases as was generally supposed. The Lord Mayor, in replying to the vote of thanks, endorsed Dr Permewan's remarks on corporation hospital management and said that the time would probably come when some of the hospitals would be taken over by the city and placed entirely on the rates. His lordship suggested that probably those responsible for the administrative departments of the several hospitals of the city might learn something from each other by conferring upon the best methods of reducing the cost per head of the patients in the hospitals In the Royal Southern Hospital the cost per head was under £50 per annum

Small-pox in Liverpool Slight Abatement in the Number of Reported Cases the Tramp Nuisance

There were 306 patients suffering from small pox in the corporation hospitals on Feb 12th Only 45 fresh cases were reported during the week, as against 131 during the previous week. The spread of the disease is largely due in

Liverpool to tramps Dr E W Hope, the medical officer of health, is of the opinion that they leave a trail of disease behind them. There is a class of idle loafers who alternate between the gaol and the tramp sheds of the workhouses and wherever they go they are a nuisance. A letter from the Local Government Board bearing on this subject will shortly be laid before the health committee. Nothing has been more clearly proved than that the dissemination of small pox has been very largely owing to tramps Stringent measures have been taken to deal with them in Liverpool. More drastic measures generally in dealing with this class of pest (in Dr Hope's opinion) would prevent a great many outbreaks of the disease

The Liverpool Cancer Research Fund in connexion with University College and the Royal Infirmary

The director of the Liverpool Cancer Research (Sutton Timmis) Fund, Dr A. S F Grünbaum, has issued a circular letter to the local members of the medical profession in which he states that the objects of the foundation are (1) to investigate the biology and chemistry of the disease, (2) to attempt the production of curative remedies, (3) to discover, if possible, means for the prevention of the occurrence and spread of the disease, and (4) to investigate, experimentally and otherwise, the questions of etiology relating to heredity, locality, occupation, &c Dr Grünbaum appeals to his professional brethren to give him the opportunity of obtaining fresh specimens of malignant tumours when occasion presents itself.

Feb 17th

SCOTLAND

(FROM OUR OWN CORRESPONDENTS.)

The New Professor of Anatomy in the University of Edinburgh

THE curators of patronage of the University of Edinburgh met last week for the purpose of considering the vacancy in the chair of anatomy created by the promotion of Sir William Turner to be Principal. The curators having learned that Dr D J Cunningham, professor of anatomy in Trinity College, Dublin, was willing to accept the Edinburgh chair, unanimously decided that in view of his pre eminent qualifications it was unnecessary to consider other applications and that he should be invited to succeed Sir William Turner The appointment of Professor Cunningham had been anticipated, so that the intimation did not cause any surprise. The manner in which the appointment has been made may well be highly gratifying to Professor Cunningham. I do not remember any other appointment to a medical chair being made in this way Professor Cunningham will be warmly welcomed back to Edinburgh, where many men who knew him in student days now occupy prominent positions Professor Cunningham graduated in medicine at the University of Edinburgh in 1874 with first-class honours. Two years later he took the degree of M D, receiving a gold medal for his thesis on the Anatomy of the Cetacea. In 1876 he became senior demonstrator of anatomy in the university under Sir William (then Dr) Turner and this position he held for six years, when he received his appointment at Dublin. Professor Cunningham has been a fruitful contributor to anatomical science and his scientific attainments have been recognised by the conferring upon him of honorary degrees by the Universities of Dublin, Oxford, Glasgow, and St. Andrews

Carnegie Trust Scheme for Post Graduate Study and Research

The executive committee of this trust has published its regulations for scholarships fellowships, and grants. The scholarships are intended to afford promising graduates an opportunity of training and proving their powers in higher study and research, and may in this way qualify scholars for fellowships Each scholar is selected by the trustees on nomination by a professor or lecturer, but the trustees in considering a nomination may include the opinions of others also who are acquainted with his qualifications The scholarships are to be of the value of £100 per annum and may be held for two years During the tenure of the scholarship no other scholarship can be held, but in the case of such a scholarship being held the trustees may supplement it so as to bring it up to £100 per annum No position of emolument can be held with a scholarship except with the sanction of the executive committee. Ordinarily a scholar is expected to devote his whole time to the purpose for which the scholarship is awarded. The scholar has to work under the supervision of the professor or lecturer who nominates him. The fellowships are for graduates who have already, preferably by work published, shown their capability of advancing science or medicine and who desire to devote themselves further to this work. These are of the annual value of £150, exclusive of such special expenses in connexion with a research as the executive committee may allow Here, also, no other fellowship or position of emolument is allowed save on the same terms as mentioned above as applicable to the scholars. The fellowships may be held for three years if the executive committee decide so to extend them Finally, the committee will consider applications for grants in aid of research These are open to professors, lecturers, and assistants in Scottish universities, any teacher in Scotland recognised for the purpose of graduation in a Scottish university, or a Scottish university graduate resident in Scotland. The applicant must submit evidence of his experience in research, the nature of the proposed research, the time it will take, and the estimated cost. The executive committee of the Carnegie trust is again to be congratulated on its statesman like grasp of this difficult question and on the very admirable nature of the arrangements it has made. The young men in Scotland seem to me to be given an enviable opportunity of showing their interest in, and capacity for, original work. The scheme conserves, as it was bound to do, the interest of university graduates while allowing considerable choice as to the laboratory in which research can be pursued.

Feb 17th

IRELAND

(FROM OUR OWN CORRESPONDENTS.)

Zymotic Health of Dublin

AT the last meeting of the managing committee of Cork street Fever Hospital, the registrar reported that the number of recent admissions was unusually high There was a local outbreak of typhus fever in the city which resulted in the admission of many cases of that disease, while many patients with scarlet fever and others with diphtheria of a severe type were received during the two weeks ending on Feb 12th

County Monaghan Infirmary

From the statement of accounts for the year ending Jan 5th, 1903, it appears that there is a balance of £496 12*s* 3*d* to the credit of this institution. There is an increase of £200 as compared with the previous year The Local Government Board has instructed one of its medical inspectors to visit the infirmary and to report as to its recognition as a school for the training of medical and surgical nurses

The Ulster Medical Society

The President of the Ulster Medical Society (Dr John Campbell) entertained the members of that association at a smoking concert in the Medical Institute, Belfast, on Feb 12th, when there was a large attendance. Refreshments were served at one end of the main lecture hall and during the evening an admirable programme of recitations and musical (vocal and instrumental) items were given The concert was in every respect a great success.

The Samaritan Hospital, Belfast

At the annual meeting of the supporters of the Belfast Samaritan Hospital held on Feb 16th it was reported that during the past year 536 extern and 149 intern patients were treated Of the latter 115 required surgical aid There were 25 major operations. Owing to loss of subscriptions the income is less than last year, so that there is a balance due to the bank of £250 Owing to a case of typhoid fever occurring among the nursing staff it was decided to overhaul the drains after the patient's recovery, this was done at great expense and practically led to a closing of the wards for the last quarter of the year To put the finances in a satisfactory condition 100 additional subscribers of £1 and 50 additional ones of 10*s* are needed It is hoped in the interests of this excellent institution that this financial help will be secured.

Feb 17th

PARIS

(FROM OUR OWN CORRESPONDENT)

The Alcohol Question

THE alcohol question is being fought out with vigour on both sides. The Distillers and Alcohol Sellers' Union, not content with having brought an action against the Prefect of the Seine and the Director of the Assistance Publique for having placarded Paris with anti alcohol notices signed in their joint names, has now had a meeting of its members. These members have determined to placard every town in France with a counterblast to the effect that alcohol is not a poison but a useful food, giving as their authority M. Duclaux, whose opinion I quoted in THE LANCET of Feb 7th At the meeting of the Academy of Medicine which was held on Feb 3rd M. Laborde said that he wished to protest in the strongest fashion against the opinion of M. Duclaux. Alcohol, said M. Laborde, is not a food—it is a drug, one which stimulates for a moment but which exacts a heavy payment afterwards But it is above all things a poison, slow and perfidious it may be in action, but nevertheless sure and far reaching in its effects, for these effects extend even to the progeny of the drinker As for arguing that the common sense of the people will prevent them from abusing alcohol, such argument was a dangerous illusion. After listening to M. Laborde's burning words the Academy heard other speakers who wished some modifications to be made in the report read by M. Laborde at the previous meeting of the Academy This report, which grew out of a Parliamentary question,[1] dealt with the sale of alcoholic drinks containing essential oils. These liquors were to be divided into two classes. Those in the one class were absolutely prohibited and such were liquors containing the natural or synthetic essences of absinthe, star anise (*badiane*), bitter almonds, and the like The other class contained liquors which were only to be sold under the most stringent regulations and included those containing essence of mint, melissa, arnica, nutmeg, sandal wood, sage, and others, including the residual alkaloids of cinchona. M Hanriot thought that the chief point to be observed was that the alcohol should be pure. Alcohol, he argued, is the substratum of all alcoholic drinks and the flavouring essence simply added its poisonous quality The higher alcohols should be absolutely forbidden because of their poisonous qualities Methylic alcohol only existed in a liquor as an impurity or an adulterant and therefore all liquors containing it ought to be rejected. The various flavouring agents should be dealt with individually according to their various grades of toxicity Essence of bitter almonds was only moderately poisonous and it would be therefore better not to proscribe it absolutely for fear of driving drinkers to consume other and more poisonous essences. M. Hanriot proposed that the manufacture and sale of every liquor containing essence of absinthe or hydrocyanic acid in a greater proportion than that of a decigramme to a litre should be absolutely forbidden M. Daremberg said that essence of anise being more poisonous than essence of star anise should be prohibited Essence of juniper was not poisonous M Bouchard thought that the essences of anise, of star anise, and of fennel should all be put in the same class. The manufacturers purify these by crystallisation and obtain a product which contains 90 per cent. of anethol The forbidding of the sale of essence of absinthe was an illusory precaution for the absinthine contained therein could be obtained from other essences. M. Raymond gave some statistics of 2000 patients observed by him in the Salpêtrière during the year 1902 to 1903. Of these patients both men and women, 66 per cent. were alcoholics Of the whole number 10 per cent were markedly alcoholic and bore evident signs of intoxication. Alcohol favoured the development of both tabes dorsalis and epilepsy M Raymond quoted the case of a woman in whom epilepsy developed in a very marked manner after absinthe poisoning and of another who exhibited a polyneuritis after intoxication by *eau de melisse*

The Funded Property of the General Association of French Medical Men

There is at present great excitement among the members of the council of the above mentioned association. This benevolent society possesses considerable funded property which in accordance with the law is invested in a public institution called the "Caisse des Dépôts et Consignations," which pays out interest on the money Out of this interest are paid pensions to those members of the association who have fallen on evil days or to their widows By a law dated April 1st, 1898, the rate of interest was fixed at 3½ per cent., but by special arrangement it may be as much as 4½ per cent. The director of the Caisse des Dépôts et Consignations has, however, just transferred the capital of the association to a different schedule by which the interest allowed is only at the rate of 1½ per cent. This stroke of business, which at once reduces the resources of the association by some two-thirds, has naturally enough brought about vigorous opposition from the council. A deputation has been appointed to wait on the Minister of the Interior who is himself much surprised at the arbitrary action of the director of the Caisse The Minister himself wrote a letter to this official who, however, refused to modify his decision alleging that his action was in accordance with instructions received from his council. The association has therefore brought an action against the director so that the matter will be submitted for judgment to the Conseil d'État. The association is besides in trouble in other ways. The general secretary of the association, M Lereboullet, and Dr Lande have together formulated the idea of publishing a great medical journal, the expenses to be paid by the association and the journal to be distributed gratuitously to all its members. As these members include nearly half of the whole of the medical profession this idea if carried out would mean the stopping of practically the whole of the rest of the medical press of France. The syndicate of the medical press has therefore held an extraordinary meeting and has decided that if the association should carry out its idea an action should be brought against it for having violated the first article of the law dealing with friendly societies, which states that such societies should not engage in any commercial transaction. The association hopes to pay the expenses of its journal by money received for advertisements which would constitute a commercial transaction.

The Waters of Luchon

At the meeting of the Academy of Medicine held on Feb 3rd M Moissan stated that from an examination of the Grotto spring at Luchon he was able to affirm that the sulphur in the water at the springhead was in the form of sodium monosulphide. In the inhalation rooms, however the sulphur existed as sulphur vapourised at a temperature of 50° C and not as sulphuretted hydrogen Moreover, the staff of the inhalation rooms who work there for some six months of the year never show any of the symptoms which even slight doses of sulphuretted hydrogen bring about. M. Berthelot agreed with M Moissan and said that sulphur gives off no vapours at ordinary temperatures, but at a temperature of 50° C the vapour has a sensible tension If the water is at a higher temperature it holds the sulphur which will settle out on cooling as sulphur Workers in vineyards who sulphur the vines know well that sulphured vines give off sulphur vapours under a hot sun M. Armand Gautier added that sulphur waters introduce sulphur into the economy in some way not at all clearly understood He had experimented upon himself and had been unable to detect either sulphuretted hydrogen or sulphur on his skin after a bath.

The Treatment of Incurable Cases of Tuberculosis

An interesting experiment is about to be made on behalf of incurable cases of tuberculosis The council of the Assistance Publique has decided to set on foot a special department, annexed to a Paris hospital for the care of advanced cases of tuberculosis. The Pitié Hospital is the one selected and the cases will be placed in charge of M. Robin M Mesureur the director of the Assistance Publique is arranging with the director of the hospital as to a site for the wards for tuberculosis The wards will contain 26 beds

Feb 17th

BERLIN

(FROM OUR OWN CORRESPONDENT)

Specialism in Medicine and Surgery

PARAGRAPHS have recently appeared in the newspapers to the effect that the Government intends to introduce legislation relative to medical and surgical specialists, and it has been definitely stated that not long ago, at a meeting of the Prussian medical chambers, Dr Kirchner, a member of the Government medical department, announced that a Bill would be brought in requiring an additional examination to be passed by those medical men who desired to have the title of specialist granted to them. The news caused some surprise and the project was from the first regarded by the medical profession with disapproval. It was argued that in the event of an additional qualification for specialists being made compulsory only those medical men would be admitted to the examination who had worked in a public clinic such as that of a university and that the necessary certificates for the examination would be obtainable only from such clinics. It is well known that many specialists, including some of the most competent, have begun to work in their special branch after having been engaged in general practice, others have received their training either in private clinics or by becoming assistants to established specialists or by attending lectures and courses of instruction either in Germany or elsewhere It is true that this system has occasionally led to abuses, for some medical men have been known to put themselves forward as specialists after having attended courses of instruction in their particular branch for only a few weeks These worthies, who were familiarly known in the profession as "six weeks' specialists," hardly ever prospered in their new departure, and either very soon returned to general practice or else endeavoured to extend their knowledge by further study This abuse has not, however, at any time attained proportions sufficient to justify such a radical measure as compelling specialists to take an additional qualification, and the unanimous disapproval of the medical profession has apparently had the effect of influencing the Government, for the semi official journals declare that Dr Kirchner's words have been misunderstood and that the Government has no present intention of creating a new qualification for specialists It is furthermore pointed out that the regulations affecting medical qualifications are controlled by the Federal Council and are the same throughout the empire, for which reason an individual state like Prussia could have no power to alter these regulations without the consent of the Imperial authorities The *Berliner Aerzte Correspondenz* announces that it is authorised to deny all the current rumours relative to the alleged project—a turn of affairs which will commend itself to those who disapprove of too much Government interference in medical questions

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[1] THE LANCET July 15th 1902, p. 49

Health of the Army

According to a report issued by the Army Medical Department and quoted by the *Deutsche Medicinische Wochenschrift* the invaliding during the period from Oct. 1st, 1898, to Sept. 30th, 1899, was 355 446 out of an effective force of 514,569 men, or a proportion of 690·8 per 1000, as compared with 682·5 per 1000 during the previous twelve months The mortality continues to decrease, being only 2·1 per 1000 during the period in question, whereas the average for the period from 1881 to 1886 was 4·1 per 1000 Of the men invalided during the twelve months 1898–99 the proportion who returned to duty was 924·1 per 1000, 783, or 2·1 per 1000, died, of whom 13, or 0·04 per 1000, committed suicide, and 6661 were discharged as unfit for service In about one third of all the cases the causes of complete invaliding were diseases of the respiratory organs About 1600 men were sent for treatment at spas and watering places at the public expense. Infectious diseases showed a relatively considerable increase—namely, 34·6 per 1000, as compared with 24·3 per 1000 in the previous twelve-month. This increase was principally due to the prevalence of influenza, enteric fever, diphtheria, venereal diseases, and tuberculosis, on the other hand showed a diminution. The report, which is very comprehensive as well as instructive, deals also with the military hospitals In five garrisons new hospitals were established and in seven the existing buildings were enlarged and improved. Several hospitals have been provided with new operating rooms and supplied with apparatus for Roentgen ray work and for the application of mechanical movements in medical treatment. With respect to food, it is mentioned that trials which had been made of frozen meat had been very successful, it could be conveyed long distances in the height of summer without sustaining damage.

The Battle of the Clubs

Some alterations are to be made in the laws relative to the workmen's clubs which insure against sickness. According to a Bill which is at present under discussion by the Federal Council the sick clubs will have to support their members for 26 weeks instead of for 13 weeks, as required by the existing law, and women will have to be supported for six weeks after confinement instead of for four weeks as at present. It is also a great improvement that the objectionable exclusion from the benefits of the club which is at present imposed on members suffering from venereal diseases will be abolished and that these members will be entitled to the same rights as any other patients The Bill, however, does not contain any provision relative either to the insurance of the families of members or to the position of the medical officers of the clubs. Considering the immediate interest of the medical profession in questions connected with these clubs it is remarkable that the official representatives of the profession have not been consulted in any way The precarious position of medical officers to sick clubs is only too well known, but if proof is needed it can be supplied by the events leading up to the medical strike which is now in progress at Gera, a manufacturing town about 35 miles from Leipsic. Some years ago medical strikes were not very uncommon in Germany[1] and they have, in fact, ceased to be regarded as sensational, so that the daily newspapers which formerly published long telegrams from Leipsic with details of the strike which took place there now make very little reference to the strike at Gera There is a sick club in that town and the cause of the present dispute was that the committee of the club, contrary to a previous agreement, appointed a so-called "Naturarzt"—i.e., a hydropathist—without regarding the wishes of the other medical officers whose income was affected by the high fees of the "Naturarzt." Of the 33 medical officers 28 at once went on strike and were aided by other medical unions, especially by the Leipziger Verband. This union, consisting of medical men engaged in club practice throughout Germany, was founded after the strike at Leipsic and has collected a considerable fund for the purpose of supporting medical men who had come into difficulties with a club The Leipziger Verband inserted advertisements in all the leading newspapers, medical and non medical, warning medical men against accepting appointments in Gera, and it is reported that in consequence of the steps taken by the union the club finds itself unable to procure medical officers even at higher salaries than before. There is thus reason to hope that the movement will be successful and that the medical officers will compel attention to their remonstrances.

Feb 16th

SWITZERLAND

(FROM OUR OWN CORRESPONDENT)

Treatment of Cholelithiasis

CONSIDERABLE interest has of late been aroused in Switzerland in connexion with the results of new methods of dealing with cholelithiasis introduced by Dr Robert Blaser of Muri, canton Aargau. He has published reports of about 100 cases treated with such great success that he can describe 79 cases as cured, and this restoration to health, according to his statistics, seems to have continued for at least one year 16 cases were improved and six were unimproved. He treated 73 women and 27 men, and diagnosed cholecystitis 39 times, sudden impermeability of the common bile-duct 13 times, and chronic impermeability of it 43 times. He does not consider patients to be cured till they can take ordinary food of a light description. He recommends that cases of gall stone should be treated medicinally, if possible, for from four to six weeks in a sanatorium and then at home for a couple of months, and he maintains that by this system they will often be spared the necessity of a course of treatment at Carlsbad and operative interference. He is of opinion that his treatment increases the amount of biliary salts and the total amount of bile and that it dissolves cholesterin, therefore slowly dissolving gall stones and acting in a directly curative manner He has, after an experience extending over a period of 12 years, combined the following remedies hydrargyrum in small doses (not more than one-sixth of a grain per diem), podophyllin, oil of peppermint, melissa, and aniseed In cases of acute biliary colic a bandage soaked with a mixture of poppy seed oil and chloroform always gave immediate relief, so that he never had to resort to morphine injections. It is most desirable that the patients should be under careful medical supervision at a sanatorium for at least one month, so as to be free from work and worry

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[1] THE LANCET April 27th 1901 p 1242.

He insists (1) on frequent deep inspirations to increase the flow of bile and to improve the circulation , and (2) on plenty of fresh air with a maximum amount of exercise. He gives his patients a mixed dietary with meat and vegetables, avoids raw fruit and some sorts of fish, such as salmon, and especially insists on careful mastication and slow eating He orders saline baths containing carbon dioxide, as at Nauheim. He considers cholelithiasis to be primarily a nervous disease —a disorder of the branches passing from the vagus and sympathetic to the liver The bile is thereby rendered abnormal, cholesterin is formed, the bile becomes infected, catarrh ensues, bilirubin is excreted, a calculus either partially or totally hinders the exit of the bile from the gall bladder, and local hyperæsthesia becomes established It may not be possible to follow Dr Blaser in all these hypotheses, but his practical results are such that many medical men will probably be disposed to try this new method of treatment before recommending surgical intervention for their patients suffering from biliary colic.

Zürich Feb 16th

Obituary.

JOHN ORTON, M.R C S ENG , L.S A.

MR. JOHN ORTON, who died recently at his residence, Foleshill, near Coventry, was one of the best known medical practitioners in North Warwickshire. His professional training was received at the Birmingham General Hospital and in 1867 he took the diploma of M R C S Eng , in the following year he was admitted L S A. He then settled in Foleshill, where his father had previously been in practice, and in course of time he obtained several local appointments, such as those of medical officer of health of Foleshill rural district, medical officer of a Poor law district, and workhouse medical officer For several years Mr Orton took an active interest in political questions He had been in failing health for a considerable period and at the time of his death he was in his fifty ninth year He has left three sons and a daughter one of his sons being Dr John O Orton of Foleshill. Mr Edward W Orton, M.R C S Eng , of Bedworth, also in Warwickshire is a brother of the deceased.

Medical News.

UNIVERSITY OF LONDON —At the Intermediate Examination in Medicine, held in January, the following candidates were successful —

Entire Examination

First Division.—Thomas Charles Clare, Birmingham University Colin Clarke, St Bartholomew's Hospital Arthur Donald Griffith King's College George Stanley Morse St. Bartholomew's Hospital John Morgan O Meara, University College Wilfrid James H Pinniger University College Bristol Lilian Trousdale Rowland London (Royal Free Hospital) School of Medicine for Women Albert Salmon London Hospital and Rawdon Augustus Veale Yorkshire College

Second Division —Eustace Henry Adams Guy's Hospital Wilfrid G Attenborough King's College John Stanley Avery University College Bristol Thomas Henry Barton and Richard John Bentley Guy's Hospital Valentine Henry Blake St. George's Hospital Herbert D Clementi Smith St. Bartholomew's Hospital David Kirkpatrick Coutts St Thomas's Hospital Claude Harold Cross St. Bartholomew's Hospital Ivor Jones Davies University College Cardiff, Arthur Sydney Hahn University College Sheffield George Hamilton and Edward Montague Harrison Guy's Hospital Hyman Isaacs University College Cardiff Herbert Stanley Knight and Edward Farmiuer Milton Guy's Hospital Conwy Llewellyn Morgan St Thomas's Hospital Theodore Charles Pocock, Guy's Hospital Norman Bennett Powell, St Bartholomew's Hospital William Percy Purdom Guy's Hospital Ellis James Roberts and Ernest Littleton Sandiland, London Hospital Frederick Augustus Sharpe Guy's Hospital Olive Bertha Smith London (Royal Free Hospital) School of Medicine for Women Edward John Sunnucks University College Archibald Alfred Sutcliff St. Thomas's Hospital Violet Ackroyd Turkhud London (Royal Free Hospital) School of Medicine for Women Herbert Andrew Watney Guy's Hospital Arthur George Wells University College and Frank T H Wood B Sc. Guy's Hospital

Excluding Physiology

First Division.—Mary O Brien London (Royal Free Hospital) School of Medicine for Women

Second Division.—Alec Barber St Bartholomew's Hospital Henry H. Rudolf Bayley Charing Cross Hospital Lilbrooke Frank Cope St. George's Hospital Edward Vincent Dunkley St. Thomas's Hospital Alexander Harold Gifford King's College Llewelyn Llewelyn London Hospital Bessie We'don Symington London (Royal Free Hospital) School of Medicine for Women Alfred Geddes Tressider London Hospital Ruth Helen Western, London (Royal Free Hospital) School of Medicine for Women and David Wilson St Thomas's Hospital.

Physiology only

Second Division —Leonard Christopher Blackstone University College Isaac Reginald Cook Guy's Hospital, Reginald John Hands Cox and John Harmer Drew St. Thomas's Hospital Guy Stanley Earl, St George's Hospital Harold Oscar Gough, University College Bristol Alfred Wyat Hooker St Thomas's Hospital Frank Douglas Roberts London Hospital and Harold Sugden Vivian Middlesex Hospital

N.B —The foregoing list, published for the convenience of candidates is provisional only and is not final until the report of the examiners shall have been confirmed by the Senate.

UNIVERSITY OF CAMBRIDGE —At the Congregation on Feb 12th the following medical degrees were conferred —

M.B —H. C Williams Pembroke E B Leech Christ's and A F Elliott Emmanuel

B C —H. Davies-Colley Trinity and T StC Smith Trinity Hall.

The Rev E S Roberts, for many years Tutor of Gonville and Caius College, was elected Master on Feb 16th, in the room of the late Dr Ferrers.

TRINITY COLLEGE, DUBLIN —At examinations held recently the following candidates were successful —

Final Examination in Surgery —Seaton S Pringle, Thomas L Sands Demetrius Jacovides Joseph Wallace James T M Entire, William Wiley Thomas Ff Manning Edward V Collen, and John F Nicholson

Section A —James G Wallace John Cunningham Arthur A. M Neight Keith R C Hallowes Wright Mitchell, John A. Sibthorpe, John H Waterhouse George B M Caul, Robert Magill James H. Thompson John Chambre Charles E Fawcett William Hassard Cecil A. Boyd and Francis S Crean

FOREIGN UNIVERSITY INTELLIGENCE — *Berlin* Dr Max Lewandowsky and Dr Friedrich Umber have been recognised as *privat docenten* of Physiology and Internal Medicine respectively —*Berne* Dr Howald has been appointed to the chair of Forensic Medicine —*Breslau* Dr Arthur Dienst has been recognised as *privat docent* of Midwifery and Gynæcology —*Erlangen* Dr Hermann Merkel has been recognised as *privat docent* of Forensic Medicine.—*Gratz* The title of Extraordinary Professor has been granted to Dr Adolf Tobeitz, *privat docent* of Children's Diseases.—*Kieff* Dr Volkovich has been appointed to the chair of Clinical Surgery in succession to Dr Bornhaupt.—*Marburg* Dr Ludwig Aschoff of Göttingen has been appointed to the chair of Pathological Anatomy and General Pathology in succession to Professor Ribbert.—*Moscow* Dr Flëroff has been recognised as *privat docent* of Medicine, Dr N Bazhënoff as *privat docent* of Neurology and Psychiatry and Dr A Starkoff as *privat docent* of Surgery —*Naples* Dr Giuseppe Boccardi Extraordinary Professor of Histology, has been promoted to the Ordinary Professorship Dr Giuseppe Trotta has been recognised as *privat docent* of Midwifery and Gynæcology —*Prague* (*German University*) Professor Von Franqué of Würzburg has been appointed Professor of Midwifery in succession to the late Professor Max Sänger —*Strasburg* Dr H. Jäger of Königsberg has been appointed Extraordinary Professor of Hygiene.—*Vienna* Dr G Nobl has been recognised as *privat docent* of Dermatology

THE LATE N C HATHERLY, M D ABERD, M R C S ENG, STAFF SURGEON R.N (RETIRED) —The funeral took place at South Molton, Devon, on Feb 13th, of Staff Surgeon Narcissus Collins Hatherly, who died on Feb 10th in his eightieth year The deceased was formerly a surgeon in the Royal Navy and for ten years—from 1852 to 1862—was senior assistant surgeon at the Royal Naval Hospital, Plymouth. Staff Surgeon Hatherly was one of the oldest and most esteemed residents of South Molton and had been identified with practically all the works of philanthropy in the town. It was only quite recently that his portrait and an album containing the names of the subscribers were presented to him The funeral was attended by a large number of influential residents and friends Numerous wreaths were sent, amongst those sending them being Earl Fortescue, Viscount Ebrington, and others

SOUTH DEVON AND EAST CORNWALL HOSPITAL —The sixty third annual meeting of the subscribers to this institution was held on Feb 9th under the presidency to the Earl of Mount-Edgcumbe. The medical report stated that during 1902 the in patients numbered 1215 a decrease of 134 as compared with the previous year 3134 out-patients were treated, against 2795 in 1901. 69 nurses and 258 patients were sent to the Pearn Convalescent Home. The financial statement showed that the income amounted to £7415 The expenditure for the year was £8409, leaving a deficit of £994 on the year's working

Health of Bideford Rural District —Mr J H. Hobling in his annual report for 1902 presented at the meeting of the Bideford (Devon) rural district council held on Feb 4th, stated that the population of the district was 6386 The birth rate was 27 1 per 1000 and the death rate was 8 9 per 1000 14 deaths occurred in children under one year of age Mr Hobling considered that several of these were due to ignorance in feeding and at his suggestion the council decided to issue an official leaflet containing instructions as to the feeding of infants and to request the registrar to give copies of it to the parents when the birth of a child was registered.

Bath Eye Infirmary —The annual meeting of the subscribers to this institution was held on Feb 2nd, under the presidency of Mr J S Bartrum. The medical report stated that during 1902 the out-patients numbered 2258, being an increase of 59 as compared with 1901 215 in patients were admitted, against 295 in the previous year The financial statement showed that the total income amounted to £552, and the unfavourable balance of £46 remaining at the end of 1901 had been converted into a balance in hand of £10 , but that in order to effect this the committee had been obliged to reduce the number of the in patients

Parliamentary Intelligence.

THE SESSION OF PARLIAMENT

The session of Parliament was opened by the King on Tuesday Feb 17th with full State ceremony As usual His Majesty's speech gave a forecast of the legislation which the Government proposes to introduce in the course of the session Eleven measures were mentioned including an Education Bill for London a measure amending and consolidating the licensing laws in Scotland a measure for regulating the employment of children and a measure for dealing with the sale of dulterated dairy produce. There was no reference in the speech to he Vaccination Bill but as Mr Chaplin s Act expires at the end of the present year it will no doubt be forthcoming in the course of the session Another notable omission was the Lunacy Bill which year after year has occupied a place in royal speeches It is understood however, that the Lord Chancellor contemplates the introduction of a Bill dealing with the laws as to lunacy

Appointments.

Successful applicants for Vacancies Secretaries of Public Institutions and others possessing information suitable for this column are invited to forward it to The Lancet *Office directed to the Sub-Editor, not later than 9 o clock on the Thursday morning of each week for publication in the next number*

Blake A F M R C S L.R C P Lond., has been appointed Medical Officer for the Grays Division of the Orsett Union

Carr White, Major P M B I M S has been appointed Clinical A sistant to the Samaritan Free Hospital for Women

Clapham Lucy B M.B Lond has been appointed Assistant Anæsthetist to the New Hospital for Women London.

Dismore Henry Bertram L R C P Lond M R.C S has been appointed Medical Officer for the Wroughton District by the Swindon Board of Guardians

Jarvis John M R C S has been appointed Surgeon to the Western Dispensary Bath vice Mr John Davies resigned

Lyell J H. M D C M Glasg has been appointed Outdoor Surgeon to the Royal Infirmary Dundee.

Palmer Harold Lewis M R C S Lond L.S A. Lond J P has been appointed Honorary Consulting Surgeon to the Montgomeryshire Infirmary

Paton E L M.B C M Glasg has been appointed Visiting Surgeon to the Royal Infirmary Dundee.

Pearse, James M.D C M. Edin has been appointed Medical Officer of Health for the Trowbridge (Wilts) Urban District Council

Sandall T E M B B S Cantab has been appointed Certifying Surgeon under the Factory Act for the Alford District of the County of Lincoln

Stirling Robert M D Edin F R C S Eng has been re-appointed Visiting Surgeon to the Royal Infirmary Dundee

Taylor, W M D Edin , has been appointed Visiting Surgeon to the Royal Infirmary Dundee

Wilkins A G M B B S Vict Univ has been appointed Certifying Surgeon under the Factory Act for the Patterdale District of the County of Westmorland.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

Chesterfield and North Derbyshire Hospital and Dispensary —House Physician and Surgeon Salary £120 per year with board, apartments and laundress

City of London Asylum —Second Assistant Medical Officer and Pathologist, unmarried Salary £150 a year, with board, apartments, and washing

Cumberland Infirmary Carlisle —Resident Medical Officer

Durham County Asylum —Assistant Medical Officer Salary £180 per annum rising to £220 with rooms and attendance.

East London Hospital for Children and Dispensary for Women Shadwell, E —Medical Officer for the Casualty Department for six months renewable Salary at rate of £100 per annum with luncheon. Also House Surgeon for six months with board and residence Honorarium of £25

Evelina Hospital for Sick Children Southwark S.E —Two Physicians to Out-patients

Hospital for Sick Children Great Ormond street London, W C —House Physician unmarried, for six months. Salary £20 with board and residence

London Throat Hospital, 204 Great Portland street W —House Surgeon (non resident) Honorarium at rate of £50 per annum.

London Temperance Hospital. Assistant Resident Medical Officer for six months Honorarium at rate of 50 guineas per annum with board and residence.

Manchester Owens College —Junior Demonstrator in Physiology Stipend £100 rising to £150 per annum

National Hospital for the Paralysed and Epileptic Queen square Bloomsbury —House Physician. Salary £100 with board and apartments

Newcastle on Tyne School Board —Two Medical Officers. One male one female

North Eastern Hospital for Children Hackney road Bethnal Green N E —Assistant Physician. Also Casualty Officer for six months Salary £80 with lunch

Queen Charlotte s Lying-in Hospital, Marylebone-road, N W —Assistant Resident Medical Officer for four months Salary at rate of £50 per annum with board residence and washing

Rotherham Hospital and Dispensary —Senior House Surgeon Salary £110 per annum, with rooms commons and washing

Royal Eye Hospital Southwark S.E —House Surgeon for six months renewable Salary 50 guineas per annum with board and residence

Staffordshire General Infirmary, Stafford —Assistant House Surgeon Salary £80 per annum, with board lodging, and washing

Stockport Infirmary —House Surgeon Salary at rate of £100 per annum with board, washing and residence

Victoria Children's Hospital, Park-street Hull.—Lady House Surgeon. Salary £50 per annum with board and laundry Also Lady Assistant House Surgeon Salary £40 per annum, with board and laundry

Warwick Union —Medical Officer Salary £140 per annum

West London Hospital Hammersmith road, W —Assistant Surgeon.

Walsall and District Hospital —House Surgeon unmarried Salary £100 per annum with apartments board and laundry

Wolverhampton Eye Infirmary —House Surgeon. Salary £70 per annum with rooms board and washing

Wolverhampton and Staffordshire General Hospital.—Assistant House Physician for six months Honorarium at rate of £75 per annum, with board lodging and washing

Births, Marriages, and Deaths.

BIRTHS

Bacon —On the 10th inst at Riverside Bitterne Park Southampton the wife of Robert A. E Bacon M.R C S Eng L R C.P Lond of a son

Frith —On Feb 15th at The Limes Rickmansworth the wife of Walter S Frith M.B B C Cantab of a son

Hicks —On Feb 12th at Huntingdon the wife of Charles H. Hicks M.R C S L R C P Lond of a son.

MARRIAGES

Charlesworth—Ram —On February 14th at Christchurch Cathedral Zanzibar Francis Charlesworth M B of H M s Agency Zanzibar, to Mary Frances Jane eldest daughter of the late Rev George Stopford Ram of Clonatin County Wexford vicar of St. Peter's Bournemouth and of the Hon Mrs. Ram of 59 Courtfield gardens S W

Richardson—McLean —On Feb 11th at St. Paul s Church Clifton, Bristol by the Rev A. H Sewell M.A. Hugh Richardson M B C M Edin (late R.A.M C) St Andrews son of the late Henry Cockburn Richardson I C S to Elizabeth daughter of the late Patrick McLean

DEATHS

Dixey —On Feb 13th at his residence Moss Hall Villa North Finchley Augustus Edward Dixey M D St. And

Halliburton —On Feb 16th at The Oaks Grange-road Upper Norwood S.E Thomas Halliburton in his 80th year

N.B —A fee of 5s is charged for the insertion of Notices of Births, Marriages and Deaths

Notes, Short Comments, and Answers to Correspondents.

THE MEDICAL MAN THE CORONER AND THE PATHOLOGIST

DEPUTATIONS from the staff of St Thomas's Hospital and the practitioners in the south-western district of London were received by the public control committee of the London County Council on Feb 13th and made a representation of the situation that has arisen out of the innovations introduced by Mr Troutbeck into his coroner's court *The public control committee went carefully into* the representations made to it and will no doubt make a report which will be presented to the Council and become public property

The *Wandsworth Borough News* of Feb 13th contains lengthy accounts of two inquests conducted by Mr Troutbeck in the course of each of which the coroner pointed out to the jury the reasons for calling upon Dr L. Freyberger to make post-mortem examinations. As long as Mr Troutbeck, in defence of his own innovations misrepresents the medical profession so long we shall be compelled to re-state the true position of affairs. The first of the two inquests was upon an infant who died from rupture of a malformed heart. Mr Troutbeck, at the Battersea coroner's court suggested that if he had not had specially skilled assistance the jury might have been led into thinking that the child's death was due to suffocation. Dr Freyberger could have told him what as a lawyer he is not likely to know that no special knowledge whatever is necessary to detect such a condition post mortem and that there may have been excellent material for diagnosing the condition while the infant was alive. In addressing the jury in this case Mr Troutbeck is reported to have justified his action in not having subpœnaed the medical attendant on the ground of economy But we understand that Dr Freyberger has offered his services to the London County Council at the statutory fee of two guineas For the same sum Mr Troutbeck could have had the evidence dealing with the symptoms of the infant while alive and the conditions after death from the best person to describe them—viz. the medical practitioner in attendance upon the case while for half that sum he might have obtained from the medical practitioner sufficient evidence to result in a proper verdict. We do not see in what way Mr Troutbeck has saved any waste of public funds

The second inquest reported in the *Wandsworth Borough News* of the same date was held at the Wandsworth Town Hall and was also upon an infant The infant during life was attended by two medical men one of whom the one who had only seen the child in a dying condition was called by the coroner Evidence was also given as to the post-mortem conditions by Dr Freyberger in the medical practitioner's presence and he very properly told the coroner that as a matter of fact Dr Freyberger had not touched the body Dr Freyberger said that he suffered from sore hands and therefore employed the post-mortem porter paid by the borough council, to open the body He added that he had done the same in thousands of cases. It appeared that the attendant did not open the heart and that Dr Freyberger arrived at his conclusions regarding this organ from external appearances We see no harm in the porter occasionally doing the manual work, or portions of the manual work, of the investigation under Dr Freyberger's or preferably under the medical adviser's eye but think it unfortunate that Dr Freyberger should not be in a physical condition to touch a corpse An attendant can not take the place of a skilled pathologist: *tactus eruditus* is required to detect the friability of an organ or the density of an adhesion &c. and no coroner ought to look for such information from an attendant even though his wages are paid by the borough council. Why Dr Freyberger whose special knowledge of cardiac pathology was dwelt upon by the coroner in the previous case, made no examination of that essential organ the heart in this case we cannot pretend to guess. The medical practitioner who saw the child before death seems to have thought that there were grounds for believing a malformation to have been present and certainly the heart should have been opened. Nor do we understand why of the two medical men who could have given evidence as to the symptoms before death the one who had the shortest opportunity of so doing was subpœnaed to help the jury

YELLOW FEVER.

IN an address delivered at the opening of the Washington Post Graduate Medical School on Jan. 12th and published in the February number of the *Popular Science Monthly* Surgeon-General George M Sternberg enumerated many instances of the success of modern methods of dealing with epidemic diseases With regard to yellow fever he said that Havana had for many years been the principal focus of infection in the West Indies and the port from which it had been repeatedly carried to the seaport cities of the United States but a great change for the better had come about during the last few years. According to the reports of the health officers in that city there had not been a case of yellow fever in Havana for more than a year and the extinction of the disease was ascribed entirely to the vigorous measures enforced to prevent its transmission by mosquitoes of the species proved by the researches of Reed and Carroll to be the immediate hosts of the yellow fever parasite and the active agents in the transmission of the disease from man to man. During the first 60 years of the past century yellow fever prevailed almost annually in one or more of the southern seaports of the United States and not infrequently it extended its ravages to the interior towns in one or more of the southern states. So frequently did it prevail during the summer months in New Orleans and Charleston that the permanent residents of those cities commonly regarded it as a disease of the climate and as a necessary evil which it was folly to attempt to combat by quarantine restrictions In the great epidemic of 1853 yellow fever prevailed extensively in the states of Florida, Alabama, Louisiana, Mississippi Arkansas, and Texas The epidemic of 1867 was limited to the states of Louisiana and Texas. Those states again suffered severely in 1873 and the states of Florida, Alabama, and Mississippi were also invaded. A still more extended and deadly epidemic occurred in 1878 causing a mortality of 15 934 out of a total number of cases exceeding 74 000 In this epidemic the disease followed the Mississippi river to the very suburbs of St. Louis, the state of Tennessee suffered severely as well as the states south of it and the city of Memphis alone had a mortality from the disease of about 5000

MULTIPLE GONOCOCCUS INFECTION

DR. JOSEPH L BOEHM of St. Louis Missouri has published in the January number of the *St. Louis Courier of Medicine* a case of multiple gonococcus infection occurring in a boy 16 years of age who was admitted into hospital with granular inflammation of the conjunctiva. He had been suffering from a purulent discharge from the urethra for about four weeks but had otherwise been in good health Pus from his eye was found to contain the gonococcus His temperature was 103° F On the second day his pulse-rate was 140 there was a distinct systolic murmur at the cardiac apex and the diagnosis of endocarditis was made. His temperature at night was 100° Three days afterwards his left ankle-joint was painful œdematous and hot. Next morning the left knee was painful and fully three inches larger in circumference than the right knee. On the next day the two shoulder-joints were affected. He afterwards became delirious and so ill that a fatal issue was expected but eventually he recovered. He was given a mixture containing guaiacol carbonate, sodium salicylate, and benzoic acid Ice-packs were applied to the head and over the heart and the joints were strapped, fluid being also aspirated from the knee-joint

UNFORTUNATE ADVERTISEMENT

THE following paragraph is taken from the *General Advertiser* a Dublin newspaper and we are requested to give an opinion upon it

> INDIGESTION
>
> LOSS OF APPETITE, FLATULENCY, BILIOUSNESS
>
> SIR C CAMERON M.D reports— I can strongly recommend EARL'S FLUID PEPSINE as a reliable Remedy for Indigestion and Dyspepsia. It contains the digestive properties of the gastric juice in a highly concentrated permanent and reliable form. It causes even the toughest beef to become digested is peculiarly suitable for invalids and young children and is superior both in strength and efficacy to any other preparation of Pepsine" Of all Chemists and Druggists in bottles, 1s. 3s 5s. 6d. 10s. 6d.—Central Depôt, 12, Grafton Street

Our view is that Sir Charles Cameron should instruct the proprietors of Earl's Fluid Pepsine to discontinue the use of his name in connexion with their wares in the lay press.

WEST INDIAN COLONIAL MEDICAL SERVICE.

M.R C S L.R.C.P is anxious to correspond with any medical man who has served in the West Indian Medical Service and who could inform him fully on the subject

THE CHEAP PISTOL AGAIN

A TYPICAL accident with a toy pistol formed the subject of investigation at an inquest held recently at Bromley A lad, aged 17 years a milk carrier bought from one of his companions a pistol and a few cartridges for a shilling He appears to have tested its capacity for destruction by firing it at a fence when the bullet went through a rail and into a field A few days later he produced it from his pocket showed it to two companions and loaded it. His companions had left him and apparently he was replacing it in his trousers pocket when it went off wounding him in the lower part of the abdomen. He was taken to the cottage hospital and treated without delay but peritonitis supervened and two days after receiving the wound he died A curious feature in the case was that he stated to Dr H. J Ilott, when he first examined him, that another boy shot him at a distance of five or six yards. This statement would have thrown grave and unjust suspicion upon the boys who were both within 20 yards when the accident took place had not the condition of the wounded lad's clothes and apron clearly pointed to the pistol having gone off in his pocket. He also before dying retracted his former statement and said that the pistol went off in his own hand by accident Dr Ilott informed the jury that in two years he had treated four wounds from such pistols as that which the deceased had owned a weapon which is no doubt still in the hands of somebody at Bromley for one of the lads said that he threw it away after the accident and it has not been found since. The jury expressed an opinion that some restriction ought to be placed on the sale of toy pistols and cartridges but it seems useless to hope for this Something will no doubt be done when some conspicuous personage has been shot until then this peculiarly useless and dangerous commerce will presumably continue unchecked

NON LEAKABLE FOUNTAIN PEN

To the Editors of The Lancet

Sirs —You refer in The Lancet of Feb 14th p 450 to a non leakable fountain pen in which the principle of the closure of the reservoir by pushing the pen up into writing position and the arrangement by which ' the cap can be replaced over the nib in such a way as both to protect the nib and to close the ink reservoir is referred to as ' something quite new " This description tallies with that of the Caw fountain pen which I and others have used for many years It has given perfect satisfaction as a non leakable fountain pen, differing in this respect from all other pens with which I am acquainted I am Sirs yours faithfully

Feb. 15th 1903 Justitia

' THE PRESCRIBING QUACK.

In The Lancet of Feb 7th p 411 we animadverted very strongly upon the conduct of Mr F E Bustard M.P S in sending out an advertisement of a disgraceful nature We are glad to see that our contemporary the *Pharmaceutical Journal* in a paragraph on page 217 of the issue of Feb 14th agrees with our remarks the paragraph being headed as above Our contemporary further says that as further action may be taken in the matter it is not desirable to comment upon the circumstances at present but the hope may be expressed that no other registered chemist is endeavouring to extend his business by unprofessional means similar to those to which The Lancet has very properly taken exception " It is fair to say further that our contemporary states that Mr Bustard has confirmed the accuracy of our note but that the card was withdrawn from circulation about three weeks ago We have moreover received the following letter and we congratulate the Pharmaceutical Society upon its prompt action.

Pharmaceutical Society of Great Britain
17 Bloomsbury-square London, W C

To the Editors of The Lancet

Sirs,—I have observed the note in your issue of the 7th inst headed The Prescribing Quack and have to inform you that the person therein referred to is no longer a member of this society and will not be permitted to continue to use the initials M P S I am Sirs *yours faithfully*

Feb 16th 1903 R Bremridge Secretary and Registrar

A FORMALDEHYDE INHALER

Dr Chowry Muthu has designed a simple appliance for formaldehyde inhalation which he regards as a very important aid in the treatment of pulmonary tuberculosis The inhaler consists of perforated zinc and is pyramidal in shape the base resting on the chin and the apex on the nose It is flexible so that it can be readily fitted. The following mixture is sprinkled on a pad of cotton wool: one drachm of formalin one drachm of chloroform and two drachms of rectified spirit The inhaler is light and portable and can be used at all times of the day whether the patient is reading writing or walking Dr Chowry Muthu points out that the success of this apparatus depends on its being used constantly and perseveringly for six or seven hours a day and even at night The inhaler is supplied by Messrs Maw, Son and Sons 7 Aldersgate-street London E C

MOTOR CARS FOR MEDICAL MEN

To the Editors of The Lancet

Sirs —Perhaps some of your readers may like to hear particulars of a good second hand steam car and also a 10-h p Panhard suitable for medical men They were built less than a year ago for a wealthy private motorist and are now privately offered for sale at a low price. Each car has been little used and can be inspected and fully tried before purchase I am, Sirs yours faithfully

Feb 16th 1903 H C R

AN APPEAL TO MEDICAL FREEMASONS

To the Editors of The Lancet

Sirs —May I ask any of my brother medical practitioners who have votes to spare for the coming election at the Royal Masonic Institution for Boys to give them to the case of C P Hines? His father was a young practitioner who died five years ago leaving a widow and son very inadequately provided for Any votes will be thankfully received by Yours faithfully

281, Clapham road, S W Heaton C Howard L R C P Lond

P S -It is the last application

◆

Urban M O H —1. It is quite usual for the official to apply for an increase of salary 2. It does not appear to us necessary that the post should be advertised but the clerk would be well advised to take the advice upon the matter of the Local Government Board. An advertisement of the salary proposed to be assigned appeared of course upon the original assignment.

H J W —The preparation is probably one of papaverine and must be taken with the same precautions against the formation of a vicious habit as would be observed in prescribing morphine

Enquirer —To practise legally in Switzerland a Swiss qualification must, we believe, be taken after residence in that country for some considerable period of time

Dubium —The matter is one that must be left entirely to individual taste There are no rules either general or particular

Wirral —We do not recommend practitioners, specialists or otherwise.

Communications not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS

METROPOLITAN HOSPITALS

MONDAY (23rd) —London (2 P.M) St. Bartholomew's (1.30 P.M.) St. Thomas's (3 30 P.M) St. George's (2 P.M) St. Mary's (2.30 P.M) Middlesex (1 30 P M) Westminster (2 P M) Chelsea (2 P M) Samaritan (Gynæcological, by Physicians, 2 P M) Soho-square (2 P M), Royal Orthopædic (2 P M) City Orthopædic (4 P M) Gt. Northern Central (2.30 P M) West London (2.30 P M) London Throat (9 30 A.M.) Royal Free (2 P M) Guy's (1.30 P.M)

TUESDAY (24th) —London (2 P M) St Bartholomew's (1 30 P M.), St Thomas's (3 30 P M) Guy's (1.30 P M) Middlesex (1 30 P M) Westminster (2 P M) West London (2.30 P.M) University College (2 P M) St George's (1 P M) St. Mary's (1 P M) St. Mark's (2.30 P.M.), Cancer (2 P M) Metropolitan (2.30 P M) London Throat (9.30 A.M.) Royal Ear (3 P.M) Samaritan (9.30 A M. and 2.30 P.M.), Throat Golden-square (9 30 A.M) Soho-square (2 P M)

WEDNESDAY (25th) —St. Bartholomew's (1.30 P M) University College (2 P M) Royal Free (2 P M) Middlesex (1 30 P.M.) Charing Cross (3 P M.) St. Thomas's (2 P M), London (2 P M) King's College (2 P M.), St. George's (Ophthalmic 1 P.M) St. Mary's (2 P.M) National Orthopædic (10 A.M.) St Peter's (2 P M) Samaritan (9 30 A.M and 2.30 P M) Gt Ormond-street (9 30 A.M) Gt. Northern Central (2.30 P M), Westminster (2 P.M) Metropolitan (2.30 P.M) London Throat (9.30 A.M), Cancer (2 P.M), Throat, Golden square (9.30 A M) Guy's (1 30 P.M)

THURSDAY (26th) —St. Bartholomew's (1.30 P.M) St. Thomas's (3 30 P.M), University College (2 P M) Charing Cross (3 P.M.) St George's (1 P M.), London (2 P.M) King's College (2 P M.) Middlesex (1.30 P M.) St Mary's (2.30 P M), Soho-square (2 P M) North West London (2 P.M) Chelsea (2 P.M), Gt Northern Central (Gynæcological, 2.30 P M.) Metropolitan (2.30 P.M) London Throat (9.30 A M.) St. Mark's (2 P M) Samaritan (9 30 A M and 2.30 P.M.) Throat Golden square (9 30 A.M.) Guy's (1.30 P.M)

FRIDAY (27th) —London (2 P M) St Bartholomew's (1.30 P.M) St Thomas's (3 30 P M) Guy's (1.30 P.M) Middlesex (1.30 P.M) Charing Cross (3 P M) St. George's (1 P M) King's College (2 P M), St. Mary's (2 P M.) Ophthalmic (10 A M) Cancer (2 P M) Chelsea (2 P M), Gt Northern Central (2.30 P M) West London (2.30 P M) London Throat (9.30 A M) Samaritan (9 30 A.M and 2.30 P.M), Throat, Golden-square (9 30 A.M) City Orthopædic (2.30 P.M) Soho-square (2 P.M)

SATURDAY (28th) —Royal Free (9 A.M) London (2 P.M.) Middlesex (1.30 P.M) St. Thomas's (2 P M) University College (9 15 A.M.), Charing Cross (2 P M) St George's (1 P.M) St. Mary's (10 P.M.) Throat, Golden-square (9 30 A M.) Guy's (1 30 P.M.)

At the Royal Eye Hospital (2 P.M) the Royal London Ophthalmic (10 A M.) the Royal Westminster Ophthalmic (1.30 P.M) and the Central London Ophthalmic Hospitals operations are performed daily

SOCIETIES

MONDAY (23rd) —Medical Society of London (11 Chandos-street Cavendish-square, W) —8 P.M Council Meeting 8.30 P M Ordinary Meeting Papers:—Dr J K. Fowler: Hæmorrhagic Enteric Fever with an Account of Two Cases.—Dr S H Habershon: The Causes Diagnosis and Treatment of Spasmodic Contraction of the Pylorus.

Odontological Society of Great Britain (20 Hanover-square, W) —7 P.M. Council. 8 P.M Casual Communications:—Mr C Robbins: A Preliminary Note on some Prehistoric Skulls —Mr G Bird: A Case of a Denture impacted in Œsophagus Paper:—Mr J B Parfitt: A New Anatomical Articulator

TUESDAY (24th) —Royal Medical and Chirurgical Society (20, Hanover-square, W).—8.30 P.M Papers —Dr V Pearson Latent Empyema in Infants —Mr C W Ensor and Dr J O W Barratt Paroxysmal Hæmoglobinuria of Traumatic Origin

WEDNESDAY (25th) —Epidemiological Society (11, Chandos street, Cavendish-square, W) —8.30 P.M. Discussion on the Panama Canal and the Introduction of Yellow Fever into Asia (opened by Dr P Manson C M G)

Dermatological Society of Great Britain and Ireland (20, Hanover-square W) —5 P M. Meeting

Hunterian Society (London Institution Finsbury-circus, E.C) —8.30 P.M. Mr C Lucas: The Symptoms and Diagnosis of Stone in the Kidney (Hunterian Society)

THURSDAY (26th) — Neurological Society of the United Kingdom (11 Chandos-street, Cavendish square, W) —8 P.M. Clinical Evening Case [of Myopathic Muscular Atrophy will be shown by Dr Ascherson, Dr Beevor Dr Buzzard Dr M. Clarke, Dr Collier Dr Guthrie, Dr Hutchison, Dr Ormerod Dr Pitt Dr Russel and Dr Taylor

An Address

ON

SOME FAMOUS MEDICAL OFFICERS OF THE ARMY.

Delivered to the Royal Army Medical Corps Staff College at the Examination Hall, Victoria Embankment, on Feb 18th, 1903

By NORMAN MOORE, M.D CANTAB,
F R C P LOND,
PHYSICIAN TO AND LECTURER ON THE PRINCIPLES AND PRACTICE OF MEDICINE AT ST BARTHOLOMEW'S HOSPITAL.

GENTLEMEN —The medical officers of an army appear in one of the earliest and most celebrated pieces of literature[1]—

ἰητροὶ μὲν γὰρ Ποδαλείριος ἠδὲ Μαχάων—

and Homer represents them as held in due honour at the siege of Troy[2] —

ἰητρὸς γὰρ ἀνὴρ πολλῶν ἀντάξιος ἄλλων
ἰούς τ' ἐκτάμνειν ἐπί τ' ἤπια φάρμακα πάσσειν

("For a medical officer is worth many men
To cut out arrows and spread soothing remedies")

and such was their fame that Podaleirios, according to Strabo, was afterwards worshipped on Mount Dria.

The story in Arrian's *Ἀνάβασις Ἀλεξάνδρου* is worth remembering as a proof of the high esteem in which the greatest general of the Greek world held his principal medical officer "Alexander" says Arrian, "was seized with pains in the nerves, accompanied with a sharp fever and a continual waking, insomuch that when all the rest of his physicians despaired of his life Philip the Acarnanian, in whose extraordinary skill in physic he had great confidence because of his success in the camp, was ordered to administer a draught to him. After these orders were given, while he was preparing the cup, came a letter from Parmenio to Alexander warning him to beware of Philip, for that he had heard how Philip had been bribed by Darius to poison him. Alexander having read the letter took the cup wherein was the potion, in his hand and gave Philip the letter to read, and while he was reading he drank up the draught, the physician showing by the composure of his countenance that the medicine was inoffensive and by his intrepidity on perusing the letter that he was not conscious of any crime that he had been guilty of He only entreated Alexander to acquiesce in his advice in what he should prescribe for the future, which if he did he would recover his health After his disease had left him he declared his esteem for Philip by assuring him that he should always have a share in his friendship and certified to all who were present how steady an opinion he retained of their loyalty in refusing to entertain any suspicions to the contrary, as also that he could meet death with a true heroic magnanimity "[3]

You will remember that Flavius Arrianus, who was as good a general as he was a man of letters, was the pupil of Epictetus and lived in the second century of our era but that his lucid *Ἀνάβασις Ἀλεξάνδρου* is based on the contemporary records of Alexander If our army should ever be engaged in military operations in the region of Alexander's campaigns it would be interesting if some member of your corps were in any spare moments to consider on the spot the passages of Arrian and of Plutarch which relate to the death of Alexander The history of his illness is simple, as stated in the concise ephemerides kept by his secretaries He was slightly unwell yet supped two nights at the house of Medius after the obsequies of his friend Hephœstion The day after which was June 18th he was distinctly feverish but ate a full meal. He had a daily access of fever in the evening till the 25th, when his fever having greatly increased he became unconscious and died on the evening of June 28th, the twelfth day after he was distinctly ill. Though he kept his bed from the 19th he tried till the 25th to transact business and was carried out to assist at sacrifices and seems to have been out of bed for this purpose. He had disturbed nights and his fever increased from day to day He was 32 years and eight months old at the time of his death.

Arrian is careful to distinguish between facts stated by later or less authentic writers and those contained in the ephemerides or royal diary He says "The royal diary gives us an account that he ate and drank with Medius and then retired to rest and when he awaked and had washed and refreshed himself he again supped with Medius and drank till late at night. When he retired from the banquet and had washed he ate a little and lay down because he had some symptoms of a fever Afterwards he was carried in a chair to the temple and there sacrificed after his usual manner and this he repeated several days and when the sacrifices were performed he lay in an apartment prepared on purpose for him till the evening In the meanwhile he issued out orders to the captains of his troops to make ready for a march in four days' time and even nominated those who should travel on foot, but those who were to go on board the fleet with him were to prepare themselves against the fifth day • After this he was carried to the river and being put on board one of his gallies was conveyed to some pleasant gardens on the other side where after he had washed he went to rest. The next day he again bathed and performed his accustomed sacrifices and held discourse with Medius, having given orders to his officers to attend him in the morning He then supped moderately and being conveyed to bed had a continued fever upon him all that night. However, the next morning he again washed and sacrificed and ordered Nearchus and the rest of his captains to prepare for sailing the third day The next day he washed and sacrificed as before, but this fever still continued, notwithstanding which he again called his captains to him and ordered all things to be made ready for a voyage, and, having bathed, his fever increased towards evening The next day he was carried into a house adjacent to the bath, where he performed his usual sacrifices and once more called his chief officers about him to give orders concerning the intended voyage The day following he was with great difficulty carried to sacrifice and, notwithstanding he grew manifestly worse, could not be restrained from sacrificing the day after that. He then commanded his chief officers to remain with him in the hall and the inferior ones to wait at the gates, and growing still worse, he was conveyed from the hall in the garden where he then was into the palace, and his chief officers approaching near he made signs that he knew them but was not able to speak and thus he remained all that night The day following the fever still increased and all that night and the next day continued strong and violent And now his soldiers expressed a great desire to see their king some doubting whether he was alive, others plainly affirming that he was dead but that his death was concealed by his bodyguards, and to such a height at last did their grief drive them that many of them forced their way through the guards and entered the royal apartment. But though the king perceived them his speech had left him, however with much difficulty he lifted up his head and looking upon them stretched forth his hand to each of them. The same royal diary also informs us that Python Attalus, Demophoon, Peucestas, Cleomenes, Menidas and Seleucus tarried all night in the temple of Serapis and having asked that god whether it would not be better for Alexander to be brought into his temple to be restored to health by him were answered by the oracle that he should not be brought, for it was best for him to continue where he was This answer was brought back to Alexander by his friends and in a short while after, as if the oracle had pronounced that best he died. Ptolemy and Aristobulus in their accounts of these transactions differ not much from the royal diary "

M. Littré in a very interesting essay[4] published in 1853 points out that some later tales of poisoning as a cause of the death of Alexander are not supported by the evidence which points distinctly to a natural disease and concludes that the fever was a malarial one. The history of death on the twelfth day of well marked illness with some indication of preceding diminution of health for a further period, the evening rise of temperature going on to higher and uninterrupted fever, added to the fact that the patient did not take absolute rest in bed and did not take to bed at the beginning till absolutely compelled to do so by the blade broken off near the hilt, with many wounds on his head. I, seeing the hairy scalp of one side of his head hanging down his neck, went to him, and calling my friend Will Clarke to me with a sponge to cleanse the wound we saw six pieces of the skull sticking to it some of them were of the first table others of both tables Besides which there were various fissures, sedes, and some fractures with depression, made by sword, musket-stock, and &c We freed the scalp of those bones and returned it upward so far as we judged was necessary , then cutting off what was superfluous, tacked it to the sound parts by several stitches distant from one another, leaving a space to dress the depression and greater fractures Then we dressed up the wounds with digestives ex terebinth and &c., and where the dura mater lay bare we applied pledgits dipped in ol. ros., and to the other parts of the cranium liniment arcei. The alarm growing hot of the enemies entering the city, I left Will Clarke to bind it up and made my way out of the town But this young chirurgeon being taken busied in dressing the wounded soldiers had liberty, after the heat of the fight was over, to employ his charity in dressing some of them and write me since this soldier's particular case—viz , the third day he found him pretty hearty and his wounds mattering so very much that he was necessitated to cut loose two of the stitches to give vent to it then he dressed the penetrating wounds with mel. ros and the cranium with lint pressed out of spir vini and proceeding accordingly in the cure saw the depressed and mangled bones cast off, incarn, and cicatrize with the rest. The soldier being thus cured by him made a voyage to the Indies and since that served a soldier in the Tower of London " An excellent life of this surgeon was published in 1891 by a member of your own corps, Surgeon General Sir T Longmore.

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[1] Iliad xi., 833.

[2] Iliad xi 514.

[3] Rooke's Arrian London 1729 Book i., cap. iv

[4] De la Toxicologie dans l'Histoire et de la Mort d'Alexandre.

The battle of Worcester put an end for the time to the king's cause in the British Isles, so that the loyalty of Dr William Petty, who in 1652 was appointed physician to the army in Ireland, cannot be called in question, especially as on the restoration the king received him and knighted him on April 11th 1661.' Sir William Petty was so distinguished a man that I should be sorry to omit him from your record, the more so as his descendant, the present Lord Lansdowne, is a statesman whose influence has been directly felt by the Royal Army Medical Corps. Petty will always be remembered as the author of the first English treatises on political economy, "Political Arithmetic," and "Several Essays in Political Arithmetic " In one of these essays he endeavours to prove that London has more people than Paris and that they are better provided for, and he uses the then state of the London hospitals as an illustration "In the hospital of St Bartholomew in London there was sent out and cured in the year 1685, 1764 persons and there died out of the said hospital two hundred fifty and two Moreover, there were sent and cured out of St Thomas's Hospital one thousand five hundred twenty and three, and buried two hundred and nine, that is to say, there were cured in both hospitals three thousand two hundred eighty and seven, and buried out of both hospitals four hundred sixty and one, and consequently cured and buried three thousand seven hundred and forty and eight, of which number the four hundred sixty and one buried is less than an eighth part, whereas at La Charité the part that died was more than an eighth part which shows that out of the most poor and wretched hospitals of London there died fewer in proportion than out of the best in Paris."[11]

The most ancient office in your department of surgical practice is the king's serjeant-surgeoncy It is a duty of the king's serjeant-surgeon to attend the sovereign on the field of battle. The distinguished surgeon who at present holds this office has shown his readiness to take part in the labour and hardships of a campaign and has also as we all know, by the skilful practice of his art preserved the King's life in a situation not less dangerous than many hazards of the field, but Sir Frederick Treves has not had the chance of discharging the original military service of a serjeant surgeon since the exigencies of affairs have not called our sovereign into battle for a long time. John Ranby, who was appointed serjeant-surgeon to King George II , was present with that king at the battle of Dettingen in 1743. His Majesty dismounting from a restive horse fought on foot and his son, the Duke of Cumberland, was severely wounded In a little treatise on gunshot wounds Ranby describes the duke's case[12] A grape-shot from a cannon went through the calf of his leg and the orifices of entrance and of exit of the shot were each as big as a hen's egg The wound did well and there was no subsequent stiffness

It would be easy to draw from the annals of your corps many more interesting histories or valuable observations of disease or of wounds and we might spend a long time in the consideration of its representatives throughout the years of the war in the Peninsula, on the field of Waterloo, and in relation to the marches, the battles, the sieges, and the epidemics of India, in every climate and under every condition of success and of disaster, but I have only time to mention two more of its famous men, one a regimental surgeon and the other a physician to the army

George Cleghorn, a native of Scotland and a graduate of Edinburgh, was appointed surgeon to the 22nd Regiment of Foot in 1736 The regiment was stationed in Minorca and remained there till 1749 Cleghorn occupied his spare time in writing "Observations on the Epidemical Diseases in Minorca from the year 1744 to 1749 " Four editions of this excellent book appeared in the author's lifetime. It is full of original observations and deserves a permanent place in English medical libraries. He gives a thorough account of the physical geography, climate, agriculture, botany, and zoology of the island. He describes the natives and their habits of life and observes what customs described in Theocritus, Virgil, and Lucretius were still maintained in Minorca. He goes on to relate the diseases which he had observed and gives an account of diseases which were clearly enteric fever complicated with tertian ague, with pneumonia, and with dysentery and keeps strictly to what he had observed at the bedside. He took the temperature with a thermometer, a rare proceeding in his period, and notes that in cases of epidemic pleuro pneumonia it was raised to 102° or even 104° F 21 patients died from this epidemic and he examined 14 post mortem and gives a full account of the morbid appearances. Cleghorn's complete and accurate account of the natural history, physical conditions, and pathology of Minorca is valuable in itself and is further of use as an example of a kind of work which a medical officer of the army may do for any particular station with great advantage to medical knowledge in general. After he left the army he settled in Dublin where he became professor of anatomy in the university He died in 1789

Richard Brocklesby, who in 1758 was appointed physician to the army, was born in 1723 at Minehead in Somersetshire but was sent to school in Ireland. The school to which he was sent was kept at Ballitore, co Kildare, by Abraham Shackleton and Brocklesby had been there seven years when a boy entered who was destined to make the school and its master for ever remembered , this was Edmund Burke. The friendship which grew up between him and Brocklesby lasted for life and when Brocklesby settled in practice in London he enjoyed the friendship of both Burke and Johnson and lived in the most illustrious circle known in the history of our literature He was both generous and learned In July 1788, he wrote to Burke giving him £1000 and said he would be happy to repeat the gift "every year till your merit be rewarded as it ought to be at court." He was generous in the same way to Johnson, and Boswell tells "as an instance of extraordinary liberality of friendship he told us that Dr Brocklesby had on that occasion offered him a hundred a year for his life. A grateful tear started into his eye as he spoke this in a faltering tone." He gave to the College of Physicians a splendid copy of the 25 volumes of the great collection on classical antiquities known as the "Thesaurus" of Grævius and Gronovius, and generosity with him was a constant habit and not an occasional impulse. He wrote an interesting little book on the regular use of music in medicine It probably became the subject of his thoughts through a story he heard in Edinburgh of a Jacobite gentleman who lost two sons and was himself wounded in the rising of 1715 and who fell into a melancholy accompanied by fever till his physician cheered him by making a Highland harper play to him every day His most valuable book was published in 1764 "Œconomical and Medical Observations in Two Parts " This book laid down for the first time sound principles of hygiene for the army

There were then few barracks and most of them were very ill arranged buildings. Brocklesby shows that the soldiers must have plenty of air in their rooms if they are to remain healthy He draws up proper regulations for field hospitals and thinks that the doctor ought to be supreme in the hospital, which was not then the case His observations on diseases of camps are lucid and original and all he says on treatment is full of good sense. There was a tendency at that time to appoint men with but little knowledge of medicine and Brocklesby dwells on the importance to the army of that part of our profession with which physicians are principally concerned [13] "That the business of every regimental practitioner is at all times much more the subject of medical consideration and of cool reflection, than of mechanical dexterity in dressing, or even in cutting off a limb will appear to the meanest capacity, who stands informed of the following fact, well vouched to me by a very ingenious and worthy man, who was seven years surgeon to a regiment in the late war, during which, the corps had been two campaigns upon very hard service, and had also sustained the severest shocks and losses which attended the tedious siege of the Havana. Yet the surgeon declares, that in full seven years, he had never met with near 100 properly chirurgical cases in the whole regiment, though in that course of time near 2000 men had gone through the regimental books, including about 400 draughted out of it into different corps May we not then justly conclude, that in time of profound peace, the exigencies of chirurgical dexterity compared to the objects of medical attention, in any regiment, are at most, one half less than they had been observed in two battles and one siege, besides, the rest of the seven years consequently that the medical science requisite for a regiment, is at least forty times necessary to be in some sort practised for once that any particular dexterity in manual operations, or surgery is required."

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[11] Sir William Petty: Several Essays in Political Arithmetic. London 1699 p. 94

[12] John Ranby: The Method of Treating Gunshot Wounds London 1781, p 45.

There is no need at the present day to insist on this contention of Brocklesby The more enlightened conditions of medical education give to every practitioner sufficient knowledge of medicine and of pathology to interest him for life in all diseases and their treatment as well as in injuries and operations When you remember that in an ordinary epidemic of enteric fever there is a percentage of deaths five times as great as that of the killed in the battle of Waterloo and that enteric fever is a common incident of a campaign, or if you open the medical report of the civil war in the United States and learn that on the side of the North alone 50 000 men died from dysentery, you need no further arguments to prove that the highest attainments in medicine will find abundant employment in the army whether in war or in peace

Brocklesby's mind was stored with learning and his conversation was such as was worthy of an associate of Burke and of Johnson. Johnson objected to the practice of making puns in which Burke now and then indulged One of them was on Brocklesby's name, and I mention it as a pleasant example of the *familiar relation* existing between the physician and his illustrious schoolfellow There was in their time a quack doctor in London called Dr. Rock Burke by accident or out of mischief one day called Brocklesby Dr Rock, and when Brocklesby remonstrated Burke said that he would prove algebraically that Rock was Brocklesby's true name Brock minus B equals Rock, and what is that but Brock less b' Brocklesby was physician to Dr Johnson and attended him in his last illness Two incidents of this attendance are related by Boswell.

"About eight or ten days before his death, when Dr Brocklesby paid him his morning visit he seemed very low and desponding and said I have been as a dying man all night. He then emphatically broke out in the words of Shakespeare —

> Canst thou not minister to a mind diseased
> Pluck from the memory a rooted sorrow
> Raze out the written troubles of the brain
> And, with some sweet oblivious antidote
> Cleanse the stuff'd bosom of that perilous stuff
> Which weighs upon the heart?

To which Dr Brocklesby readily answered from the same great poet —

> Therein the patient
> Must minister to himself

Johnson expressed himself much satisfied with the application.

On another day after this, when talking on the subject of prayer, Dr. Brocklesby repeated from Juvenal —

> Orandum est, ut sit mens sana in corpore sano

and so on to the end of the tenth satire, but in running quickly over he happened in the line,

> Qui spatium vitæ extremum inter munera ponat

it to pronounce 'supremum' for 'extremum,' at which Johnson's critical ear instantly took offence and discoursing vehemently on the unmetrical effect of such a relapse he showed himself as full as ever of the spirit of the grammarian

Brocklesby died on Dec. 11th, 1797 and left his house, pictures, books, and a considerable fortune to his great nephew, Thomas Young, to whom he had always shown much kindness and who deserved it, for while a student of about 20 years at St. Bartholomew's Hospital he wrote so original a memoir on sight that he was elected a Fellow of the Royal Society and in after life he became famous as the originator of the undulatory theory of light and the earliest interpreter of the Egyptian hieroglyphics. Thus was Brocklesby useful and happy in his life and fortunate in his friendships To have been the benefactor of three such men as Burke, Johnson, and Young to have shared their conversation and to have enjoyed their esteem is perhaps the highest distinction which has ever been attained by any member of the Army Medical Service

Such were a few of the many celebrated men of your branch of our profession. It would be easy to tell of many more whose lives or whose writings deserve attention and remembrance, and it is an interesting circumstance that the first lectureship in the history of medicine in the United Kingdom has recently been founded to commemorate a very learned and worthy man who began his professional life in the Indian branch of the military medical service, Dr. Thomas Fitz Patrick.

The study of the past in medicine is more than a mere archæological pursuit, it ought to be so used as to be of present service to its student. The observations of every man who has stated to the best of his ability what he saw are of permanent value, of the same kind of use, in fact, as the reports of living cases. A part of the method of diagnosis is the weighing of the circumstances of a history, and where these are clearly stated the exercise is useful though the patient is not himself before us This is what may be called the practical value of a study of the medical writings of past times. They are instructive, too, as warning us how easy it is to be misled as to what we are looking at, or touching by some preconceived hypothesis. This is a lesson which cannot be too often inculcated, everyone engaged in practice knows how often the impression conveyed to him beforehand may mislead him in diagnosis by inducing him to attach too much weight to one fact or too little weight to some other, though both have been observed by himself. The habit of precise consideration of every observation and of rigid logical deduction from our observations can only be acquired in medicine and when acquired can only be retained by constant exercise in every possible direction, and it is as a part of this training that the perusal and consideration of the cases of past times are important to everyone engaged in the practice of medicine and surgery Besides this use the knowledge of the work done the difficulties surmounted and the discoveries made by our predecessors in science and in practice elevates the tone of our professional life, and urges us to be worthy associates in history of those who have added to knowledge and been constant in duty

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SOUTHEND-ON-SEA AND DISTRICT MEDICAL SOCIETY —The second annual meeting of this society, postponed from October, was held on Feb. 10th. The following officers were elected President Dr A. Clough Waters, J P, vice-president Mr G F Jones, committee, Mr C H. Wade, Mr H. Cleveland Smith and Dr A. Grosvenor Hinks, honorary secretary, Mr J B. Maxwell. The following gentlemen were elected honorary members Dr T Outterson Wood and Mr C W Mansell Moullin.—An address was then given by Mr Mansell Moullin on Gastric Ulcer from a Surgical Point of View and Hints when to Operate in Appendicitis.—A discussion followed, in which the following gentlemen took part the President, Dr J T C Nash Dr C Forsyth, and Dr A G Hinks —The members afterwards dined together at the Queen's Hotel, the President being in the chair About 30 members and guests were present.

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[13] Brocklesby: Œconomical and Medical Observations London 1764 p. 47

An Address

ON

GASTRO-ENTEROSTOMY AND ITS USES, WITH A DESCRIPTION OF THE OPERATION AS PERFORMED BY THE AUTHOR.

Delivered before the Oxford Medical Society on Nov 14th, 1902,

By A W MAYO ROBSON, F R.C S Eng,
VICE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND

Mr President and Gentlemen,—It is only 21 years ago since Nicoladini first suggested the possibility of making an anastomosis between the stomach and small intestine so as to short-circuit obstruction at the pylorus At that time, and for some years later, so little confidence was placed in this and similar operations on the stomach that patients, as a rule, were treated medically until almost moribund before being handed over to the surgeon, with the result that the mortality was appalling This naturally retarded progress, since the deaths following on operations in moribund cases were mistaken for deaths due to the operation itself, and when we take into account the fact that out of 35 cases in which gastro-enterostomy was performed between the years 1881 and 1885 there were only 12 recoveries—in other words, that the mortality was 65 71 per cent —it is not to be wondered at that little confidence was placed in surgical methods It rather reminds one of the beginnings of ovariotomy, in which the mortality was still higher, and it accounts for the prejudice against recommending surgical treatment that existed for many years among physicians and that still exists among many of the older practitioners and in some of the more conservative schools. Even when I gave the Hunterian lectures on the Surgery of the Stomach at the Royal College of Surgeons of England in 1899, out of 1978 cases of gastro enterostomy that I was able to collect from all sources there had been a mortality of 36 4 per cent.—not a very encouraging outlook when one patient out of every 2 75 might be expected to die It is, however, a very different tale that I am able to tell to day, only three years later when I can point to a considerable series of cases with a mortality of under 5 per cent This—I venture to think will be granted—brings the operation within the realm of comparative safety, and seeing that it has to be undertaken in many cases for diseases that would be otherwise inevitably fatal, it may be looked on as an operation the benefits of which not even the most conservative among us can afford to ignore.

These changes have been brought about, not only by patients being operated on at an earlier stage and under more favourable conditions—for many of my patients have been extremely ill at the time of operation—but also by greater care in technical details, by greater expedition in operating, by more careful asepsis, by the avoidance of, or greater care in the use of, irritating antiseptics, by the prevention or better treatment of shock, by care in post-operative treatment such as early feeding subsequently to the operation, and by the careful preparation of the patient before the operation

I will endeavour in the time placed at my disposal this evening to point out in detail the methods which I employ and to illustrate my remarks by a description of a few of the cases on which I have operated

The preparation of the patient —It has been the custom with many surgeons to put patients suffering from disease of the stomach through a long course of preliminary treatment, such as frequent lavage of the stomach and abstention from food before operation This, as a rule, is quite un necessary and certainly inadvisable in the greater number of cases—first, because the treatment is depressing and debilitating in the case of patients already exhausted by a long illness, secondly, as proved by Dr Harvey Cushing's bacteriological investigations, the stomach contents speedily become aseptic if the mouth be cleansed and aseptic foods administered, and, thirdly as proved by ample clinical experience, elaborate preliminary treatment is unnecessary to success. If the stomach is greatly dilated and the contents are foul then lavage with simple boiled water night and morning is adopted for two days before operation. The careful cleansing of the mouth and teeth and the administration of foods sterilised by boiling are advisable. The last light meal is given the night before about 12 hours, the stomach is washed out about two hours, and a nutrient enema is given about one hour, before operation. In other cases no lavage is adopted, but the same care is exercised in cleansing the mouth, giving sterilised food, and administering a nutrient enema consisting of one ounce of brandy, one ounce of liquid peptonoids, and ten ounces of normal saline solution Every patient is enveloped in a suit of cotton wool made by the nurse out of gamgee tissue and each has an injection of liquor strychninæ (B P) administered subcutaneously before the operation is begun. The preparation of the skin and other aseptic details of the operation differ in no respect from those observed in operations generally

Although the operation of gastro-enterostomy has been performed in many different ways there are practically only two distinct methods—one Wolfler's, in which the jejunum is fixed to the anterior stomach wall, and the other von Hacker's, in which the anastomosis is effected between the jejunum and the posterior wall of the stomach From a somewhat extensive experience of the two I have no hesitation in strongly recommending the posterior where that operation is possible, for it must be granted that there are some exceptional cases where on account of adhesions to the pancreas, involvement of the posterior wall of the stomach by growth, or from congenital deformity the anterior method must be selected

In August I did two consecutive gastro-enterostomies in middle aged men in which the posterior operation was impracticable. In one, extensive ulceration had fixed the stomach to the structures lying behind it so that there was no free posterior stomach wall, in another extensive cancerous infiltration and adhesions prevented the stomach from being lifted up In October I also had to perform the anterior operation because of a congenital deformity in the shape of a very short transverse mesocolon.

My preference for the posterior operation, whilst at first based on theoretical considerations, has been supported by ample practical experience of its advantages, and the smooth recovery with absence of pain and vomiting that one is accustomed to witness leads me strongly to advocate the method. It affords free drainage of the stomach into the bowel and secures exact apposition by posture of the newly joined structures, hence there is little or no discomfort subsequently to operation and feeding may be begun quite early Moreover, as there is no loop of bowel constricting the colon there is no fear of obstruction, and owing to the unimpeded passage of the bowel contents, that distressing complication, regurgitant vomiting of bile, is, as a rule, avoided. In the practice of some surgeons this complication has followed so frequently that they have considerably modified Wolfler's operation in order to avoid it. In one of these modified operations an anastomosis is made between the afferent and efferent loops of jejunum, in another the loop of bowel is divided, the distal end being fixed to the stomach opening and the proximal end being inserted into the distal several inches away from the stomach These methods are certainly effectual, but as a routine practice they are unnecessary, and as they prolong the operation they must necessarily add to the risk.

The following is a description of the operation which I am in the habit of performing The abdomen is opened by an incision about four inches long, one inch to the right of the middle line, above the umbilicus. The stomach is thus exposed The jejunum is readily found by turning the omentum and transverse colon upwards, and feeling for its commencement on the left side of the second lumbar vertebra. A point about 13 inches from the commencement is chosen for the anastomosis in the anterior and one from six to nine inches for the posterior operation A loop is drawn out, milked until empty, and clamped with special forceps with long rubber-covered blades care being taken that the proximal end of the loop is towards the cardiac end of the stomach. The union of the viscera can be effected outside the abdomen, a long piece of gauze being packed round to isolate the operation area. In the anterior operation the point selected on the stomach for the union is near the pylorus and as close to the greater curvature as possible After the suture of the two orifices is complete a few additional stitches are introduced into the proximal end of the loop, securing it at a higher level on the stomach wall and also into the distal end, securing it at a lower level in order to obviate kinking In the posterior operation the transverse colon and great omentum are pulled upwards, exposing the under surface of the transverse mesocolon. A small slit is made in this and enlarged with the fingers, care being taken to avoid the wounding of any vessel. This, in case of adhesions on the posterior wall of the stomach, is sometimes simplified by passing the finger into the lesser peritoneal cavity through a thin place in the great omentum just below the stomach, the finger so introduced being used to press forward the transverse mesocolon where it is free from adhesions The posterior wall of the stomach is thus exposed and the portion which is to be sutured is drawn through the slit in the transverse mesocolon and clamped by the long slightly curved blades of a special pair of forceps covered with rubber so as to avoid crushing the stomach wall. The lateral margins of the incision in the transverse mesocolon may be stitched on each side to the stomach by a single suture in order to prevent closure of the slit and consequent narrowing of the jejunum as noticed by Czerny, though this is not necessary when the bobbin is employed. The union of the viscera may be effected in both anterior and posterior operations in one of three ways—(1) by simple suture, (2) by my decalcified bone bobbin, and (3) by a Murphy button The suture employed in (1) and (2) is practically the same The bobbin is used as a splint upon which the stitches are applied. By its use an immediately patent opening of a known size is secured and the bobbin is digested within 48 hours after it has effected its purpose Murphy's button is generally used only when the greatest haste is desirable. As the stitching in either of the two former methods can be done in from four to eight minutes by practised hands the button is rarely, if ever necessary Mikulicz regularly employs it and speaks well of it, and many other surgeons prefer its use to all other methods. If, however, its one advantage, rapidity is negatived by the operator having accustomed himself to the details of simple suture the button can only be harmful and it is a well recognised fact that it very frequently falls back into the stomach and is there retained. Now, although it may do no harm in some cases yet it cannot be desirable, especially in an ulcerated stomach, to have a hard foreign body permanently retained in its cavity

Method of stitching—The stomach and intestine being placed in apposition, a continuous Lembert stitch of spun celluloid thread unites the serous surface for a distance of two inches or more. The line of this stitch is semi oval and joins the surfaces of the viscera close to the posterior border of the anastomotic opening Incisions are then made into the viscera in front of the suture. A second continuous suture is now passed uniting the posterior cut edges, this may take only the mucous membrane or all the coats and is of catgut. After completing the posterior half the bobbin is introduced. The anterior semi-circles of stitches are now continued first the catgut circle to the cut edges and then the celluloid circle to the serous coats, in precisely the same fashion as the posterior sutures were applied. If the bobbin is used the sutures are drawn firmly on to it in tying If not, the stitch must be interrupted at one point or more in order to prevent the suture "drawing' and puckering the orifice.

Removal of mucous membrane—Chlumskij in reporting from the clinic of Mikulicz the results of gastro-enterostomy in which the simple suture had been used found that in all, the opening was not of adequate size. This lessening in the size of the opening may be due either to cicatricial contraction or to thickening and pouting of the mucous membrane at the orifice. Kelling[1] states that the chief advantage of the Murphy button over simple suture is the prevention of the formation of a ring of mucous membrane which projects into the stomach and occludes the new opening To avoid this it will be found helpful to remove a small portion of the mucous membrane of each viscus This may be done in the following manner When incising the gut the serous and subserous layer are cut through carefully The mucous membrane then bulges into the wound, is seized with nibbed forceps, loosened on each side from the submucous coat, and an ellipse of it as long as the wound and three-quarters of an inch broad is cut away This procedure has given satisfactory results but it is not necessary when using the bobbin The clamps and gauze are now removed and the viscera are carefully replaced in position, after which the abdomen is closed by a continuous catgut suture which first unites the peritoneum and posterior rectus sheath together and the same suture returning unites the anterior sheath of the rectus The skin is brought together with a continuous catgut suture or with several interrupted silkworm gut or green chromic catgut sutures

Special complications that may follow the operation of gastro-enterostomy—1 Regurgitant vomiting has been very much more frequently observed in malignant than in simple disease. The cause of it is difficult to determine. In some cases, as in those of Mikulicz, it is apparently due to spur-formation at the new orifice, of such a kind as to determine the flow of the intestinal contents into the stomach rather than in the reverse direction. At times the vomiting is trivial, occurring but once or twice, at times again it is most serious and hastens or determines death. It may be dealt with most satisfactorily by lavage of the stomach, by propping the patient in the semi erect posture, by abstinence from feeding by the mouth, and by securing a free action of the bowels, occasionally it will be relieved by allowing the patient to drink freely of milk or some other fluid. The vomit in the beginning is in appearance chiefly composed of bile and it is to the presence of bile in the stomach that the vomiting was attributed Riegel, Malbranc, and Weil have related cases where a reflux of bile into the stomach resulted in grave symptoms. Billroth remarked upon the serious import of the regurgitation of bile after gastro enterostomy Claude Bernard and others, founding their opinion upon laboratory work, considered that bile inhibited gastric digestion. Dastre, in dogs with gastric fistulæ introduced bile at all stages of digestion and concluded that the alkalinising effect of the bile was swiftly negatived by a copious outflow of gastric juice. No ill effects were noticed either in the digestive powers or in the general health. Oddi, experimenting upon dogs, obliterated the common bile duct and united the gall-bladder into the stomach. All the bile consequently flowed at once into the stomach, with the result that the animals gained in weight and suffered not at all. Max Wickhoff, Angelberger, and Terrier have performed cholecysto-gastrostomy successfully for obstruction in the common bile duct. These observations all show that the mere presence of bile alone is insufficient to induce vomiting Chlumskij has suggested that it is the presence of pancreatic juice which so irritates the stomach as to make it reject all fluids But this cause is negatived by Stendel s experiments upon dogs and by Moynihan's case,[2] in which owing to a complete severance of the gut at the duodeno-jejunal junction the duodenum was stitched up completely and the open end of the jejunum was implanted in the anterior wall of the stomach. In this case all the bile and all the pancreatic juice passed into the stomach, yet digestion was active and complete and vomiting was absent. Moreover Hartmann and Soupault have recently shown that in all cases of gastro-enterostomy, whether anterior or posterior, there is a reflux of bile and of pancreatic juice into the stomach, Carle and Fantino, Hayem Mathieu and others, have made the same observation. The cause, then, of regurgitant vomiting is not fully understood. My own view is that regurgitant vomiting is dependent on obstruction to the passage onwards of the intestinal contents either due to kinking or paralysis of the anastomosed jejunal loop or later to adhesions interfering with the regular vermicular contraction of the bowels. The case related below seems to me to prove the hypothesis.

CASE 1.—A single woman aged 28 years, was sent to me by Dr W—— on Dec 12th, 1901, with a history of pain after food and vomiting of three years duration, the weight having diminished from nine stones to six stones. When I saw her she could only take sips of milk and water and had constant epigastric pain There was also coffee ground vomit The outline of the stomach on distension with CO_2 was hour glass in shape and there was marked epigastric tenderness. After a gastro-enterostomy she lost her pain and gained weight, but three months later I had a letter to say that she had daily vomiting of bile in large quantity and though she could take food it did not nourish her In June the regurgitant vomiting was so troublesome that I admitted her to Leeds Infirmary for observation and after a few days opened the abdomen to find a band of lymph passing from the transverse mesocolon across the distal loop of jejunum and so constricting it as to produce obstruction. The fistula between the stomach and jejunum was fully patent and had not contracted in the least. The constricting band was divided and in order to make the result more certain the two arms of the jejunal loop were connected by a bone bobbin about three inches away from the stomach fistula Recovery was uninterrupted, the vomiting ceased entirely, and she returned home within the month well and able to take normal food. The improvement has continued and the patient is now well.

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[1] Archiv fur klinische Chirurgie, Band lxii.

[2] Brit Med Jour May 1901

Several "complementary operations" have been suggested in order to prevent regurgitant vomiting Roux and Doyen cut the intestine across implant the distal end into the stomach and the proximal into the side of the distal, and thus avoid the "circulus vitiosus" Jaboulay, Braun, and Weir advise a side to side approximation of the proximal and distal loops

2 Subsequent contraction of the new orifice between the stomach and intestine must occur to some extent in all cases when the dilatation of the stomach present at the operation undergoes progressive diminution. Moynihan has recorded one case in which he performed a second operation because of closure of the orifice made with the help of Laplace's forceps and has operated upon another in which a colleague had three years previously performed gastro jejunostomy with the aid of Murphy's button. In this latter case the opening had completely closed Czerny records a case where the Murphy button was used in which the opening narrowed from a diameter of five centimetres to eight millimetres. As bearing on the closure of an anastomotic opening I have found the opening in a cholecyst-enterostomy made by a Murphy button to be closed three months later My colleague, Mr W H. Brown, related[3] a case of closure of an anastomotic opening in which Senn's plates were used in a woman, 62 years of age, for pyloric stenosis due to tumour, a recurrence of symptoms occurring a fortnight after the original operation. An exploration through a gastrotomy incision showed the opening to be closed by a membrane which the operator tore through with his finger, the ultimate result being excellent. After the employment of my bone bobbin I have never known the opening to close and in cases where months or years later I have had an opportunity of examining the site of the former operation I have always found the opening to be thoroughly patent and the passage through it to be smoothly lined with mucous membrane.

3. Pneumonia or pleurisy is said to have followed operations on the stomach with greater frequency than other operations on the abdomen, the reason given being the fixation of the ribs and the consequent difficulty in expanding the lungs subsequently to operation. My experience does not bear out this, for I have not found chest ailments to follow after operations on the stomach with greater frequency than is the case after any other major operation.

4 Cases of peptic ulcer in the jejunum after gastro-enterostomy are recorded by Braun, Halm, Kausch, Korte, Steinthal, Hadra, and Neumann In four cases the ulcer perforated and proved fatal. All the operations were performed when hyperchlorhydria was marked and persistent Under such conditions Neumann suggests that the operation of jejunostomy should be performed. The opening made in the bowel can be closed as soon as the gastric juice has returned to its normal condition[4]

5 Adhesions subsequent to gastro-enterostomy causing intestinal obstruction are probably uncommon, but Case 1 shows that they must be taken into account occasionally

6 A want of union in the newly joined viscera is an accident of a very serious and probably almost universally fatal character that used to be less rare when only moribund patients were operated on, but which is now seldom seen except when the Murphy button has been used, in which case there is nothing to prevent extravasation if union be delayed beyond the first few days, whereas when the union is effected by a double line of sutures delayed union if not too prolonged is not serious I have only seen the complication on one occasion in recent years and that was after the use of the metal button. Dr W Mayo in a paper in the *Annals of Surgery* for August, 1902, speaks of having had two fatal cases from separation of the anastomotic openings, one on the seventh day in malignant disease and one on the ninth day following an epileptic seizure, in both the Murphy button had been employed.

7 Passage of small intestine through the loop formed by the junction of the jejunum and stomach is probably only possible, certainly only probable, after the anterior operation, and the only case that I know of was one reported by Dr Mayo in the paper referred to which occurred in his hands a year after an anterior gastro enterostomy

Conditions subsequent to operation —Fantino[5] examined Carle's cases of gastro-enterostomy as regards the following points (1) changes in the peristalsis of the stomach, (2) the ability or non ability of the new sphincters to close the outlet, (3) the capacity of the stomach, and (4) the secretion of hydrochloric acid.

In the cases examined the operation immediately improved the peristaltic power of the stomach, though it did not render it normal The stomach could generally empty itself, but did so gradually Systematic examinations of the stomach contents were made after test-meals, &c, and showed that after an irregular period the stomach regained completely its power of emptying itself, in fact, as a rule, after gastro enterostomy the stomach would be found practically empty in from three to five hours after a meal. Generally it was found that the stomach decreased in size soon after gastro-enterostomy, so that the formerly distended organ became normal in size Examination of the stomach by mean of distension with carbonic acid and by other methods showed that a sphincter was developed at the new opening and that its power increased with time. The secretion of hydrochloric acid after operation was studied In cases where there was formerly hyperacidity this condition was lost, and though the degree of acidity in an individual case varied from time to time, yet these variations did not depart from physiological limits In the same examinations it was found that regurgitation of bile into the stomach took place, but it was of no importance so long as the outlet from the organ was sufficient. Cases of hypo and an acidity showed no change in their gastric juice after operation, showing clearly that this condition is not dependent on obstruction but on previous changes in the mucous membranes, these changes being probably in the nature of an atrophy of the peptogastric glands.

Changes in the stomach —If dilatation as the result of obstruction has been present before the gastro-enterostomy a certain lessening in the size of the stomach may be expected to occur as soon as a fresh outlet is formed The extent of this lessening depends entirely upon the condition of the muscular tunic of the stomach If the stomach has dilated gradually during many months or years and if the dilatation has been extreme there will be little or no rebound—the dilatation will undergo little or no perceptible diminution On the other hand, if dilatation has been rapid in its oncoming and has never attained a supreme degree the return to the normal size of the stomach will be almost, or wholly, complete In cancer of the stomach or in injury resulting from swallowing acids, &c., where the latter conditions are fulfilled the stomach rapidly lessens in size after operation, in simple stenosis, where the former conditions are found, the return is always trivial if, indeed, there be any lessening at all The motor insufficiency of the stomach is, according to Hartmann and Soupault, a permanent matter A return to the normal was never observed in any of their cases, even when the examination was made after one year Gastric digestion is prolonged beyond the normal limits. Mintz and Rosenheim have shown that there is a marked delay in the evacuation of the stomach contents. Carle and Fantino, on the other hand, assert that the emptying of the stomach after a full meal is not only accomplished within the period of physiological limit but is actually accelerated They add "This is often observed immediately after the operation and almost, or almost always, in the months that follow"

When the stomach is very largely dilated and the duodenum is mobile it is possible to short-circuit the pylorus by uniting the stomach to the duodenum The operation was suggested by Jaboulay in 1892 and has been performed by several surgeons with success. It can be performed with very little disturbance or exposure of viscera, but where the pyloric region is extensively diseased or adherent the operation is impracticable. The advantages claimed for it are that the new orifice or outlet from the stomach is near its natural place and that being placed above the biliary papilla there is no danger of regurgitation of bile The incisions into the viscera are both vertical and any one of the three methods of union can be employed.

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[3] THE LANCET July 7th 1900 p 10

[4] Deutsche Zeitschrift für Chirurgie, 1901

[5] Archiv für Klinische Chirurgie, Band xlvi S 1 and 2.

have found the bone bobbin in this position to be quite simple of application.

The different indications for gastro-enterostomy cannot be stated in one category, for while in the first series the indications with certain provisos are absolute so soon as the diagnosis is established in the second series the indications for the operation apply only after failure of general treatment In the first series are—(1) simple stenosis of the pylorus, (2) malignant stenosis of the pylorus, (3) congenital stenosis, (4) congenital atresia, (5) chronic gastric ulcer with tumour of doubtful character too extensive or adherent for effectual removal, not necessarily associated with stenosis, (6) duodenal cancer or tumour causing obstructive symptoms, (7) hour glass contraction of the stomach not favourable for gastroplasty, (8) perigastritis with adhesions around the pylorus producing obstructive symptoms or pain and too extensive for gastrolysis, and (9) dilatation of the stomach dependent on pressure outside the pylorus from tumour of pancreas, liver, or gall bladder incapable of removal. In the second series after failure of medical treatment are—(10) acute or chronic gastric ulcer, (11) duodenal ulcer, (12) hæmorrhage from gastric or duodenal ulcer, (13) persistent spasm of pylorus or Reichmann's disease with dilatation of the stomach, (14) hyperchlorhydria (15) persistent gastralgia, (16) tetany of gastric origin, (17) acute gastric dilatation not yielding to lavage and general treatment, (18) pancreatitis secondary to gastric ulcer, (19) certain cases of jaundice dependent on gastric or duodenal ulcer leading to thickening around the common bile-duct, and (20) simple atonic dilatation of the stomach after failure of lavage and general treatment. Although I have performed gastro-enterostomy for nearly all the conditions here mentioned and could give numerous examples in illustration, yet it is clearly impracticable in one lecture to do more than to refer briefly to some of the indications

1 In cases of pyloric stenosis leading to dilatation of the stomach gastro-enterostomy provides a new opening for the passage of the stomach contents and thus saves the patient from starvation and death. If the stenosis be due to simple ulcer and the pylorus is free from adhesions the question will arise as to whether pyloroplasty should be performed for it can be done quickly with very little exposure of viscera and I have myself performed it on many occasions with excellent results, but the fact that occasionally contraction of the new orifice occurs, especially if there is active ulceration going on at the time of operation, has led me to favour gastro-enterostomy The following case serves as an example of relapse following on pyloroplasty for stenosis with subsequent success by gastro-enterostomy

CASE 2.—The patient, a married woman, aged 29 years was seen with Dr S—— on March 9th, 1895 A history was given of pain in the epigastrium for ten years with exacerbations and so-called spasms two or three times a week, the attacks lasting from two to 24 hours and being relieved by vomiting Severe tetanic cramps in the legs were complained of and there was obstinate constipation. The stomach was markedly dilated, but no tumour could be felt. The right rectus was rigid, and tenderness was well marked over the pyloric region and towards the left costal margin. There had been a loss of weight to the extent of two stones and the patient was unable to perform her household duties Operation was performed on Nov 22nd The pylorus was found to be stenosed and surrounded by adhesions. The adhesions were separated and pyloroplasty was performed, the patient making a good recovery and gaining weight and strength. She was seen in July of the following year, when, though there was some complaint of indigestion the vomiting had not recurred and she was half a stone heavier than when operated on in November After this date the symptoms of obstruction at the pylorus returned, and on Sept. 4th, 1898, gastro-enterostomy was performed A good recovery ensued and the patient has remained well, having fully regained her lost weight and strength and being now, four years later in good health.

The following three out of many similar cases are good examples of simple pyloric stenosis treated by gastro-enterostomy

CASE 3.—The patient, a man aged 45 years was seen at the Leeds Infirmary He had suffered pain for two years with vomiting for nine months. Great dilatation of the stomach was present. There were thickening and puckering near the pylorus. On June 12th, 1900, exploratory gastrotomy was performed. A large chronic ulcer was discovered on the posterior wall as well as cicatricial stenosis of the pylorus Posterior gastro-enterostomy was performed. Complete restoration to health resulted and the patient was well in 1901

CASE 4.—The patient, a man, aged 28 years (who was seen with Dr G——), was suffering from pyloric ulcer with tumour of the pylorus. Two years previously his weight was 12 stones 12 pounds, now it was 9 stones 6 pounds He had pain two hours after food. For the last two months vomiting had been present on an average five times a week, and on two occasions the vomit was like coffee-grounds. There was enormous dilatation of the stomach The pyloric tumour was freely moveable. There was visible peristalsis. Operation was performed on August 4th, 1899 A large mass was found at the pylorus which was evidently thickening due to active ulceration. The glands were large but not matted. Gastro-enterostomy was performed on the 27th The patient made a good recovery and weighed 9 stones 7 pounds On Sept. 20th, 1899 his weight was 10 stones 13 pounds. He could eat anything He was well when seen in 1901.

CASE 5.—The patient a married woman, aged 38 years, who was seen with Dr M——, had suffered from indigestion for 20 years The pain was constant, lately it was present one and a half hours after taking food, it was easier when lying down. She had lost 1 stone 11 pounds in weight. Posterior gastro-enterostomy was performed on Jan 8th, 1901 Scars of ulcers were found on the pylorus and the anterior stomach wall. Stenosis of the pylorus was present as well as enlarged glands in the lesser omentum. Recovery ensued. Her weight was 6 stones 11 pounds at the time of operation, two months later it was 7 stones 9 pounds. She was quite well and of normal weight when she was seen in October, 1902.

2 The following cases serve to illustrate the beneficial effects of gastro-enterostomy in malignant stenosis of the pylorus incapable of removal and I would take this opportunity of stating that I differ *in toto* from the opinion expressed lately by an eminent London surgeon, who said "It is very doubtful if there is ever sufficient benefit to be derived from gastro-enterostomy and other short-circuiting operations in malignant disease to make it worth while undergoing these operations." Needless to say, wherever the glands are not extensively involved or there are no secondary growths the tumour should be completely removed In this class of case it might be expected that the mortality would be much higher than in simple disease and in my first series of cases that was so but later experience with the improved operation shows the immediate results to be almost equal to those of simple stenosis.

CASE 6.—The patient was a married woman, aged 37 years, who was seen with Dr D—— Cancer of the body of the stomach and pylorus with dilatation was diagnosed. Gastro-enterostomy was performed on Dec. 21st, 1899 She made a good recovery and was so well that gastrectomy was advised, but cancer of the uterus supervened and prevented further operation. She lived for nine months in comfort and was able to take ordinary food.

CASE 7.—The patient, a man, aged 63 years had symptoms for five years—at first those of chronic ulcer later those of malignant ulcer with tumour associated with hæmatemesis Gastro-enterostomy was performed on March 22nd, 1901. He made a good recovery He returned home at the end of the month and gained 4 pounds in weight during the fourth week. He ultimately gained about 2 stones and lived for a time in great comfort, but the growth progressed and he succumbed to exhaustion about a year later having been able to enjoy life for some months

The following is an example of cancer of the stomach where the patient was too ill for gastrectomy in which a rapidly performed gastro-enterostomy gave such relief that a subsequent radical operation was well borne.

CASE 8.—The patient a man, aged 63 years, was seen with Dr G—— of Burnley for stomachic symptoms of a year's duration a tumour having been noticed for a month. Gastro-enterostomy was performed on Nov 15th, 1900 A central ring of cancer was found dividing the stomach into two cavities The patient was too ill to bear gastrectomy A good recovery was made with a rapid gain in weight and strength, so that on Dec. 20th the complete removal of the growth by gastrectomy was well borne and when last heard of a year later he was at work and in good health

CASE 9.—The patient was a single woman, aged 24 years A history was given of ulcer of the stomach with frequent vomiting for five years, the vomit of late being coffee ground in character Great emaciation was present. She had been confined to bed for some months Her weight was only 4 stones 5 pounds The vomit contained free HCl, with blood and sarcinæ. A tumour in the epigastrium could be easily felt and seen Posterior gastro enterostomy was performed on April 17th, 1902 The tumour was adherent and presented every appearance of cancer, the anterior wall of the stomach was extensively involved, the glands being largely affected. The patient made a good recovery with a rapid gain in weight. Her medical adviser told me in October that the tumour had apparently disappeared and that she had gained 5 stones, thus more than doubling her weight within six months of the operation. It remains to be seen if this is a case that should come under simple tumour simulating cancer

3 A degree of congenital stenosis is doubtless a frequent, though often an unrecognised, cause of dilatation of the stomach in young adults Maier[6] recites a number of cases, mostly in adults, of chronic catarrh of the gastric mucous membrane with dilatation in which stenosis of the pylorus varying from three millimetres to one centimetre (the normal being from one to three centimetres) was found. This form of stenosis may explain many of the cases of dilatation and catarrh of the stomach coming on in young adults without apparent cause and it may also explain many of the cases of persistent vomiting set down to a vicious habit or to hysteria. To judge from the literature of the subject this condition is not of frequent occurrence but it may be more common than is supposed, as necropsies are not frequently made in the case of children dying out of hospital and persistent vomiting in infants is not a very uncommon event. The first successful operation in an infant was recorded by Abel in 1899 the patient being eight weeks old. Several other cases have since been reported In February, 1900, I operated on a young man, aged 24 years, for dilatation of the stomach in which the stenosis of the pylorus was probably a congenital defect, for the indigestion had existed since childhood, though much worse during the five years previous to my seeing him, yet there was no history of ulcer or other trouble to account for it and at the time of operation the pylorus would barely admit the tip of the little finger

4 Congenital atresia of the pylorus, in which no passage exists between the stomach and intestine, is a defect which in all recorded cases has run a rapidly fatal course If diagnosed early it should be treated by gastro-enterostomy

5 In chronic gastric ulcer with tumour of doubtful character too extensive or adherent for effectual removal. I have operated on quite a number of cases in which after a long history of stomach symptoms a tumour had developed which on external examination presented every appearance and the feel of cancer, and even when the abdomen was opened the tumour gave the same impressions, but any enlarged glands were discrete and there were usually adhesions which precluded any attempt at removal. The following cases serve to illustrate what I mean and to show that in some of these cases where merely temporary relief only was anticipated complete and permanent cure resulted from the operation.

Case 10 —The patient was a man, aged 31 years, who was seen with Dr B—— and Dr W—— He had had dyspepsia for 17 years, this had been more severe during the last 20 months 16 months previously vomiting began and from the outset large quantities were ejected but never contained blood. There was recurrence occasionally of similar attacks which were always relieved by treatment. In December, 1897 the stomach reached to the pubes and visible peristalsis was present Relief followed dieting and lavage until March, 1898 since which time the pain had been almost constant. The pain was not materially worse after food or relieved by vomiting A loss of weight occurred from 10 stones to 8 stones 6½ pounds There was great feebleness Gastro-enterostomy was performed on May 6th, 1898 A large irregular tumour was found at the pylorus and along the lesser curvature with extensive adhesions, but the glands, though large, were discrete. A good recovery was made, followed by relief of all the symptoms. When the patient left the home on June 7th his weight was 8 stones, on August 17th, 1898 it was 9 stones 3 pounds. The following is an extract from a letter received from the patient dated Feb 12th, 1900 ' My health continues perfect I have not lost a day's work through illness since I recovered." He was in good health in 1902.

Case 11.—The patient, a man, aged 45 years, gave a history of pain for two years about an hour after food, with great loss of flesh. For nine months he had vomited every day or every second day a large quantity of yeasty material, but no blood, though he was very anæmic There were well marked signs of dilatation of the stomach, with tenderness over the pylorus and the presence of a tumour Posterior gastro enterostomy was performed on June 12th, 1900 On opening the abdomen the pylorus was found to be much thickened and adherent, forming a hard nodular tumour having the appearance and feel of cancer Through the centre of the mass a No 10 catheter only could be passed over a roughened ulcerated surface An uninterrupted recovery followed. Food was begun the second day and solids could be taken in the second week without pain He rapidly gained flesh and strength and is now well

Case 12.—The patient, a man, aged 48 years, who was seen with Dr R——, was supposed to be suffering from cancer too advanced for treatment, the patient being extremely feeble and having lost from 2 to 3 stones in weight in six months The presence of a tumour in the pyloric region with well marked dilatation of the stomach and profuse coffee-ground vomiting rendered Dr R——'s diagnosis extremely probable, though the history of pain from one and a half to two hours after food for three years with other symptoms of pyloric ulcer led me to hope that the disease might be simple. Operation was performed on May 30th 1902. An extensive tumour at the pylorus associated with stenosis and dilatation of the stomach, with perigastritis and adhesions, together with numerous discrete though much enlarged glands, led me to perform gastro-enterostomy The patient rapidly put on weight, gained strength, and lost all his distressing symptoms. When he returned to report himself in three months he was robust and well and no trace could be found of the tumour or of the dilatation of the stomach He is to day in perfect health

These cases teach the important lesson that one ought not hastily to give a hopeless prognosis after gastro-enterostomy for tumour, for when there is any doubt whatever about the malignancy or otherwise of the growth it is well to give the patient the benefit that is derived from the hope of cure. Another lesson to be learnt is that an exploratory operation is worth performing in nearly all cases of tumour of the stomach, for even if the growth cannot be removed the rest engendered by a gastro-enterostomy will almost certainly give relief, and in some cases thought at first to be malignant a cure may be effected

6 In cancer or other tumour of the duodenum producing obstruction to the onward passage of the stomach contents gastro enterostomy acts exactly in the same manner as in cancer of the pylorus As a rule this form of disease in the second part of the duodenum is removeable only with the greatest difficulty, in consequence of the important structures in the border of the lesser omentum being involved.

I was once tempted to perform such an operation which involved my removing the vertical part of the duodenum, part of the head of the pancreas, and about one inch of the common bile-duct, the passage of bile having to be made good by the performance of cholecyst-enterostomy and of the stomach contents by gastro-enterostomy The patient promised to do well for some days, but leakage from the duodenum ultimately led to death from exhaustion. I shall in future be content with the performance of gastro-enterostomy alone, as in a case on which I operated recently there was a well marked tumour (probably inflammatory around a duodenal ulcer) which entirely disappeared after gastro enterostomy and the patient is now well

7 Hour glass contraction of the stomach may be due to chronic ulcer or to cancer If the contraction be due to simple ulceration, gastroplasty is the operation of choice and in a number of cases in which I have performed it the results have been excellent, but if the stricture be a long one and the thickening be very extensive, then gastro-enterostomy, in which the proximal cavity is united to the jejunum, is the better operation, as in the following cases, but great care must be observed that the junction is not made between the bowel and the distal cavity as in at least two cases that have been reported, otherwise no benefit will ensue. It should be the operation of choice when pyloric stenosis is associated with hour glass contraction

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[6] Virchow's Archiv Band cli.

CASE 13.—The patient, a man, aged 52 years, who was seen with Dr. H——, gave a history of pain vomiting, and loss of weight and strength for three years. Epigastric tenderness was well marked. Posterior gastro-enterostomy was performed on Oct. 12th, 1900 Hour glass stomach was found, though the stricture was not extreme. The cardiac complement was also dilated. Recovery ensued. On March 4th, 1901, I received a letter to say that the patient's weight was 9 stones 11 pounds and that he was in good health. At the time of operation his weight was 8 stones 6 pounds.

CASE 14.—The patient was a man who gave a history of stomach symptoms for three years. In one attack perforation occurred Posterior gastro-enterostomy was performed on Nov 15th, 1900 Strong adhesions to the liver and colon were found The stomach was contracted in the centre The patient made a good recovery and when heard of subsequently he was in very good health.

Should the hour glass condition be due to a circular mass of growth constricting the centre of the stomach the proximal cavity may be advantageously fixed to the jejunum, and if by good chance the growth be limited, the glands be not enlarged and there be no secondary nodules the mass of growth may be subsequently removed as in a case previously related

8. In perigastritis with adhesions the operation of gastrolysis may be entirely curative as in many cases that I have operated on, but there are some cases where the adhesions are so extensive and the secondary dilatation of the stomach is so well marked that to rest content with simply detaching adhesions would be to court failure. If the pylorus is patent yet embarrassed by adhesions, I always separate them, and try to avoid their recurrence by interposing the right free border of the omentum between the raw surfaces left by the gastrolysis thus substituting a long, freely moveable attachment for short binding ligaments should adhesions re form. If, however, adhesions are very extensive and very short, dense, and firm, the operation of posterior gastro-enterostomy had better be done and this especially if at the same time there is stenosis of the pylorus or an hour glass stomach. In December 1900, I saw a woman, aged 57 years suffering from constant pain at the epigastrium intensified by food so that she was unable to take any solids, and as she had been unrelieved by general and medical treatment I operated and found the anterior wall of the stomach adherent to the abdominal wall and to the liver The extensive adhesions were detached and a posterior gastro-enterostomy was performed with the result that she was entirely relieved of her distressing symptoms and has remained well.

9. In tumour outside the pylorus but pressing on it and causing obstruction to the passage onward of the stomach contents gastro-enterostomy may be required at the same time that the tumour is treated The following is a case in which a pancreatic cyst was drained and gastro-enterostomy was performed at the same time

CASE 15.—A man, aged 35 years after a history of ulcer of the stomach for four years associated with pain an hour after food and with vomiting and great loss of weight, was sent to me by Dr G—— who had tried medical treatment most thoroughly with only temporary relief The patient's weight had gone down from 170 to 130 pounds From the history of the pain being relieved when the patient turned into the prone position and the fulness felt behind the stomach in the region of the pancreas together with slight jaundice it was suspected that the ulceration was in the posterior wall and that the pancreas was becoming involved. Gastro-enterostomy was advised but declined. The patient returned two months later in the last stage of exhaustion and with all the stomach symptoms more marked, the stomach being now greatly dilated, here was now a tense fluctuating tumour occupying all the epigastric region and extending well over to the right side which was diagnosed as a pancreatic cyst. Anterior gastro-enterostomy was performed on June 10th 1902. A large pancreatic cyst was exposed containing four pints of grumous fluid. This was tapped through the great omentum and then drained, the tube being fixed in the cyst by a purse string suture so as to make the opening embrace the tube tightly and prevent leakage. The posterior wall of the stomach and the pylorus were found to be fixed to the pancreas. The patient made a steady recovery and rapidly put on flesh All stomach symptoms disappeared and he was able to return home within the month looking and feeling well. Though the fluid collected in the pancreatic cyst three months later it caused no return of stomach symptoms and the insertion of a tube soon effected relief of the tumour which is still being drained.

The following indications apply only after failure of systematic medical treatment.

10. In ulcer of the stomach, whether acute or chronic, not yielding to medical treatment surgical treatment is in the greater number of cases the only satisfactory method of dealing with these refractory cases and operation should be resorted to at a much earlier period than has hitherto been the custom and always before the patient is so far reduced by pain and starvation or the supervention of serious complications that weakness and anæmia render any operative procedure hazardous Before the abdomen is opened it is quite impossible to say what operation or operations will be required and the surgeon must be prepared to adapt himself to circumstances on discovering the position of the ulcer and the conditions associated with it especially as to the presence or absence of adhesions and other complications The following case, one out of many on which I have operated, serves to show the beneficial effects following on gastro-enterostomy in intractable gastric ulcer. It acts by securing physiological rest of the stomach and at the same time curing the hyperchlorhydria which is usually present

CASE 16.—The patient, a single woman aged 32 years, seen with Dr. A——, gave a history of stomach symptoms extending over several years She had had hæmatemesis in 1892 and 1896, since which time she had suffered from flatulence and pain after food For two years epigastric pain had been constant but increased by food. For a year she had vomited daily and for some months only milk in small amounts could be retained. Epigastric tenderness was well marked and on distending the stomach with CO_2 it reached half an inch below the umbilicus and far over to the right of the middle line. Posterior gastro-enterostomy was performed on Oct. 5th, 1900 The patient returned home within the month, taking solid food without any discomfort and gaining flesh On Nov 8th Dr A—— wrote "I have seen Miss —— since her return and there is every reason to be pleased with her condition She has lost all her pain and is taking food well Allow me to thank you for her restoration to health " Her weight in February, 1901, was 8 stones 6 pounds, at the time of the operation it was 6 stones 12 pounds.

11. Duodenal ulcer very frequently fails to yield to general treatment and from the experience I have had of these cases I believe it is much more frequently the cause of fatal symptoms than is generally recognised I hope to report a series of cases of duodenal ulcer treated by gastro-enterostomy on a future occasion.

12. In hæmorrhage from the stomach or duodenum as shown by hæmatemesis or melæna, where general treatment has been tried and failed and where the bleeding is persisting or recurring after brief intervals operation is advisable with a view to find and to secure, if possible the bleeding point or points or of performing gastro-enterostomy in order to obtain physiological rest and thus to favour natural hæmostasis

I have been asked to open a discussion on the surgical treatment of hæmatemesis at the Medical Society of London in December I need therefore not dwell on it now

13. In persistent spasm of the pylorus or Reichmann's disease, leading to dilatation of the stomach, pylorodiosis or stretching the sphincter may be effectual in relieving spasm and in producing immediate relief to the obstruction, but as it is apt to be followed by relapse I have given up performing the operation, in favour of gastro-enterostomy

Not feeling satisfied with the calibre of the pylorus in one case after I had stretched it as far as I thought safe, I immediately performed pyloroplasty The condition then revealed showed me the cause of relapse for I found two rather extensive lacerations through the mucous membrane quite into the substance of the pylorus. As these lacerations would have had to heal under the unfavourable condition of being constantly irritated by food and the acid contents of the stomach there must have been a considerable effusion of plastic lymph which would inevitably have led to cicatricial contraction and so to stenosis This, I suspect, occurs in all cases where the pylorus is fully stretched and explains my reason for having no faith in Loreta's operation.

14 Hyperchlorhydria is a regular concomitant of ulcer of the stomach though it may occur apart from ulceration. As a rule it yields to medical and general treatment, but where such treatment fails to relieve and the life of the patient is being made miserable by constant indigestion with acid

eructations the operation of gastro-enterostomy is well worth consideration, especially when in such a case it can be performed with almost no risk, for in the absence of complications such as occur in ulcer and cancer the operation when properly performed by an expert ought to have no mortality

15 *Persistent gastralgia* —Cases must have occurred in the practice of every physician where although the positive signs of ulcer were absent, gastralgia of such intensity has persisted, and in case of temporary relief has recurred so regularly, that the patient is brought to the last stage of exhaustion by an utter inability to take food because of the pain induced by even a mouthful of solid. Some of these cases are doubtless due to simple ulcer, but in others the absence of tenderness in the epigastrium, of rigidity of the recti, of regular vomiting, and of hæmatemesis makes the diagnosis extremely doubtful. Even rectal feeding and absolute rest in bed do not always cure the condition and the patient gradually loses weight and strength and lapses into a state of chronic invalidism without any positive sign of organic disease. After all ordinary means have failed gastro enterostomy is well worthy of consideration, and, as the following case will show, it may lead to excellent results

Case 17 —The patient was a single woman, aged 27 years, who was seen at the Leeds Infirmary She had suffered from pain and indigestion since she was a girl, vomiting occurred at times, though she never brought up blood. The stomach was dilated and tender Free HCl was found in the contents of the stomach. She had lost weight and weighed now 7 stones 6 pounds Gastro-enterostomy was performed on March 7th, 1901. No scarring or other signs of ulcer were discovered. Soft solids were allowed at the end of the month The patient made a good recovery and was able to take food without pain, ultimately she was completely restored to health

16 In tetany of gastric origin The prognosis of tetany occurring in gastric dilatation is undoubtedly very serious, and according to some authorities death occurs in nearly 75 per cent of the cases The largest mortality occurs in cases where the spasm in the extremities is associated with tonic spasms in the head and trunk muscles or with clonic spasm. My own experience of tetany and of the severe muscular spasms in association with gastric dilatation leads me to think that we may possibly take a more hopeful view if the cases be treated surgically at an early period. The following case will serve to illustrate my views.

Case 18 —A man, aged 34 years was sent to me by his medical attendant in January, 1895, with a view to have something done in the Leeds Infirmary to relieve his condition. He had been suffering for five years from pain after the ingestion of food, with attacks of vomiting Latterly his condition had become aggravated, the pains occurring from half an hour to one hour after each meal and being relieved only by vomiting, so that for the last six months he had had to give up his work as a printer For some time before coming under my notice there had been very evident peristalsis from left to right in the epigastric region. Throughout the period over which his stomach symptoms extended his bowels had for the most part been very constipated but there were occasional attacks of diarrhœa. During this time he had attacks of what he described as "cramps" in his limbs and especially in his legs. He had lost very considerably in weight, as in December 1892 he weighed 9 stones 7½ pounds. On examination there was found well marked dilatation of the stomach, but the feature of the case which presented most interest in connexion with the present question was the occurrence while under observation of severe tetanic spasms affecting almost all the muscles of the body So extreme and so widespread were these, the muscles of the trunk and of the cervical region as well as those of the limbs being affected, that on Jan. 17th the question of possible strychnine poisoning was raised As palliative treatment of the stomach condition gave no relief the stomach was exposed on the 24th and the diagnosis of cicatricial stenosis with hypertrophy of the pylorus was confirmed. Pyloroplasty was performed, a bone bobbin being employed to insure patency of the new pylorus. Recovery was uninterrupted and although the cramps were present up to the time of operation he never had a threatening of cramp afterwards. On Feb 15th he was able to take a mutton chop for his dinner without inconvenience and by March 2nd (five weeks after the operation) he had gained 8 pounds. Two years after the operation he had quite recovered his strength and was working as usual, his weight then being just over what it was in December, 1892, and quite 2 stones above what it was at the time of the operation. There had been no recurrence of "cramps" or of muscular spasms of any kind. In a letter received at the beginning of 1899 he speaks of some stomach disorder, but he adds "You will please understand that I am a new man to what I was when you saw me last." A recurrence of stenosis necessitated gastro-enterostomy, which I performed early in 1902, but it is interesting to note that on this occasion, though he was much wasted and was vomiting every day, there was no return of the tetany He made a good recovery and is now well and strong again

17 Acute gastric dilatation is one of the most serious diseases that can be encountered. It was first described by the late Dr Fagge, his paper being illustrated by two cases, both in men, 30 and 31 years of age respectively, and both ending fatally In the Leeds Infirmary during the past ten years there have been at least four fatal cases But that the condition of acute gastric dilatation is not hopeless the following case distinctly proves.

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I would suggest that in every case of this kind where stomach lavage has failed, but only then (for the stomach tube is the first indication, no matter at what stage it may be recognised, unless, indeed, the patient be actually dying), the abdomen should be opened and the stomach should be emptied and connected with the jejunum, thus providing for continuous drainage into the intestine I believe that as yet gastro-enterostomy for acute dilatation has not been put to the test

18 In an exceptional case of ulcer of the stomach eroding the pancreas and producing pancreatitis with abscess draining into the stomach, a gastro-enterostomy apparently saved the life of the patient by draining the very foul contents directly into the intestine. The case is reported in "Diseases of the Stomach and their Surgical Treatment," p 168, so that I need not repeat the account here

19 Cholelithiasis may lead to perigastritis and the contraction of bands of lymph around the pylorus may produce obstruction or kinking, thus leading to dilatation of the stomach at the same time that the concretions lead to obstruction of the bile-ducts. As a rule the condition can be relieved by gastrolysis, but where the adhesions are extensive or the thickening of the pylorus is very pronounced the operation of gastro-enterostomy may have to be performed at the same time as the cholecystotomy Gall stones may also lead to fistula between the gall bladder and pylorus and the thickening of the pyloric canal may lead to obstruction, for which gastro-enterostomy may be the most suitable operation, though in the cases that have come under my care the repair of the fistula in one case and pyloroplasty in another were sufficient when combined with cholecystotomy to remedy the disease

20 In atonic dilatation of the stomach general and medical treatment, supplemented, if need be, by electrical treatment and lavage, if carried out systematically and for a sufficient length of time, usually yield good results, but in some cases, despite regular lavage of the dilated organ, well regulated diet, and general medical treatment the dilatation persists and the nutrition of the patient and the general health become seriously impaired. In such cases

the operation of gastrorrhaphy or gastroplication may be worth considering, though in certain cases gastro-enterostomy may possibly be performed with advantage The indication for operation in these cases is not so distinct as in the cases of dilatation due to pyloric obstruction, seeing that the cause is a general one, nor is the recovery after operation so rapid and satisfactory The general health requires considerable attention at the same time that the stomach is being dealt with

I fear that you may think that I have made out a very formidable list of conditions suitable for relief by gastro-enterostomy, but I trust that the cases which I have related as examples will serve to show that I have not exaggerated the importance of my subject.

In conclusion I would say that if the procedure is to hold its own as one of the most beneficial operations in surgery it must continue to be done with a very small mortality, which will be effected only by observing every care in detail before, at the time of, and subsequently to, operation.

LUNACY AND THE LAW[1]

BY T OUTTERSON WOOD, M.D DURH, F R.C P EDIN, M.R.C P LOND,

SENIOR PHYSICIAN TO THE WEST-END HOSPITAL FOR NERVOUS DISEASES, EPILEPSY AND PARALYSIS

IT augurs well for the success of the action taken by the conjoint committee of the British Medical Association and the Medico-Psychological Association with regard to the amendment of the Lunacy Law to enable cases of recent (incipient) insanity to be legally treated in private care without being certified as lunatics, that the Lord Chancellor inserted into his proposed Lunacy Bill a clause to meet our requirements in the very terms which I advocated at the annual meeting of the British Medical Association in 1896 The importance of the subject must be my justification for bringing before this association some features in connexion with it from a practical point of view I look upon the question for my present purpose as being divided into two sections only, for I intentionally leave the rate aided class to be dealt with elsewhere.

Section 1 —The proposal to extend the provisions of the present law so that incipient cases of mental disorder may legally and without delay be brought under care and treatment without certification, and

Section 2 —The suggestion that cases admittedly certifiable, or even already certified, may be placed in single care without the so-called stigma of certificates, or if already admitted into an asylum, they may be taken out and placed in the house of some relative or impecunious person and kept there for profit, and not necessarily for cure, for it is not suggested that these patients may be curable

Now, with regard to the first section which deals with cases of recent—i.e., incipient—insanity I would divide them into two classes—(1) those who are amenable to reason and advice, who are absolutely uncertifiable, and who can to a great extent take care of themselves, and (2) those recent cases of a mild type in which the mental warp is more pronounced, who may require removal from home, who are almost certifiable or who may even have harmless delusions, who require a certain amount of moral restraint, and who may object to the control necessary for their proper treatment. With regard to Class 1, no alteration in the law is necessary, these patients are as capable of treatment outside the Lunacy Law as any ordinary medical case. I have to deal with a large number of them as out-patients at the hospital and I have no difficulty whatever with them. It is with regard to Class 2 that the law requires amendment to enable us to obtain the legal control of the patient, and a system of notification seems to me the best to meet the requirements of such cases. This, however is no new idea. I have for years advocated a relaxation of the present law in order that incipient, doubtful, or undeveloped cases might under suitable conditions and at the earliest moment be brought under that expert care and treatment which experienced alienist physicians know to be so necessary for the arrest of the disorder and the cure of the patient. Upon this point I am glad to think we are all agreed. It is the adoption of a principle that has worked well in Scotland for many years and I know of no reason why, under proper conditions and with the necessary safeguards of skilled supervision, it should not work equally well in England and Wales, the order of a magistrate on this side of the border taking the place of the order of the sheriff as in Scotland for the legal detention of the patient for a definite period. There is, however, one point upon which we must insist and it is that wherever these cases are so placed, whether it be in a medical man's house or not, they shall be at once notified to the Commissioners and be placed under their official supervision as well as that of some skilled and independent local authority appointed by the Lunacy Board. Above all, we must be certain that it shall not be merely a matter of boarding them out in so-called medical homes or private houses kept by unqualified, inexperienced, and untrained persons, but that we shall have some guarantee that they will be cared for and looked after by those who have been trained in some recognised institution for the insane or whose competence is assured by long experience and who shall be approved of by the Commissioners, and, further, that they shall be nursed and attended not by hospital nurses who have had no asylum training but that their nurses shall be asylum trained and, preferably, that they shall hold the certificate of the Medico-Psychological Association for proficiency in nursing and caring for those of unsound mind.

It is absurd to imagine for one moment that such cases as these can be properly treated by persons with no special knowledge of, or experience in, all the details of the moral control that these persons require and we must speak out with no uncertain voice in our condemnation of any attempt to minimise this the most vital part of their treatment. The periodic visits of a consultant are practically useless as regards the supervision of these details, which are of daily, even hourly, importance for the cure of the patient. This of course, we cannot expect physicians, however eminent, to appreciate who have not made a special study of the care and treatment of mental disorders It is the absence of this special knowledge on the part of the hospital physician which will permit him, on the one hand, to give these, the most difficult of all cases to manage, into the care of inexperienced people of limited means, or hospital nurses with no asylum training, who do not know what to do with them, who cannot understand the constant supervision and the unceasing vigilance which they require, who are unable to anticipate a suicidal impulse or an outbreak of homicidal violence, and who will either rush in terror from the room at an outburst of excitement or will resort to the injudicious and unnecessary use of mechanical restraint, or, on the other hand, to give them up to the tender mercies of the keeper of some medical home or nursing institution who has never seen the inside of an asylum and who does not hesitate to send out hospital trained nurses to acute mental cases and untrained domestic servants as trained mental nurses. I am speaking of things of which I have personal knowledge and in my opinion instead of the law being made more elastic with regard to these transparent frauds it should step in and compel every nursing home or institution receiving such cases as these to be placed under some official supervision. If this were done we should hear less of the fatalities which are of such frequent occurrence and which help to fill the columns of the daily press. While, therefore, we advocate the early treatment of cases of incipient insanity without certificates let us endeavour to make sure it will be carried out in such an efficient manner that there shall be no excuse in future for the smuggling away of what are termed "borderland" cases or those deliberate evasions of the law which have been alluded to, and even boasted of, before the members of this law abiding association and which have in so many instances been followed by fatal results

I will now turn to the second section of the subject—I mean the suggested extension of this system of notification for incipient cases so as to make it applicable to chronic certifiable cases of insanity and to those already certified and living in institutions for the insane. This, in my opinion, would be a dangerous innovation. It is sad to reflect that at this time of day we are compelled to reiterate the arguments of our predecessors in this association against the unwisdom of such a retrograde step and that the cruelties of mechanical restraint must again be brought forward to steady eructations the operation of gastro-enterostomy is well worth consideration, especially when in such a case it can be performed with almost no risk, for in the absence of complications such as occur in ulcer and cancer the operation when properly performed by an expert ought to have no mortality.

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[1] A paper read before a general meeting of the Medico-Psychological Association held at the County Asylum, Mickleover, near Derby on Feb 12th, 1903,

15. *Persistent gastralgia.*—Cases must have occurred in the practice of every physician where although the positive signs of ulcer were absent, gastralgia of such intensity has persisted, and in case of temporary relief has recurred so regularly, that the patient is brought to the last stage of exhaustion by an utter inability to take food because of the pain induced by even a mouthful of solid. Some of these cases are doubtless due to simple ulcer, but in others the absence of tenderness in the epigastrium, of rigidity of the recti, of regular vomiting, and of hæmatemesis makes the diagnosis extremely doubtful. Even rectal feeding and absolute rest in bed do not always cure the condition and the patient gradually loses weight and strength and lapses into a state of chronic invalidism without any positive sign of organic disease. After all ordinary means have failed gastro enterostomy is well worthy of consideration, and, as the following case will show, it may lead to excellent results.

CASE 17.—The patient was a single woman, aged 27 years, who was seen at the Leeds Infirmary. She had suffered from pain and indigestion since she was a girl, vomiting occurred at times, though she never brought up blood. The stomach was dilated and tender. Free HCl was found in the contents of the stomach. She had lost weight and weighed now 7 stones 6 pounds. Gastro-enterostomy was performed on March 7th, 1901. No scarring or other signs of ulcer were discovered. Soft solids were allowed at the end of the month. The patient made a good recovery and was able to take food without pain, ultimately she was completely restored to health.

16. In tetany of gastric origin. The prognosis of tetany occurring in gastric dilatation is undoubtedly very serious, and according to some authorities death occurs in nearly 75 per cent of the cases. The largest mortality occurs in cases where the spasm in the extremities is associated with tonic spasms in the head and trunk muscles or with clonic spasm. My own experience of tetany and of the severe muscular spasms in association with gastric dilatation leads me to think that we may possibly take a more hopeful view if the cases be treated surgically at an early period. The following case will serve to illustrate my views.

CASE 18.—A man, aged 34 years was sent to me by his medical attendant in January 1895, with a view to have something done in the Leeds Infirmary to relieve his condition. He had been suffering for five years from pain after the ingestion of food, with attacks of vomiting. Latterly his condition had become aggravated, the pains occurring from half an hour to one hour after each meal and being relieved only by vomiting, so that for the last six months he had had to give up his work as a printer. For some time before coming under my notice there had been very evident peristalsis from left to right in the epigastric region. Throughout the period over which his stomach symptoms extended his bowels had for the most part been very constipated but there were occasional attacks of diarrhœa. During this time he had attacks of what he described as "cramps" in his limbs and especially in his legs. He had lost very considerably in weight, as in December 1892 he weighed 9 stones 7½ pounds. On examination there was found well marked dilatation of the stomach, but the feature of the case which presented most interest in connexion with the present question was the occurrence while under observation of severe tetanic spasms affecting almost all the muscles of the body. So extreme and so widespread were these, the muscles of the trunk and of the cervical region as well as those of the limbs being affected, that on Jan. 17th the question of possible strychnine poisoning was raised. As palliative treatment of the stomach condition gave no relief the stomach was exposed on the 24th and the diagnosis of cicatricial stenosis with hypertrophy of the pylorus was confirmed. Pyloroplasty was performed, a bone bobbin being employed to insure patency of the new pylorus. Recovery was uninterrupted, and although the cramps were present up to the time of operation he never had a threatening of cramp afterwards. On Feb 15th he was able to take a mutton chop for his dinner without inconvenience and by March 2nd (five weeks after the operation) he had gained 8 pounds. Two years after the operation he had quite recovered his strength and was working as usual, his weight then being just over what it was in December, 1892, and quite 2 stones above what it was at the time of the operation. There had been no recurrence of "cramps" or of muscular spasms of any kind. In a letter received at the beginning of 1899 he speaks of some stomach disorder, but he adds "You will please understand that I am a new man to what I was when you saw me last." A recurrence of stenosis necessitated gastro enterostomy, which I performed early in 1902, but it is interesting to note that on this occasion, though he was much wasted and was vomiting every day, there was no return of the tetany. He made a good recovery and is now well and strong again.

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I would suggest that in every case of this kind where stomach lavage has failed, but only then (for the stomach tube is the first indication, no matter at what stage it may be recognised, unless, indeed, the patient be actually dying), the abdomen should be opened and the stomach should be emptied and connected with the jejunum, thus providing for continuous drainage into the intestine. I believe that as yet gastro-enterostomy for acute dilatation has not been put to the test.

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æmoptysis by the hypodermic injection of gelatin involves onstant and careful watching of the patient, such as can be atisfactorily carried out only in hospitals or similar nstitutions For the general practitioner it could be of o use.

This form of treatment has been applied with success in ther varieties of hæmorrhage. For instance, Holtschmidt[2] reated five cases of melæna neonatorum by hypodermic njections of a 2 per cent. solution of gelatin in normal saline olution, 15 cubic centimetres were injected, usually in two laces to avoid tension. The hæmorrhage was checked in ach case after the first or the second injection, and all ive patients recovered. Of the previous 14 cases in the ame clinic which were not treated by gelatin seven were atal.

On account of its many unpleasant complications the above reatment has not been used in Dr. Hettinger s sanatorium or a long time, the older methods being employed previously o the occurrence of the following case

The patient was admitted on March 3rd, 1902, having twice within the previous week brought up large quantities of blood. Hæmoptysis occurred again on the day of admission. On he next day bleeding occurred once more and the patient ost on each occasion about a quarter of a litre (nearly nine ounces) On the 6th there was another hæmoptysis. From this date until the 13th a more or less copious loss of blood occurred nearly every day Now that a fatal termination appeared imminent it was decided to employ gelatin, but in consequence of the strong objections to the hypodermic method the solution was given per rectum. On the 14th there was no hæmoptysis. The sputum was coloured. The rectal injection was repeated. During the next three days only traces of blood were seen in the sputum. The gelatin treatment was continued until the 17th when the sputum was free from colour. From this time forward the patient had no return of hæmoptysis

Encouraged by this success the treatment was applied in the same manner to four other patients during the months of April and May and was always attended by the same favourable result In one case in which the hæmoptysis was of comparatively slight degree two injections a day were sufficient to free the sputum from any trace of blood, but it was the rule to give three injections per diem. In all the other cases the sputum was clear of blood within four or five days of the first injection Since May 15 more cases have been treated at the sanatorium in a like manner, and in each case with unqualified success Slight cases in which a small quantity of blood was brought up on only one occasion did not receive this treatment. Others who have tried this method report equally good results

In contradistinction to the hypodermic injection the method here described is quite painless. Further, every danger of infection is avoided Also no raising of the temperature is produced and of course, there is no necrosis. In short, the rectal injection of gelatin solution is unattended by any disturbing complication and it has the same effect in stopping hæmorrhage as has the subcutaneous injection. A strong point in favour of this method is that it can easily be carried out in general practice. The gelatin can be obtained from a druggist or from a restaurant and the only apparatus necessary is a jug holding about two and a half pints and an indiarubber tube with a blunt nozzle The nozzle can be held in the rectum by the patient himself while the nurse holds the vessel containing the solution at a height of about two or three feet so that the solution flows into the rectum at a very moderate pressure When the hæmorrhage has been completely stopped the patient must be kept quiet in bed for several days on a light diet. It may here be mentioned that the injection does not cause any action of the bowels.

The solution is prepared in the following manner 50 grammes (about one and three quarter ounces) of gelatin are dissolved in one and a quarter litres (two pints three and three-quarter ounces) of boiling water and boiled very gently for one hour when the volume is reduced by evaporation to one litre The solution is then cooled down to the body temperature and a quarter of a litre (nearly nine ounces) is slowly passed into the rectum from an ordinary irrigator in the manner described above. The injection is given three times a day until the sputum ceases to show any trace of blood.

Nordrach Schwarzwald.

THE USES OF X RAYS IN OPHTHALMIC SURGERY[1]

BY M. S MAYOU, F.R.C.S. ENG.,
CHIEF CLINICAL ASSISTANT TO THE ROYAL EYE HOSPITAL, SOUTHWARK.

I HAVE to thank you for the honour you have conferred on me in asking me to read a paper before this society to-night I accepted, as I hope that I may be able to show in some small degree how this comparatively new science may be far reaching in its extent, even in this one branch of medical science—ophthalmic surgery My experience has extended over the last 18 months, during which time I have daily undertaken the treatment and investigation of cases, and I have to thank Mr L. V Cargill, Dr F H. Low, Dr O F Grünbaum, and others for their kindness in sending me cases and for their opinion on these cases during and after the treatment. The whole question is too large to deal with to-night and I propose to select the following subjects from it (1) the localisation and treatment of metallic foreign bodies in the globe, (2) rodent ulcer of the eyelids—the pathology of the cure, and (3) the treatment of trachoma—granular ophthalmia.

1 *Foreign bodies in the globe*—It is not out of place to repeat how invaluable these methods of radiography and localisation are to ophthalmic surgery and the great boon that Mackenzie Davidson has conferred on us During the last year I have had sent to me from the Royal Eye Hospital, the Seamen's Hospital, and King's College Hospital 16 cases of supposed foreign bodies in the globe, of these, 13 were found and localised, two eyes contained no foreign body, and one was missed about which I wish to speak later Of the 13 all were verified and found to be accurate. The method adopted was as follows In recent cases and cases where there was much photophobia a wire stitch was fixed in the conjunctiva directly below the centre of the corneal margin, the eye having been first cocainised, but in cases where there was no photophobia a piece of fine wire was fixed over the lower lid and kept in position by the lashes and the patient was directed to gaze at some object so as to bring the corneal margin in contact with the summit of the loop.

The head was fixed in a Mackenzie-Davidson head rest, taking care that the cross wire did not fall across the orbit I wish to emphasise this point, as it was due to this occurring that the case mentioned above was missed, the shadow of the foreign body, which measured barely a millimetre, falling across the shadow of the wire and being obscured by it It was subsequently extracted in the lens, which had become opaque, so no harm followed. Two separate photographs are taken, as they are liable to render the images indistinct when taken on the same plate This is done twice over as I have seen a foreign body missed in two successive photographs owing to the patient moving his eye and making the image of the foreign body which was a very small one, indistinct. Half a minute s exposure is generally sufficient The method of subsequent localisation is worked out on a drawing board, it is cheap, efficient, and takes practically no more time than other methods. Having found the relation of the foreign body to the cross wire and to the wire on the lid, the next thing to do is to mark it on an eye drawn to scale, such as can be found in Quain s *Anatomy* and observe its relation to the various structures of the globe. The shape of the foreign body is determined by using some form of stereoscope and the one I find most convenient is a modification of Wheatstone's which I have had made to take negatives, it can be used at once after developing the negative as immediate extraction of the foreign body is of the utmost importance.

The size of the foreign body should be very carefully measured, as the size of the incision for its removal must be regulated by it. I cannot emphasise too much the importance of immediate localisation and removal of foreign bodies as (1) they are said to be the most fertile source of sympathetic ophthalmia, (2) they are more likely to give rise to suppuration if left, and (3) if left for a day or two they become rapidly encapsuled and often defy extraction with the electro-magnet. In two of the cases I have mentioned, the minds of well-meaning but ill-informed philanthropists and to bring into bold relief the danger of giving a free hand to those impecunious persons who bombard us with applications for the care of this class of patient. One of these individuals who was anxious to obtain the care of such a one endeavoured to impress upon me that blindness and being crippled would not matter. I presume if the unfortunate patient was blind he could not see and criticise his food and surroundings, and if crippled he could not escape and would require less expensive supervision.

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[2] Münchener Medicinische Wochenschrift Jan. 7th.

[1] A paper read before the Roentgen Society on Dec. 4th 1902.

It has been suggested that the relatives of many certified patients should take them out of asylums because they are not dangerous to themselves and others and that they could undertake the care of such cases as well as, or even better than, they could be cared for in an asylum without the "stigma" attaching to them of being certified lunatics. This to my mind is mere sentiment; nothing can alter the fact that the patients are insane whether they are certified or notified and, whether the fastidious friends like it or not, the fact remains. My experience through a long series of years spent among the insane is that more downright cruelty and neglect are often inflicted upon such patients by friends and relatives owing to their ignorance and incompetence, and through judgment giving way to feeling than are possible under the splendidly humane treatment of such cases in our institutions for the insane, private as well as public, which are a credit and an honour to our country.

In support of this statement permit me to give you an account of a case which came under my notice a short time ago. [Dr. Wood here gave details of the case and continued.]

I confess to being somewhat shocked at such a condition of things occurring in the closing months of 1902. But these are the evasions of the law which we must expect to increase and to multiply if the law is made "more elastic" with regard to cases of certifiable insanity without adequate official supervision. I do not wish to weary you with a recapitulation of further instances of the inhumanity of ignorance which are only too well known to us, but I venture to say that if the supervision of the certifiable insane in single care by the Commissioners in Lunacy is in any way relaxed we shall soon have a recrudescence of those scandals which brought on to the statute-book the Lunacy Law as it now stands. No perfunctory visitations of the physician can prevent them. Only within the last month I had three applicants for the post of nurse to a mental case and in view of the question which I have raised of asylum trained nurses being so necessary for the care of mental cases permit me to describe to you the kind of persons these three applicants were. [Here Dr. Wood gave details of his interviews with would-be mental nurses.] Then there is a further view of the subject which the following incident illustrates and it is a pretty example of another method of evading the law. [Details were here given.] We have arrived at a serious state of thing if consultants, either unable or unwilling to recognise a case of acute mania, can bring themselves to call it "hysteria" in order that they may pander to the pride and prejudice of fastidious relatives who look upon this one of the most affecting disorders that can afflict a fellow creature, as a crime or something to be ashamed of. Is it not rather the duty of a consultant to support the medical practitioner in his endeavour to induce the relatives of the sufferer to take a sane view of her malady and to do their best for her rather than to hand her over to such untrained and unreliable people as I have described to be "policemaned" as a case of "hysteria"?

They who have spent their lives in endeavouring to ameliorate the condition of the insane must not stand by without protest and allow a reversion to those methods of barbarism which would be bound to follow any relaxation of the law without something more to protect the unfortunate patients than the mere visits of a physician who may have no special knowledge of the care and treatment which they require. Above all, we must be satisfied that those who are allowed to take charge of insane patients are properly trained and competent to do justice to their charge.

The point upon which the whole question hangs is that of adequate supervision. It is a very simple one. The Commissioners in Lunacy have all the facts in their possession. There is no need for any commission of inquiry about Laws. We know quite enough about them with local expert representatives of the Lunacy Board in centres of the population will, in my opinion, meet every requirement. By these means the vagaries of those who take charge of cases of doubtful or confirmed insanity will be held in check, and the friends and relatives will be controlled and guided by the firm but kindly supervision of trained experts who are qualified by long experience to guide and to direct them in the right way.

Margaret-street, W.

THE
GELATIN TREATMENT OF HÆMOPTYSIS.

BY H. M. TICKELL, M.A., M.D., B.C. CANTAB.

IT must be admitted that the usual methods of treating hæmoptysis have not by any means attained that degree of efficiency which this distressing and dangerous complication of pulmonary tuberculosis demands, and that an agent capable of acting with greater certainty than those in common use will be cordially welcomed by the medical profession. Of the old drugs, morphia is the most highly recommended, and doubtless, when injected hypodermically, it exercises a favourable influence by relieving mental distress, allaying cough, and quieting the action of the heart, and by these means promoting coagulation in the smaller vessels. But, on the other hand, there are some cases in which morphia increases the tendency to asphyxia by retarding the expulsion of blood from the bronchi and this is a danger always to be borne in mind. The treatment by morphia, moreover, gives no security for the final arrest of the hæmorrhage, and in the severer degrees of hæmoptysis it fails us entirely.

In the treatment by means of the rectal injection of the solution of gelatin presently to be described we have a method of checking hæmoptysis which promises exceedingly well, and one which is free from the drawbacks of morphia. In the *Aerztliche Mittheilungen* of Sept. 17th, 1902, appeared an article on the Gelatin Treatment of Hæmoptysis by Dr. Jungmann, assistant to Dr. Hettinger of Nordrach, and I am indebted to the author for much valuable information on the subject.

First, let us consider the treatment by hypodermic injections of the gelatin solution. This method has been used in France and Germany with brilliant results as regards the checking of hæmorrhage, but unfortunately it is associated with a series of unpleasant effects which at times are of such a nature as seriously to call in question the utility of the proceeding. In the first place the injection is accompanied with severe pain which is due not so much to the puncture of the skin as to the distension of the tissues by the solution. Even if a local anæsthetic be employed the pains usually supervene shortly after the operation and may persist for two or three hours, and when the operation has to be repeated several times on successive days the painfulness of the procedure becomes a matter of serious consideration. Again, not infrequently necrosis of the skin occurs as a consequence of the injection, so that the patient has to remain a long time in bed—a most unfortunate circumstance from the point of view of open-air treatment. In some cases tetanus has been observed to ensue. Levy and Bruns[1] examined six samples of gelatin and found tetanus spores in four of them. It is, therefore, necessary to sterilise the gelatin before use. The question as to whether prolonged boiling destroys the value of gelatin as a hæmostatic may, according to experience in Dr. Hettinger's sanatorium, be answered in the negative.

The most disagreeable effect of the hypodermic injection of gelatin undoubtedly consists in the raising of the body temperature. As reported from Brehmer's Institute in Gorbersdorf, one patient treated with the gelatin injections on five successive evenings had a temperature of from 40.3° to 40.7° C. (104.5° to 105.2° F.). The subsidence of the fever is irregular, but it may persist for 10 or 14 days and thus increase the debilitation of the patient.

All these observations show that the treatment of disease, if such organism be present. Taking the first of these, the method we adopt very commonly is the application of copper sulphate or some mild caustic. At each application we destroy the epithelium of the conjunctiva on which we rub it, and although we cure the trachoma an excessive amount of scar tissue is left, causing entropion and other deformities of the lid. As regards rolling brushing, and other operations, they have the additional advantage of removing the actual diseased tissue, but it is generally recognised that they are only suitable for certain cases and that even in these cases the cure is not generally complete unless they are followed by some form of caustic to keep up the irritation set up by the operation.

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[1] Deutsche Medicinische Wochenschrift, Feb. 20th, 1902.

In the x rays we have a method of setting up a leucocytosis with the absolute minimum of destruction to epithelial and other tissues, and further we have a means of producing an inflammation from a very slight leucocytosis to an actual gangrene of the part which with due care and experience we have under almost perfect control. Not knowing the organism which causes trachoma we cannot say whether the irritants which are used in its treatment, or the x rays, have any effect on it. But we have in the x rays a method of producing leucocytosis in any degree of severity from that following a mild application of perchloride of mercury up to that induced by jequirity, and, further, this leucocytosis is much more prolonged than that in any method previously adopted and the destruction is not nearly so great. Although granules disappear very rapidly under the x rays operative methods, which have the additional advantage of removing the diseased tissue, must be preferable to some extent except that the patient has to undergo an operation, but such operations can be followed by the x rays to complete the work in preference to one of the other irritants now in use. Operation, however, should never follow x ray treatment without a considerable interval.

At the beginning of 1902 I showed before the Ophthalmological Society a case of trachoma which had been treated by the x rays and which, so far as I know, was the first of its kind. The method adopted was to cover the whole face, with the exception of the affected eye, with a metal mask. (Since then I have discarded the mask altogether, as now I never expose the patient sufficiently to get any reaction at all in the skin.) The upper lid was then everted and the lower lid was pushed up so as to cover as much of the cornea as possible, but in bad cases of pannus the cornea is left exposed. I have never had any trouble with the globe following x ray treatment, and in a case of rodent ulcer of the lid in which this treatment was used for six months and which I showed at the same society last June there were no signs of retinal, corneal, or other trouble, with the exception of conjunctivitis, and the patient's vision remained the same ([illegible]) throughout the treatment. The patient is seated about nine inches from the anode with a moderately soft tube and a current of six ampères Two minutes exposure is given for from four to six successive days, depending on the case. If there be much injection or the case be an acute one four are generally sufficient. A week's rest is then given and if no reaction is set up the patient is exposed twice a week until there is a slight increase in the photophobia, which shows that he is beginning to react. About this time the granules begin to disappear from the lids. Exposures once, twice, or three times a week are carried out until they disappear entirely When once the granules have disappeared all treatment must be stopped, as it requires some weeks for the infiltration set up by the x rays to settle down and it is difficult to tell whether the disease is absolutely eradicated as the lid remains injected for some time after treatment has ceased The final result to the lid is most satisfactory Instead of the white puckered conjunctiva gained by other methods a supple, non contracted, non scarred conjunctiva, with no obliteration of the fornices unless they are already gone before treatment, is produced, similar to the soft, supple scar in the skin following this form of treatment in rodent ulcer, as compared with the dense cicatrix of excision.

As regards the effect on pannus, it often clears with great rapidity, especially if recent, and it is the common thing for patients to say that they see more clearly from almost the first exposure. But even dense corneal opacity will often clear considerably and in one case of extensive destruction and cicatrisation of the cornea, in which at the commencement of treatment the patient could only see shadows, in two months she could count fingers three feet away Another peculiar point is the amount of exposure required by different patients. Sometimes the granules begin to disappear from almost the first exposure, others require eight or ten exposures before showing signs of reaction.

With regard to the cases suitable for treatment the most satisfactory are the chronic cases, and of course the earlier they seek treatment the more rapid and satisfactory is the result. These patients will stand more frequent exposure than any others, acute diffuse infiltrations with thickening of the lids and much photophobia require more careful exposures extending over a much longer period. Old-standing cases in which the lid trouble has almost disappeared, but in which there is much opacity of the cornea, will often improve considerably under exposures of long intervals after the first reaction, which should be mild. The chief advantages of this treatment are (1) there is considerably less deformity in the lid after treatment, (2) it is practically painless treatment, and (3) pannus clears more thoroughly It is eminently suitable for hospital patients who cannot attend daily for the other methods of treatment to be carried out In the first cases the patients were troubled with some falling out of the lashes and conjunctivitis *In no other case out of some 15 has there been similar trouble.*

Weymouth-street W

THE TREATMENT OF EPILEPTICS

BY FLETCHER BEACH, M.B F R.C.P LOND,

PHYSICIAN TO THE WEST END HOSPITAL FOR NERVOUS DISEASES EPILEPSY AND PARALYSIS PHYSICIAN TO THE CHALFONT COLONY FOR EPILEPTICS

As I had no opportunity, owing to want of time, to join in the discussion on Dr J S Risien Russell's and Sir Victor Horsley's admirable papers on the Treatment of Epileptics which were read before the Medical Society of London on Feb 9th,[1] I take the occasion to make some observations on the subject in the columns of THE LANCET

Among the causes of epilepsy described by Dr Russell and Sir Victor Horsley no mention was made of errors of refraction, which my colleague Mr Work Dodd in a paper in the sixteenth volume of *Brain*, showed might be a cause of epilepsy He examined 100 consecutive cases of this affection and found that by correcting the errors of refraction, in combination with other treatment, 49 were cured or relieved. I think that this is a point which is worthy of attention by the medical profession. I am in agreement with Dr Russell and Dr C E. Beevor that a toxic cause of epilepsy has not yet been proved, though I admit that when bromism has been produced great benefit will be derived by the use of hot baths, internal antiseptics, and saline enemas. In most cases there is neurotic inheritance and an exciting cause is only necessary to produce a fit. This is an indication that all exciting causes, such as indigestion, constipation, the use of alcohol, irregular meals, late hours, the presence of worms, &c, should be removed as much as possible I am in favour of limiting the amount of meat to be consumed by the patient, and in some cases of omitting it altogether, certainly at the commencement of the treatment, for I have noticed in cases in which much meat is eaten that there is great difficulty in reducing the number of fits I believe that what may be called the home treatment of epilepsy is of importance. The patient should lead a quiet life, free from excitement, and should be subjected to cold baths or cold sponging daily Outdoor exercise and a moderate degree of mental work are necessary and care should be taken to place the patient in such circumstances as will promote his welfare and recovery It is necessary that he should be careful, prudent, and temperate in all things. Children who are the offspring of a neurotic family require to be brought up carefully, and later should be put into some occupation in which they will be free from excitement and worry, such as the Civil Service, in which the work is light and the hours of employment are not long

With reference to the treatment by drugs, I am in favour of giving large doses of the bromide and I prefer the combination of ammonium, sodium, and potassium. If for any although the magnet was literally applied to the foreign body which was in the lens, it could not be withdrawn, and out of seven recent cases in which the foreign body was in the vitreous and had penetrated the lens only one eye was saved, this foreign body had been in the eye only four hours In cases in which foreign bodies have been in the eye some time, although they are generally small and aseptic, the prognosis as regards extraction is not good, as they become encapsuled, which may lead subsequently to siderosis, &c., unless situated in the lens, when they can be extracted with that body with good result

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[1] THE LANCET Feb 14th, 1903, p. 439

In operating for these foreign bodies the best method, except in a few cases when the foreign body is in the lens, is to use a small electro magnet. I must say here that I have not seen the large magnet used very much, but it always seems to me that the traction of a foreign body through the globe regardless of structures is a most unscientific procedure, causing vast injury to the intra ocular contents. I have seen more than one case in my limited experience in which the eye would have been destroyed if this method had been adopted, and although I have read Mr A. F MacCallan's valuable paper on the subject I still think that the Haab's magnet should only be used after failure of the small one The incision in the globe must be large enough to admit the magnet and to allow the foreign body to come out, and the magnet is applied, if possible, to the narrowest diameter of the foreign body When the foreign body is lying in the vitreous I think equatorial incisions are preferable to radial, as they are more easily held apart and do not go so near the ciliary body No stitches are necessary in the sclera and it is better if possible to cover the wound with conjunctiva and muscle by turning them back in a flap before incising the globe and having the sutures in readiness for immediate closure of the wound, after the method which, I believe, was first introduced by Mr Cargill

Going once more over the salient points as regards the method of localisation (1) immediate localisation to be repeated if the foreign body be not found, (2) the use of separate plates, (3) care to be taken not to let the cross wires fall within the shadow of the orbit, (4) localisation and estimation of size, and (5) the use of the stereoscope for the estimation of the shape, preferably one made for negatives, as it saves time

The points to be determined by the x rays before operating are (1) the size and shape of the foreign body, (2) the situation with regard to the intra ocular contents, and (3) the position of the foreign body with regard to the wound to be made in the globe for its extraction or with regard to the entrance wound.

Prognosis is influenced, apart from points defined by the x rays, by the following considerations (1) the nature of the case—i e, recent or old standing, (2) the condition and size of the foreign body on entrance, (3) the situation and size of the entrance wound, and (4) injury to the intra ocular contents

2 *Rodent ulcer of the eyelids* —The eyelids are a common site for rodent ulcer, especially the lower, and, like rodent ulcers in other situations, can be cured by the application of the x rays. I do not propose to night to speak much of the methods of exposure, but of the pathology of the cure and some of the changes found in the tissues. When the x rays are applied to healthy living tissues the most noticeable effect is an acute inflammation in the part, which does not extend deeply into the tissues but is quite superficial. The peculiarity of this inflammation is that it does not reach its full height until some time after the exposure, say in from one to three weeks. This inflammation is greatly increased and more rapidly brought about by simultaneously applying irritants. This point I want to emphasise and to illustrate by one or two cases, as I think it is not generally noted. A man was sent to me to be x rayed for a superficial epithelioma of the hand. After about two weeks' exposure it was thought to be increasing in size, so a local excision of the growth was performed. So much sloughing occurred that the arm had to be amputated above the elbow Some time ago I had rather a severe x ray burn on my hand and I found that the least irritation, such as washing my hand, caused it to become hot, painful, and bright red, and after assisting at an operation and putting my hands in 1 in 20 carbolic acid solution extensive sloughing of the skin followed This observation led me to use 1 in 20 carbolic acid solution for dressing rodent ulcers in the early stages of x ray treatment whenever possible, and this I find has the double advantage of keeping them aseptic and of accelerating primary reaction

This susceptibility to irritants can be largely accounted for by the vaso-motor paralysis which occurs in an inflamed part and which when more irritation is applied, leads to greater dilatation of the vessels. This dilatation of the vessels seems to be permanent at the seat of the most acute inflammation, for if a part be examined after recovery from an x ray burn dilated vessels can be seen all over the area. This increased susceptibility to irritants is a most important factor in the healing of rodent ulcer, for I think it is largely due to the irritation produced by the rodent cells on the surrounding tissues that the x rays have such a wonderful effect. Otherwise, why should the new growth disintegrate and not the surrounding tissue?

By the application of the x rays to a part we can produce an inflammation leading to anything from a mild leucocytosis to an actual gangrene. This is brought about I think in exactly the same way as an inflammation is produced by other forms of stimuli and is most severe at the point first struck—i.e, the superficial tissues. All evidence tends to show that this form of energy does not penetrate deeply and is probably not produced by the rays which penetrate the body

In rodent ulcer the tissues are invaded by a new growth which sets up a slight inflammation, and this in all probability is nature's method of trying to rid herself of the disease At the same time the growth is dependent on the underlying tissues for its nutrition Now if we excite an acute inflammation the part furthest from the sources of nutrition dies and will come away as a slough This will therefore account for the disappearance of the large masses of nodular growth which so rapidly subside under treatment. But if a section of rodent ulcer be examined we find lying under apparently healthy skin cells of the growth. Now how is it that these cells disappear also, as they obviously cannot be thrown off as sloughs? If a section of rodent ulcer after it has just begun to react to the x rays be examined we find that the clumps of epithelial cells which make up the growth are surrounded with enormous numbers of leucocytes It is the duty of these leucocytes to remove all irritating substances from the part by breaking them up and carrying them away, or, failing that, to encapsule them with fibrous tissue, shut off their nutrition, and so prevent their spread. In a section of rodent ulcer which has nearly healed we find a mass of granulation tissue organising, with healthy epithelium growing in from the edge, scattered here and there amongst the infiltration leucocytes are epithelial cells of the growth in various stages of degeneration The degeneration seems to take place from without inwards towards the centre of the clumps of epithelial cells, which become vacuolated, and the granules in the cells multiply and collect around the cell wall, seem in places to be making their way through it, and finally disappear The nuclei do not as a rule proliferate although there are some large cells with multiple nuclei to be seen which are probably derived from the stroma. The chromatin ceases gradually to take up the stain until nothing but the cell wall remains which is apparently removed by the leucocytes In treating a rodent ulcer I find it most useful to remove portions of the growth from time to time to see if there are any active cells of the growth present and if they have all disappeared to cease treatment.

3. *The treatment of trachoma by the x rays* —In treating any disease it is almost essential that we should first know its exact pathology Although a great deal of work has been done in the pathology of trachoma we are not yet absolutely sure that the exact causative factor has been discovered and therefore cannot be sure that any treatment adopted is the best possible In trachoma we have a disease which is very closely allied to lupus in many respects in that it is characterised by the formation of nodules or infiltrations consisting of masses of round cells, and there is every evidence that the disease is probably due to some organism closely allied to the tubercle bacillus.

At the present time trachoma is cured by applying some form of irritant to the lid, either by chemical means, such as copper sulphate, corrosive sublimate, or jequirity, or mechanically by rolling, brushing, or other operative methods. These irritants must act in one of two ways either (1) simply by the reaction they set up, partly by causing a leucocytosis and subsequent cicatrisation of the nodules, and partly by mechanically removing the diseased tissues, or (2) by direct action on the organism causing the

FIG 1

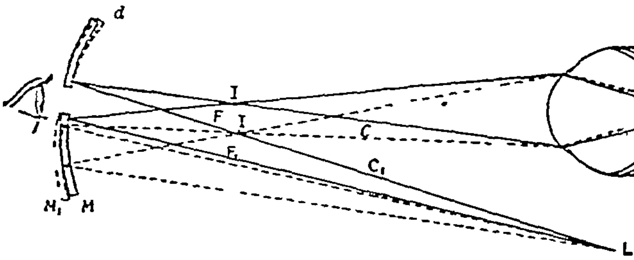


FIG. 2.

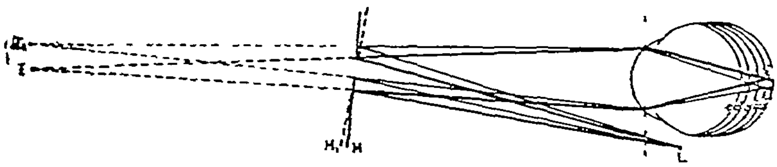


FIG. 3

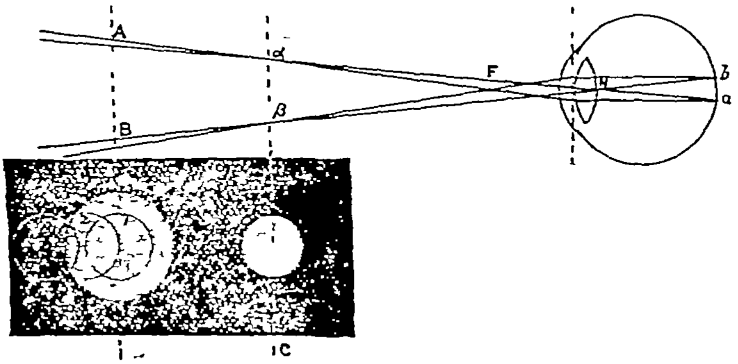


FIG. 4

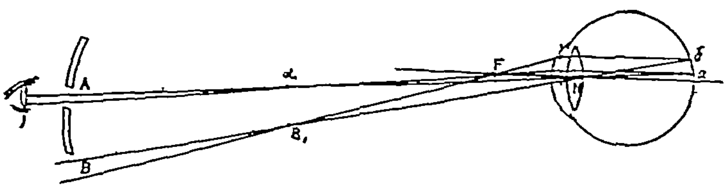


FIG 5.

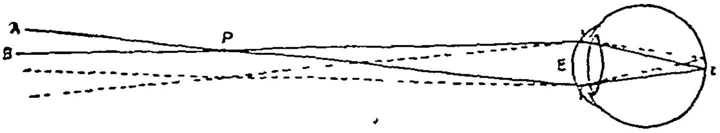
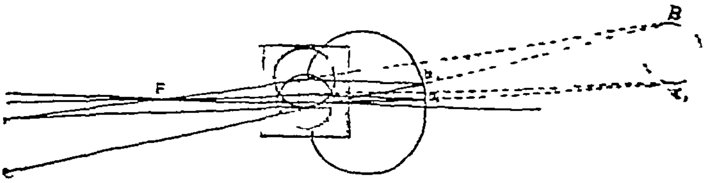


FIG 6



P, coincides with the focus of the mirror. On account of this coincidence there is formed on the retina of the observed eye an exact and well defined image, *i*, of F (which in its turn is an image of L, Fig 1) Hence the rays emerge from the image in the eye along the same path as they entered, P and *i* being conjugate foci

The shape of the emergent beam is shown in Fig 5, and it is seen that the cone is very narrow in section and may even all be included in the sight-hole of the mirror The illumination is a maximum and a *very slight* movement of the mirror is enough to send the cone right off the sight-hole, as shown by the dotted lines, and so the edge of the shadow is difficult to observe (be it noted that a reflected ray moves at *twice* the angular rate of the mirror)

Now since we have assumed the distance P E to be one metre, it is obvious that a − 1 D lens, placed in front of the eye would remove the far-point to infinity—in other words, render the rays parallel. Hence this is a case of myopia 1 D, and it may be regarded as the limiting case between movement *with* and movement *against*.

(*b*) 2. *Myopia of less than* 1 D, in which the remote point lies further away than P, is not often met with in practice, as so little inconvenience is experienced that it is hardly worth correcting being actually a real convenience for close work like reading &c, and cannot be accurately gauged by the method of retinoscopy, as the movements of the shadow are difficult to observe, for the same reasons as before. Such cases must be settled at the test-types

(*c*) *Emmetropia.*—In this case the diffusion-circle of illumination is very small (see Fig 1) and is situated at the principal focus of the eye, so that the emergent beam consists of bundles of parallel rays coming from points of light in the circle. The section of this beam is nearly the same at every point and is of about the size of the patient's pupil The illumination, as seen by the observer, is bright, but the shadow movement, which is "against," is not easy to detect for reasons already given.

(*d*) *Low hypermetropia*—Rays from any point of light in the circle of illumination continue to be divergent after passing out of the eye and so never cross as in case *a* (myopia), but their directions, if produced backwards, do meet and form a virtual image of the point behind the eye This is shown in Fig 6 and is the reason why the shadow moves against instead of with.

$\alpha\ \beta$ is a virtual image of $a\ b$ As in all the other cases when the mirror is tilted down $a\ b$ goes up and, therefore, also $\alpha\ \beta$. In Fig 6, $a_1\ b_1$ is the new position of $a\ b$ and $\alpha_1\ \beta_1$ of $\alpha\ \beta$. This is movement against. The appearance seen is represented by the shaded projection, where the lower circle represents the pupil, and the upper the virtual image $\alpha_1\ \beta_1$

(*e*) *High hypermetropia.*—In this case the diffusion-circle of illumination is larger and the emergent rays are more divergent than in *d* Hence, also the virtual image $\alpha\ \beta$ is larger and, therefore, not so bright and being larger the shadow is more crescentic.

Wimpole-street, W

reason this combination is not desirable and only one salt is required, I give the bromide of ammonium as it is not so depressing as the bromide of potassium In this statement I think I am in agreement with Dr Beevor In some cases I have found a combination of antipyrin with the bromide useful. The use of this drug for this purpose was brought to my notice by my colleague, Dr A. de Watteville, some time ago and I prescribe it in doses of five grains three times daily for children and ten grains three times daily for adults. I have noticed that in many cases where the bromide alone has not produced much result so far as the lessening of the fits is concerned the addition of antipyrin has proved useful, and this result is no doubt due to its analgesic properties. In cases where the fits occur at night only I direct the patient to take just before going to bed or to be given a double dose of the bromide if the fits be infrequent and to take a large dose only at night if a great number of fits occur It will often be useful to give a large dose of the bromide at night in the cases of clerks and workmen who are apt to forget to take the medicine during the day, whereas if it is given at night this forgetfulness is not so likely to occur If the fits come on in the early morning a large dose should be given before the patient gets up and he should remain in bed for at least an hour after the dose is taken if possible. With regard to the reduction of chlorides in the diet to make the patient more sensitive to the use of bromides, although a less quantity of the bromide is necessary for daily administration, it appears to me that this plan has not sufficient evidence in its favour to warrant its use in the treatment of epilepsy, and in any case it cannot be continued for a long time in consequence of its interference with nutrition. As to the length of time during which the bromide should be administered, I am in favour of giving it for two years after the last fit in ordinary cases, and for three years in a few cases where circumstances render it necessary During the time that the bromide is being taken by the patient it will be well to give iron tonics and cod liver oil to maintain the nutrition. The bowels should be kept well open and occasionally high rectal saline douches should be given

As to the treatment in colonies, which was only briefly touched upon experience has shown that the result is most gratifying In many cases the colonist has lived in a town and removal to the country has a good effect, because it is known that life in the open air is very necessary for epileptics. The general health is improved, the fits are diminished, and the colonists help to furnish a variety of food which is desirable in the treatment of the affection Employment is particularly necessary, not only because it gives the colonist no time to brood over his malady, but because farm and garden pursuits bring him into the sunshine, fresh air, and other surroundings which inspire him with mental activity and hopefulness. As far as the colonial treatment of children is concerned, wherever it has been tried it has been followed with good results A recent Act of Parliament, the Elementary Education (Defective and Epileptic Children) Act, has so far interfered with the treatment of epileptic children in colonies in England, but it is hoped that this Act will soon be modified and permit epileptic children to benefit by the treatment which is so necessary for them

In the above remarks I have not attempted to give a full account of the treatment of epilepsy but only to make some observations which have occurred to me and which I could not state at the meeting after the papers of Dr Russell and Sir Victor Horsley were read.

Wimpole-street W

ROYAL INSTITUTION — The Friday evening discourse at the Royal Institution on Feb 20th was delivered by Principal E. H. Griffiths of the University College of South Wales and Monmouthshire. The subject of the discourse was the Measurement of Energy with special reference to the mechanical equivalent of heat. Joule's original determination was that 772 foot-pounds of work were equivalent to the heat required for raising the temperature of a pound of water by 1° F Referred to the centigrade thermometer and to the units of the metric system this expression becomes $4\ 156 \times 10^7$ ergs per gramme-degree. Later experiments have shown that this estimate is somewhat too low and that the number of ergs per gramme-degree centigrade is more correctly stated as $10^7 \times 4\ 185$ or 4 186. Professor H L. Callendar's apparatus for performing the experiment was exhibited in action.

THE THEORY OF RETINOSCOPY

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As the theory of retinoscopy is very inadequately dealt with in the text-books the following, which is a complete account of its optical principles as worked out on Frost's artificial eye, may prove interesting to readers of THE LANCET

Let L be the source of light and M a concave mirror, with its centre of curvature at C, and focus at F about 20 centimetres from M. There will be an image of L formed at I, a little above and to the right of F (see Fig 1). Let i represent the image formed on the retina b, then it follows that retinæ in other positions, as a, c, d, e, will have diffusion circles of light formed upon them.

If I be the far point of the eye, then it is one of low myopia, I being distant about one metre, and the position of the retina will be that of b In the other cases represented—a, high myopia, c, emmetropia, d, low hypermetropia, and e, high hypermetropia—diffusion circles are formed proportional in size to the amount of ametropia.

When the mirror is tilted downwards (into the dotted position M_1), I goes to I_1, and i goes to i_1—i.e., against the mirror Also, all the aforesaid diffusion circles go the same way—*against*.

If M be the position of the mirror (plane), then an image (virtual) of L is formed at I (as far behind M as L is in front) and an image (real) of I is formed at i on the retina b, diffusion circles being formed on retinæ in other positions, as a, c, d, e (see Fig 2) When the mirror is rotated downwards to the position M_1, then I goes to I_1 and i goes to i_1—i.e , downwards—and the diffusion circles go the same way This is just the opposite of what takes place with a concave mirror (see Fig 1) b is the retina of a low myopic eye, the far point of which is at I

Now, having seen how the retina in the observed eye receives its illumination and that this always moves *against* the concave mirror, let us omit from subsequent diagrams all the rays concerned in the formation of this illuminated area and consider only those which leave the retina, pass through the lens, and enter the eye of the observer, and we shall take the five cases mentioned and consider each separately

(*a*) *High myopia* —Here we have a diffusion circle, $a\ b$, upon the retina, because it is further back than the focal plane of the refracting media of the eye, the rays having crossed at i (Fig 1) and an image of this circle is formed in the air at $\alpha\ \beta$, as shown in Fig 3 the construction being to draw a ray through the nodal point undeviated and another parallel to the axis, and refracted at the principal plane through the anterior focal point F Such rays cross at $\alpha\ \beta$ and here is formed a real aerial image of $a\ b$ Since the observer is accommodated for the pupil and not for the image its edge appears ill-defined, as shown in the figure

Suppose now, by a downward tilt of the mirror, $a\ b$ is made to go to $a_1\ b_1$ (Fig 4) then the emergent cone of rays, A F B and the image $\alpha_1\ \beta_1$, go downwards—i e., sweep across the front of the mirror—and presently the more or less ill defined edge of the cone sweeps across the sight-hole and, when it is just passing, the eye behind the hole sees the light disappear downwards, followed by the concave edge of the shadow, and the field of vision—i.e , the observed pupil—at different stages of the sweep is represented by the circles 1, 2, and 3 in Fig 3 Owing to the largeness of the diffusion circle, $a\ b$, the illumination is seen to be somewhat feeble and the shadow is not very wide.

(*b*) *Low myopia.*—Here the cone of rays is not so divergent, for as we approach emmetropia they become more and more nearly parallel, the section of the cone is smaller, the illumination is brighter, and the edge of it is more curved than before and the width of the shadow is greater

(*b*) 1. *Particular case of low myopia* in which the far point, behind the sternum, accompanied by a slight cough but by no pain. This soon passed off, its occurrence being completely forgotten. Early in the following January he had a somewhat severe attack of "influenza," followed shortly afterwards by a relapse both attacks being accompanied by severe coughing and a slight amount of expectoration of thick yellowish muco-purulent material. During the relapse he suddenly developed aphonia for several days, preceded by slight huskiness of the voice, but unaccompanied by any pain. The cough and slight muco-purulent expectoration, however, continued and in March, 1902, he had an attack of dry pleurisy over the outer aspect of the left lower lobe. On recovering from this he went to the country in the hope of hastening convalescence, but while there he was much troubled by severe attacks of coughing The cough was dry and hard and expectoration was very scanty, but later it became somewhat more abundant It was especially troublesome at night, often awakening the patient from sleep and was accompanied by a feeling of irritation behind the upper part of the sternum. He also noticed that these attacks of coughing were brought on by the act of stooping, and on these occasions he sometimes brought up a considerable quantity of thin whitish sputum. In July and August he went for a six weeks sea voyage and improved considerably in general health, the cough and thick muco-purulent expectoration, however, continuing unabated. These symptoms remained unchanged until Friday, Jan. 30th, 1903, when he had a sudden hæmoptysis while walking along the street, preceded by some coughing He remained in bed during Saturday and Sunday and on Monday morning he again went out, but owing to a recurrence of the hæmoptysis had to return home. Shortly afterwards, while lying quietly in bed, he felt a "sort of obstruction" in the chest and coughed up a large mouthful of bright red clotted blood. In this he felt something hard which on examination proved to be the fang of an upper molar tooth with a large cavity at its upper end, the edges of which were so sharp and ragged that it must have caused considerable damage to the tissues in which it had lain imbedded for over a year I saw the patient last October for my father, Dr George Dickson, Edinburgh, and neither of us for a moment suspected that the case was other than one of early phthisis, the patient at that time dating the commencement of his illness from the attacks of influenza in January, 1902, and having entirely forgotten the occurrence of the slight cough and expectoration after the extraction of his teeth in the preceding December He was also seen by a consulting physician in Edinburgh who had his sputum examined for tubercle bacillus with negative results. The case is one of considerable interest to the dentist as well as to the physician and conveys to both a lesson worthy of remembrance.

Edinburgh.

A CASE OF TYPHOID FEVER WITH PROLONGED INCUBATION

BY W NORWOOD EAST M.D LOND, M.R.C S ENG, L.R C P LOND

DEPUTY MEDICAL OFFICER, H.M S CONVICT PRISON, PORTLAND

THE following case of typhoid fever appears worthy of recording having an incubation period of at least 141 days. The patient was a convict and during the whole of this period was in H.M 's prisons under medical supervision, and although the incubation period may have been longer than that stated it can be proved to be of at least that duration. The events preceding the convict s reception to this prison, which are of importance, are as follows. Sentenced by military court-martial in South Africa to a term of penal servitude, he was sent to Pretoria a prisoner and then to Cape Town, where he arrived about March 2nd, 1902 Seven days later he embarked for Southampton, arriving on April 1st He then passed a few days in a military prison and was received at H.M 's prison, Lewes, on April 21st The medical papers of the patient to which I have access are those which accompanied him in the civil prisons and date from his reception into Lewes prison, the dates previous to this are only approximate, being furnished by the patient's memory On his reception into Lewes prison he stated that he had not suffered from any special illness and that during the whole period of his detention there he was in perfect health On August 25th he was transferred to H.M.'s convict prison Portland, likewise in perfect health, well developed, and muscular, his height was six feet and half an inch and his weight was 182 pounds. He was set to work in the blacksmiths' shop On Sept. 1st he was admitted to hospital, the outer side of the left foot and ankle were inflamed, having been chafed by an ill fitting boot. He was discharged well on the 8th Four days later, on the afternoon of Sept. 12th, he was readmitted to hospital, complaining of headache and shivering On examination his pulse was rapid and his temperature was 102° F rising in the evening to 104°, he had headache and slight bronchial catarrh, evidenced by occasional rhonchus, the abdomen appeared to be normal, the spleen was not palpable and there was no roseola, he had no diarrhœa. The tongue was slightly furred. He informed me that the day after he left hospital—that is, Sept. 9th—he had not felt well and had gradually been getting worse. On the 17th three rose spots were found on the trunk. Typhoid fever was definitely diagnosed and this opinion was confirmed by the Widal reaction On the 19th the laboratory report of the Clinical Research Association was received, to the effect that tests made from the patient's serum with dilutions of 1 in 10, 1 in 25, and 1 in 50 gave positive reactions. The patient is now well, having passed through a moderately severe attack of typhoid fever with relapse, he had occasional retention of urine and at one time signs of cardiac failure caused anxiety, "tender toes," with signs of a local neuritis, lasted for a few days, but the cold bath treatment had not been used.

As soon as the diagnosis was made it befell one to endeavour to trace the origin of the attack. Dr W A. Dow, medical officer of Lewes prison, reported that there was no typhoid fever in that prison and further kindly reported (Dec 19th) that the medical officer of health of Lewes had had no case notified since March 20th At Portland prison there had been no typhoid fever for some years and Dr D J Lawson, medical officer of health of Portland, kindly reported that no case had been notified to him for six months before our patient was attacked It has been an isolated case and so could not have been due to diet, all of which, except water, milk, and cheese, is cooked before being served. Had it been so with a convict population of over 700 some other case would certainly have occurred. The result of a bacteriological examination of the milk- and water supply carried out at the Government laboratories was negative It was therefore impossible for infection to have taken place at either this or Lewes prison It transpired that on the journey from the latter to this prison, the prisoners being transferred, the patient and three other convicts were given a glass of water to drink at Weymouth station Could this have caused the infection? The three other convicts have remained in perfect health and Dr T H. Jones, medical officer of health of Weymouth, kindly informed me that no case of typhoid fever was notified to him in July, August, or September The patient could not, therefore, have been infected by this glass of water It is obvious that infection took place at some date previous to reception into Lewes prison The patient himself considers that infection took place at Pretoria, but of course this is only a supposition, there was little illness on the ship in which he came to England and his kit was used only by himself. This case is reported with the permission of the Directors of Convict Prisons.

Portland Prison Hospital

CASES OF ASSOCIATED PNEUMONIA AND PSEUDO DIPHTHERIA

BY JOHN REID M.D ABERD

IT is well known that various cocci, more particularly streptococci, staphylococci, and pneumococci, are almost always found associated with the Klebs-Löffler bacilli in diphtheria and it is also recognised that several morbid conditions are attended with the formation of membrane or exudate more or less resembling that of diphtheria but entirely independent of the Klebs Löffler bacillus. The organisms present in the last-mentioned class of cases are streptococci, staphylococci, diplococci, and the bacilli of pseudo-diphtheria. These bacilli resemble the Klebs-Löffler bacilli to some extent but can be distinguished from

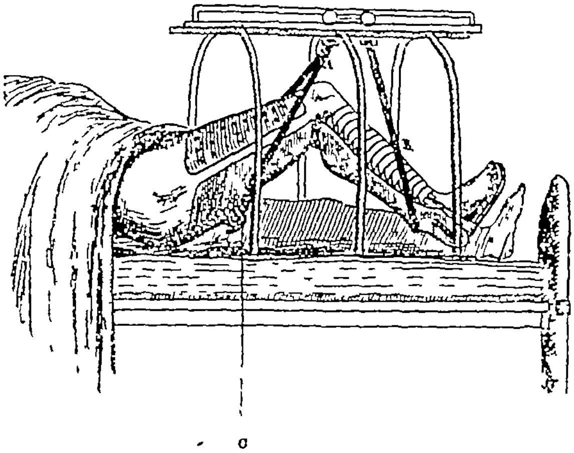
A NEW METHOD OF TREATING FRACTURES OF THE SHAFT OF THE FEMUR

BY J P LOCKHART MUMMERY, F R C S ENG,
DEMONSTRATOR OF OPERATIVE SURGERY AT ST GEORGE'S HOSPITAL.

FRACTURES of the shaft of the femur are among the most difficult to deal with satisfactorily that the surgeon is called upon to treat and the results of mal union are often very serious to the patient Any shortening in the thigh will of necessity bring the knee-joint on that side out of alignment with its fellow and so make a difference in the level of the two knee-joints. Thus patients with shortening above the knee walk more lamely than would be the case with a similar amount of shortening below it. There are several reasons which render these fractures particularly difficult to deal with. The bone in a well developed subject is covered by a thick layer of muscles and is a long way from the skin surface, it is, therefore, difficult to ascertain the exact position of the fractured ends with any degree of certainty and to manipulate them into position when found. The muscles pulling on the fragments are probably the most powerful in the body (the glutei, hamstrings, quadriceps, &c.) and tend to make the fractured ends override each other, besides necessitating the use of powerful extension to overcome their pull Also, the limb below the site of fracture is long and heavy, so that almost any movement of the patient's body is liable to result in movement taking place at the site of fracture in spite of the most carefully adjusted splints It is now a well recognised practice to endeavour to bring the bones into place by position rather than by force and to bring the distal fragment into line with the proximal one the joints being so bent as to relax as far as possible the muscles tending to displace the fragments. (This was particularly pointed out by Sir William Bennett in an article in the *Practitioner* for August, 1901)

More or less powerful extension, however, is almost always necessary in treating fractures of the femur, for it is not to be expected that weights of a few pounds will overcome the pull of such powerful muscles as those involved. The best way of obtaining efficient extension is undoubtedly by making the distal portion of the leg the fixed point and allowing the body weight to act as the extending force, powerful extension can in this way be secured by very simple apparatus. Probably the best splints at present in use which attain these objects are "the double incline plane" and "the Hodgen's splint", in both of these the weight of the upper part of the limb tending to slide off the splint acts as the extending force (The "double incline plane," to be efficient, should have the thigh piece at least two inches too long for the thigh) The Hodgen's splint is, however, somewhat tiresome to adjust and entails a good deal of rather complicated apparatus, while "the double incline plane" has the twofold objection that it is very troublesome to nurse patients with and there is no means of steadying the thigh laterally The following method, which is in a sense a modification of both, is, I venture to think, simpler and more easily managed than either, while at the same time remaining quite as efficient.

The splint is applied as follows An extension stirrup is applied with strapping from the ankle to the knee in the usual way and the stirrup is fixed round the foot-piece of a Macintyre's splint, the thigh piece of which should be made long enough to reach well up to the fold of the buttock. On the under side of the thigh piece and close to its upper margin a metal hook is fixed (see illustration) The best splint for the purpose is a Macintyre made so that the length of the thigh piece can be adjusted by means of a thumb-screw and with a flat metal hook attached to the under side. An anterior splint for the thigh is then made of Gooch's splinting, or, better, of gutta percha, padded with a double layer of lint, and fixed to the thigh with webbings passed round the Macintyre splint. The fracture having been set the splint is now adjusted with the knee bent nearly to a right angle and the limb is fixed with bandages or webbings, as the case may be A leather strap, which should be about an inch in breadth, is now passed through the lugs on the carriage of a Salter's cradle, then round the thigh piece of the splint and caught in the hook on the under side. The buckle is then brought to one side and the strap is tightened until the buttock and the thigh on that side are lifted off the bed, when the strap is sufficiently tight it ought to be possible to pass the open hand beneath the buttock on the injured side. Another strap is then passed round the lower end of the splint and fixed to the cradle to support the leg, this strap must not be too tight or it will depress the upper end of the splint. The upper strap will need tightening from time to time to make up for stretching, &c All that is necessary in order to examine the site of fracture is to remove the anterior thigh splint.



c Hook on splint round which strap A passes

By this method very powerful extension can be easily secured and with very little attention will remain efficient. The weight of the thigh and buttock tending to slide off the splint draws the upper fragment away from the lower, the latter is prevented from moving by the extension strapping and stirrup round the foot-piece and by the bent position of the limb

The chief advantages of this method are 1. The nursing is very easy, as there are no weights, &c, and the cradle is the only thing that rests on the bed 2 There is less tendency to movement at the site of fracture than with most other methods, as if the patient moves his body or it should become necessary to move him for the purposes of nursing, the distal portion of the limb and the splint will tend to move with him rather than for the movement to take place at the site of fracture 3 The splint is comfortable and the limb is in the natural resting position of semi flexion. 4 The apparatus is simple and easily applied. Movement of the knee joint can be carried out from time to time by screwing the splint straight with the key while the thigh is supported by an assistant, this can be done without undoing the splint at all. In these days, when the value of early movement and massage in the treatment of fractures is becoming recognised, it is getting more and more necessary to have some method of splinting which will enable one to get at the site of fracture, and to bend the joints without having to remove the splints, and I think that the above method will be found to be an improvement on the older ones. I have to thank Sir William Bennett for his kindness in allowing me to try this method on several cases under his care in St. George's Hospital.

Cavendish place, W

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

EXPECTORATION OF A TOOTH THIRTEEN MONTHS AFTER INHALATION INTO THE LUNG

BY W E CARNEGIE DICKSON, B SC, M B, CH.B EDIN

IN the middle of December, 1901, the patient, a marine engineer, aged 28 years, had 12 stumps removed from the upper jaw on two consecutive days, gas being the anæsthetic employed He now recalls the fact that after the second day's operation he experienced a slight feeling of uneasiness connective tissue on the affected side was fuller and contained more fluid than the skin on the opposite side. He did not think that all these cases of empyema went on to a fatal termination but that some of the patients ultimately recovered without operation. He thought that those cases which were due to streptococci very generally proved fatal. He considered that leucocytosis was of some value in diagnosis and referred to two cases in which it was present and after repeated examination pus was at length found.

Dr Pearson in reply said that the evidence obtained from leucocytosis was very uncertain owing to the many complicating factors. He thought that the x rays were of great value although he had not himself used them. He had not examined the urine for albumose. He thought that the infection might in some cases be streptococcic but was much more generally pneumococcic. He had never observed the œdema of the skin on the affected side.

MEDICAL SOCIETY OF LONDON

Hæmorrhagic Typhoid Fever —Spasmodic Contraction of the Pylorus.

A meeting of this society was held on Feb 23rd, Mr A. Pearce Gould the President, being in the chair

Dr. J Kingston Fowler and Mr A. G R. Foulerton communicated a paper on Two Cases of Hæmorrhagic Typhoid Fever. The occurrence of cases of a hæmorrhagic type was recognised in all the infective fevers, in some of which—e.g., typhus fever and small-pox—it was common, while in others, like enteric fever, it was rare. In the two cases which formed the substance of this paper careful bacteriological observations had been made and on that ground they appeared to be worthy of record. The first case occurred in a man, aged 20 years, who was admitted to the Middlesex Hospital under the care of Dr. Fowler on Jan. 6th. On Dec. 27th he suffered from headache and had attacks of shivering On Jan. 20th the appearance of "tender toes" lent support to the view that the case was one of enteric fever in spite of the doubtful results of bacteriological examination and the absence of Ehrlich s reaction. On Jan. 22nd he had an attack of epistaxis, he also vomited blood and passed blood in the urine and a patch of ecchymosis appeared in the lobule of the ear which had been pricked for the blood test. In referring to the bacteriological examination, the negative results obtained from the blood test on Jan. 7th, 14th, and 25th were noted. Pure cultures of bacillus typhosus were, however obtained from (1) a sample of blood and urine drawn off with a sterilised catheter on Jan. 24th, (2) from five cubic centimetres of blood drawn off by a syringe from the basilic vein and (3) blood taken from the spleen after death. Case 2 occurred in a man, aged 23 years, who was admitted on Dec. 16th with a history of 14 days' illness accompanied by pyrexia. On Dec. 23rd blood appeared in the sputum and urine. Ecchymoses appeared in various parts of the skin and there were hæmorrhage from the pharynx and blood in the stools The patient died on the twenty-eighth day of the illness At the necropsy hæmorrhages were found in the pelvis of the kidney and various other situations. Pure cultures of bacillus typhosus were obtained from the heart blood and spleen. In the gall bladder and in some of the muscles the bacillus coli communis was also detected. Turning to the question of etiology which still remained undecided the title of a paper on this subject by Nicholls and Learmonth of Montreal[1] The Hæmorrhagic Diathesis in Typhoid Fever and its Relationship to Purpuric Conditions in General," appeared at first sight to suggest that the authors considered that a close connexion existed between this condition and hæmophilia, but this was not so. In two cases recorded by Eshner and Weisenberg[2] there was a marked history of alcoholism. It had been suggested by Gerhardt[3] that such cases had become more common since the introduction of the cold bath treatment. This was not in accord with the experience at the Middlesex Hospital. These two cases, Dr. Fowler and Mr Foulerton feared, threw but little light upon the pathology of this condition. Case 1 certainly showed that in an example of the most intensely severe form of hæmorrhagic typhoid fever no other organism than the bacillus typhosus might be present and that the mixed infection which had been observed in other cases and which was present in Case 2 was not an essential feature. It appeared from a review of all the facts that as stated by Eshner the hæmorrhages were probably due to changes in the blood or in the vessels, or in both, and that such changes were induced either by the infective or toxic activity of the typhoid bacilli or by both of these factors combined. Mr Foulerton added, as regards the failure to obtain Widal s reaction in either case, that if a case did not give the reaction after 12 days' illness it was either not a case of enteric fever or it was one of extreme severity As to the cause of the hæmorrhagic complication it had been stated that this was due to mixed infections. This was certainly not so in the first of these two cases.—Dr. A. E Wright confirmed Mr Foulerton s remarks relative to the non-occurrence of Widal s reaction in very severe cases of enteric fever He thought the bactericidal power of the blood might have been investigated. This was a point of practical importance and could be easily investigated in the laboratory Turning next to the etiology of the hæmorrhage in these cases he did not believe they had to do with the hæmorrhagic diathesis or with alcoholism, though the ready way in which hæmorrhage occurred after injury in the two cases recorded resembled both of these diseases. Now there was an obvious change in the blood in hæmophilia—namely, diminished coagulability The introduction of typhoid vaccine also diminished the coagulability of the blood and Dr Wright suggested that the cause of the hæmorrhages in hæmorrhagic typhoid fever was an intense intoxication of the blood with the typhoid bacillus. The degree of intoxication could be easily measured by drawing off a drop of blood and counting the number of bacilli per cubic millimetre. A diminished alkalinity of the blood was another cause of diminished coagulability, and he suggested that in future such cases should be tested in both of these respects. In regard to treatment calcium chloride would probably have been of no use. Calcium chloride was only of advantage by combining with the fibrinogen in the blood, but in enteric fever the latter was decomposed and therefore diminished or wanting —Dr Arthur Voelcker asked if the degree of coagulability had been estimated in these cases. He referred to a case of gastric ulcer with hæmorrhage in which the degree of coagulability was markedly diminished.—Dr. Fowler and Mr Foulerton replied.

Dr S. H. Habershon read a paper on Spasmodic Contraction of the Pylorus, its Diagnosis and Treatment. After some preliminary remarks on the normal peristaltic movements of the stomach, he described certain cases of acute and subacute dilatation of the stomach in which spasm of the pylorus was probably present though it might be a matter of conjecture. An important series of cases existed in which some disease, either gastric ulcer or early malignant disease, occurred in the near neighbourhood of the pylorus. The symptoms produced were definite and characteristic, and it was a common occurrence to find that the cause was not recognised. Variable dilatation of the stomach was always present Symptoms of pain, discomfort, or even vomiting were especially manifest in the evening or some hours after food. Pain was usually relieved by food and this was considered an important element in diagnosis. The distinction between these symptoms and those of pyloric obstruction was emphasised. In most cases the diagnosis was confirmed by operation and on this ground it was contended that in the absence of organic obstruction spasm of the pylorus was present. In the treatment lavage was beneficial but gastro-enterostomy produced brilliant results and in non malignant cases was invariably successful. Some cases were related in illustration of the foregoing points Dr Kingston Fowler remarked on those cases in which food relieved instead of increasing the pain. This kind of pain could not be associated with ulcer of the stomach. This pain was different from the sinking sensation which came on about four hours after food and which was due to gastric dilatation. Turning to the treatment, if dietetic means failed operative procedures were often successful. He also referred to severe cases which nothing but gastro jejunostomy could relieve.—Sir Isambard Owen also discussed the character of the pain and agreed with Dr Habershon that the position of the stomach lesion modified the character of the pain a good deal. He thought that the source of dilatation of the stomach due to reflex spasm sometimes lay in the colon when the latter was the seat of a colitis.—Mr Arthur Barker asked how those strictures could be explained which them by a variety of tests. The following cases are interesting as examples of pseudo-diphtheria preceding or following an attack of pneumonia.

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[1] Brit. Med. Jour Feb. 2nd, 1901, p. 305.

[2] American Journal of the Medical Sciences, March, 1901 Brit. Med. Jour Feb. 2nd, 1901, p. 309.

[3] Zeitschrift für Klinische Medicin, Band x., S 201.

CASE 1 —The patient was a boy, six years of age, who suffered from pneumonia accompanied with croupy spasmodic cough, which persisted until after the lapse of 14 days he had an attack of measles running a normal course and attended with but slight tonsillitis. After the measles he had another attack of pneumonia which cleared up in a few days The entire pharynx was subsequently covered with a dense grey membrane which disappeared after 24 hours. No diphtheria bacilli were found in it but only cocci There was otorrhœa preceding and following the attack of measles.

CASE 2 —The patient was a man, aged 37 years, who suffered from pneumonia which was followed by rheumatism While abroad he had contracted dysentery and his bowels were washed out by enemata on account of constipation. His tonsils were slightly affected, a membrane identical with that presented in Case 1 was formed on the pharynx and disappeared within 24 hours, leaving small ulcers. This false membrane, unlike that of diphtheria, was non-contagious

CASE 3 —The patient was a girl, aged six years, a swab from whose throat gave indications of the pseudo diphtheria bacillus when examined at the Jenner Institute by request of the Wandsworth sanitary authority Bronchitis followed

CASE 4 —This patient was a sister of the preceding one, was similarly affected, and had a sharp attack of pneumonia six days afterwards A memorandum from the medical officer of health stated that such cases "end in recovery and are not followed by sequelæ."

Southfields S W

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY

Latent Empyema in Infants

A MEETING of this society was held on Feb 24th, Mr ALFRED WILLETT, the President, being in the chair

Dr S VERE PEARSON read a paper on Latent Empyema in Infants He said that empyemata were latent in infants sometimes because of the meagreness of pulmonary symptoms, or an empyema cavity might be overlooked because it was the second of two such cavities Besides these latent empyemata there was another variety of empyema which was particularly likely to be overlooked and it was with this variety that the present paper dealt The cases belonging to this group were characterised by the occurrence of a small sacculated empyema giving rise to progressive wasting and anæmia and to secondary complications of a grave nature The onset usually was gradual and the course of the disease was long An irregularly raised temperature with few symptoms pointing to disease of the respiratory system was common. The physical signs in an uncomplicated case were not well marked, and this paucity of physical signs depended on the size, chronicity and site of the empyema The commonest situation was at the extreme posterior base in the vertebral groove. Here ill defined signs were often obscured by the liver or the stomach interfering with the normal pulmonary resonance The signs varied often from day to day and a slight impairment of resonance to percussion was sometimes the only sign present. The physical signs in cases with secondary pulmonary complications and with complications other than pulmonary were then dealt with. The differential diagnosis from marasmus depended on the fact that digestive derangements were common but were not so severe as to account satisfactorily for the progressive deterioration in the general condition of the patient. A continuously and irregularly raised temperature often reaching 103° F, was not common in chronic wasting children The diagnosis from tuberculosis was often extremely difficult, but the variability of the signs, the signs themselves, and the long delay of the fatal issue in spite of high fever were points of difference between these cases and the majority of cases of tuberculosis in infants. The differential diagnosis of cases with complications from chronic broncho-pneumonia or from purulent pericarditis and other such conditions arising primarily or secondarily to diseases other than empyema was usually very difficult. The secondary effects were, firstly, indirect or toxæmic, the result of the presence of a localised collection of pus, and gave rise to general symptoms—anæmia, wasting, rise of temperature, and pulmonary complications—and locally to thickening of the pleura and fibrosis of the lung, and secondly, direct or bacterial, the result of the spread of the infective agent either locally or by the blood, giving rise (1) locally to purulent pericarditis (and peritonitis) and (2) by blood infection to purulent meningitis, peritonitis, arthritis, and other pyæmic abscesses (and pericarditis) The prognosis was bad, the majority of patients died The cause of death was usually one of the serious complications, those belonging to the bacterial group This high mortality depended partly upon the infrequency of correct diagnosis but also partly upon the difficulties of treatment. The questions to decide with respect to treatment were when to explore, where to explore, and how often Much depended upon the certainty of the diagnosis and the progress of the case. The advisability of exploratory rib resection must be considered in certain circumstances Six illustrative cases of the condition were quoted

Dr F DE HAVILLAND HALL said that the paper drew attention to a class of cases which were frequently overlooked. He himself always feared the possibility of missing a small empyema and indorsed the opinion of Dr Pearson that it was only by repeated examination of the chest in these cases that such an error was to be avoided With regard to the interlobular forms of empyema he considered that diagnosis was impossible, for in many of these cases there was only a thin layer of pus between the lobes of the lung The diagnosis was easier in the basal cases and should always be completed by the insertion of the exploring needle He alluded to a case in which in a debilitated child after pus had been withdrawn from the chest and a rib had been resected the child had died apparently as the result of the operation He considered it advisable in doubtful cases to make many explorations with the needle and he did not think the insertion of the needle gave rise to much pain. He alluded to the advantages to be gained by the use of the x rays in some cases and quoted a case in which this method of diagnosis had been of the greatest advantage. He asked Dr Pearson if albumose had been present in the urine of any of his cases

Dr H S FRENCH mentioned the diagnostic value of the presence of leucocytosis in differentiating cases of empyema from those of tuberculosis He asked Dr Pearson if examination of the blood had been made in his cases

Dr G A. SUTHERLAND said that the difficulty in diagnosis of the form of case described in the paper was very great. He thought that the term "latent" had been used in the paper to embrace more than one class of case. The only forms of case to which he would apply the term "latent" were those cases in which on careful examination no physical signs could be discovered He considered that repeated exploration in cases in which pus was suspected was advisable and that in those cases in which there was reason to suspect its presence resection of a portion of a rib should be performed and every part of the lung could then be explored

Dr F E BATTEN said that he did not think it was possible to make the complete exploration of the lung after the resection of a rib suggested by Dr Sutherland, for in these cases owing to their chronicity the pleural adhesions were considerable and little was gained unless the cavity of the empyema was opened He doubted if the presence or absence of leucocytosis was of much diagnostic value and quoted a case in which there was no leucocytosis but at the necropsy an empyema was found He attached considerable diagnostic importance to the history of an acute or rapid onset in these cases He asked Dr Pearson if any other organism except the pneumococcus had been found in his cases.

Dr H W G MACKENZIE thought that in most cases there was a history of acute onset He was of the opinion that exploratory puncture was often unsatisfactory and that resection of a rib should be done in any doubtful case, and he described two cases in which exploration had failed to find pus but on resection of a rib pus had been found and evacuated

Dr G NEWTON PITT referred to cases of empyema in which the temperature was normal or subnormal throughout the whole course of the disease He thought that in doubtful cases some aid might be obtained by pinching up the skin on the two sides of the chest, when it would be found that the

EDINBURGH OBSTETRICAL SOCIETY.

Exhibition of Specimens—Some Experiences in the Gynæcological Surgery of the Abdomen.—The Treatment of Uterine Fibro-myomata

A MEETING of this society was held on Feb 11th, Dr JAMES RITCHIE, the President, being in the chair

Sir J HALLIDAY CROOM showed (1) four recent cases of Vaginal Hysterectomy with special reference to Cancer, (2) a Large Fibroid in a case of seven months pregnancy removed by Porro Cæsarean section, (3) a Fibroid Tumour which continued to grow rapidly after removal of the ovaries four years previously, and (4) a Double Hydrosalpinx removed for dysmenorrhœa.

Dr. D BERRY HART showed (1) a Fibroid Tumour developing mainly in the left broad ligament, and (2) a Pyosalpinx in which cultures showed that the pus was sterile.

Dr. G SCOTT MACGREGOR showed a Fibro-sarcoma of the Uterus removed by panhysterectomy The fundus of the uterus occupied the left hypochondrium.

Dr D J GRAHAM showed a large Ovarian Tumour and Uterus removed by hysterectomy

Mr. G ROBERTSON (Dunfermline) showed an Aborting Tubal Mole and a Parovarian Tumour removed from the same patient.

Dr. J HAIG FERGUSON read a paper on Some Experiences in the Gynæcological Surgery of the Abdomen. In one case, where removal of the ovaries for intolerable dysmenorrhœa was undertaken, the operation had to be abandoned, as during the separation of adhesions and drawing the ovary to the surface the patient manifested all the symptoms of death from syncope. She was with difficulty resuscitated and more anæsthetic was given, as it was thought that the syncope was due to a deficient amount. But a second and a third attempt were followed by the same collapse and the operation was abandoned. In extra uterine gestations retention of urine was a prominent symptom and with over-distension of the bladder the case might be mistaken for an ovarian tumour Dr Ferguson had found the opposite tube diseased in several cases, in two containing pus Severe metrostaxis after operation for extra uterine gestation occurred on the fourth day in one case to the extent of endangering life After abdominal operations where no drain had been left in and where there was reason to fear the presence of innocuous fluid it was helpful to raise the foot of the bed so as to spread the fluid over a larger area of peritoneum and thus to hasten absorption and to prevent it accumulating in the pelvis This tilting of the bed lessened any tendency to congestion of the pelvic veins and to oozing If there was a vaginal drain then the head of the bed should be elevated. After a case of abdominal operation he received a message from the medical man in charge that there was evidently peritoneal bleeding Dr. Ferguson replied that the lowest stitch in the wound should be taken out to see if there was hæmorrhage. The next day on taking off the dressings he found a coil of small intestine lying outside the abdomen The medical attendant had taken out one stitch after the other in search of the hæmorrhage and left the wound unclosed. The patient was anæsthetised, the intestines were sponged, and the stitches were reinserted with a favourable result. In two cases keloid developed in the abdominal wound and was found to be best treated by the continuous application of ichthyol collodion.

Dr F W N HAULTAIN read a paper on the Treatment of Uterine Fibro-myomata, with a record of 28 consecutive successful cases of abdominal hysterectomy by the supravaginal method. At the present time they seemed to be in the transition stage between the older practice of medical alleviation and the opposite extreme of excessive surgical zeal begotten of novelty The treatment of uterine fibromyomata might be divided into symptomatic and radical. The former embraced the exhibition of drugs, the employment of electricity, and the removal of the uterine appendages and the latter included the operations of myomectomy and hysterectomy The medicinal treatment practically resolved itself into the exhibition of ergot which, from its action in stimulating the contraction of unstriped muscle, was of special value in bleeding from the uterus. It caused contraction of the arterioles and also of the muscular fibres in the uterine wall, by this means fibro-myomata in the walls of the uterus had their nutrition impeded and they were extruded into the uterine cavity or beneath the peritoneal covering But its effects on the tumour were trivial even after prolonged treatment, so that its value was practically *nil*. Dr Haultain then discussed the electrical treatment which he had used largely He confined his remarks to the after history of a series of 22 cases reported in 1896. He had traced 15 Five of these had reached the climacteric, four remained cured, two had return of the bleeding (one of these expelled a large polypus and the other had three small polypi removed and afterwards oöphorectomy performed), in two the tumour continued to grow to such a size that hysterectomy was recommended, and two had evidently undergone malignant degeneration. Removal of the appendages was undoubtedly of great service in the treatment of hæmorrhage and in inducing a premature menopause and so promoting atrophy of those growths which normally occurred after the climacteric It was restricted in its application by its impracticability in many instances and also by the fact that it failed to produce the expected benefit in about 15 per cent of the cases. In the soft œdematous type of fibroid this treatment seemed to be valueless and should never be attempted. The sphere for this operation had become limited, as the more radical operations were performed with safety and with certainty of cure compared with a 15 per cent. risk of failure. Radical treatment was represented by myomectomy and hysterectomy, either of which might be undertaken by the vaginal or abdominal route. Vaginal myomectomy embraced the removal of stalked growths or submucous polypi and might be very easy if they were only attached by mucous membrane or difficult if they were encapsuled by a thick layer of muscle. Before the days of antiseptics myomectomy for sessile submucous fibroids was most dangerous and rarely attempted. Now it could be undertaken with safety and was chiefly applicable to the cases where the cervix had already been dilated by the downward growth of the tumour Abdominal myomectomy at one time was almost entirely confined to the removal of pedunculated subserous tumours, but was now largely employed for the removal of sessile subserous and interstitial and even large submucous growths. It was, indeed, a debateable question how far conservative surgery warranted them in proceeding on those lines, but some operators had removed as many as 15 nodules from the uterus by this means. The risks of such a prolonged operation and the questionable usefulness of the organ afterwards made him ponder whether the best interests of the patient would not have been served by the removal of such a focus of neoplasms. Hysterectomy or removal of the uterus was called for when the tumour or tumours gave rise to urgent symptoms and could not be efficiently treated by the previous methods mentioned. It might be performed by the vaginal or abdominal route, according to the bent of the operator A number of operators favoured the vaginal method for all tumours less than of the size of a six months pregnancy and based their predilection on the low mortality absence of shock, quicker convalescence, and the avoidance of an abdominal scar Others preferred the abdominal route as giving a better view of the operation area and greater ability to deal with complications as they might arise. It seemed rather a matter of individual selection, Dr Haultain had confined himself to the latter When the abdominal route was chosen two methods might be employed—entire removal of the organ (panhysterectomy) or amputation through the cervix or lower uterine segment (supravaginal method) The adoption of one or other of these methods was usually very much one of individual taste. Those who favoured the supravaginal method supported its adoption mainly on the ground of its greater rapidity and the support given to the pelvic floor by the preservation of the cervix with its vaginal attachment, while the disciples of panhysterectomy advanced its superiority on the principles of peritoneal drainage and the impossibility of secondary cervical cancer Panhysterectomy averaged fully from 20 to 30 minutes longer in its execution than the supravaginal method which itself took from 40 to 60 minutes in an uncomplicated case. Drainage could be easily effected in either method. The chance of secondary malignant disease was too remote to consider, indeed, from statistics the half hour of extra time would on these grounds be better spent in removing the *mammæ* which were more liable to malignant disease than was the cervix. Dr Haultain had performed hysterectomy on 32 cases—28 by the supravaginal method and four by panhysterectomy, two of the were due to an ulcer situated at a considerable distance from the stricture. He expressed a preference for gastro-jejunostomy done without any mechanical appliances.—Dr Walter Broadbent referred to a case of a man who vomited large quantities of fluid and in whom there was great dilatation, and in the analysis of whose stomach contents there was marked increase in the hydrochloric acid. Washing out with weak tannic acid solution produced good results —Dr W J Tyson thought that the cases described by Dr Habershon belonged to a distinct class He advocated rest for their treatment.—The President had seen several of Dr Habershon's cases and in these rest had been tried before operation. Most of the speakers had admitted that spasm of the pylorus could be produced by various kinds of irritation and could result in very considerable dilatation These were bad cases for operation. However, gastro jejunostomy was an admirable means of treating them in many instances Mr A W Mayo Robson's bone bobbin was preferable to any other mechanical means in his opinion.—Dr Habershon replied

LIVERPOOL MEDICAL INSTITUTION

Exhibition of Cases —Chorio-epithelioma Malignum.— Colotomy and Colectomy

A meeting of this society was held on Feb 12th, Mr Rushton Parker, the President, being in the chair

Dr Edgar Stevenson showed a case of Congenital Glaucoma in a child, aged five years, and described in detail the etiology and pathology of the condition. The patient presented all the typical appearances, the eyes being uniformly enlarged with the corneæ 18 millimetres in horizontal diameter The optic discs were cupped and atrophic, and the visual fields were much contracted. Out of 65 000 patients seen in recent years at the Liverpool Eye and Ear Infirmary the disease had appeared four times.—Dr K A. Grossmann and Mr C G Lee commented upon the case

Mr J E McDougall showed a case of Adherent Soft Palate which had been successfully treated by a new method. A thin plate of metal was attached to the patient's artificial tooth plate and to the extremity thereof a tube was soldered. The tube was passed through an opening in the soft palate made to admit its passage. Healing had taken place and the edges had become covered with epithelium The patient removed and replaced the arrangement as readily as she did the ordinary tooth plate before any addition was made to it. When no tooth plate was worn a carrier for the tube could be fixed to the teeth. The apparatus gave no trouble and the result was most satisfactory Nose breathing was carried on comfortably the sense of smell had returned and that of taste had regained its full value.—Dr Philip Nelson spoke with regard to the case.

Mr G A. Hawkins Ambler read a note on Chorio-epithelioma Malignum. He thought that Marchand's work had proved the origin of the growth from the whole of the epithelial covering of the chorionic villi The history of a woman (aged 39 years and the mother of 12 children) who had suffered from the disease was given in detail. The last of three abortions occurred in May, 1900, and was accompanied by severe hæmorrhage The uterus was curetted and packed. Six weeks later, on the occurrence of furious bleeding, the uterus was again packed and subsequently was thoroughly scraped with a sharp spoon. The uterus was smooth and measured three inches On June 17th, 1902, a uterine swelling was present extending to within one and a half inches of the umbilicus. There was a steady chocolate-coloured discharge and the patient was anæmic and breathless No radical treatment was possible No regular post-mortem examination was obtained and no metastatic growths were found. The case was interesting owing to the long interval since the last pregnancy and the thorough curettage then done. Packing with gauze and adrenalin solution had been less effective than with gauze soaked in hamamelis extract.

Mr F T Paul read a short paper on Colotomy and Colectomy He considered the former operation was becoming more popular chiefly owing to the better artificial anus now generally obtained In regard to the latter he still strongly advocated bringing the ends of the bowel out with subsequent restoration of continuity in preference to end-to-end union The latter was more satisfactory to the surgeon when the patient recovered but the risk was much greater Patients illustrating the results of the operations were shown and also the plug and belt used by Mr Paul for colotomy cases.—The President Sir William M Banks, Dr W Alexander. Dr H Briggs, Dr F Heatherley, and Mr K. W Monsarrat spoke and Mr Paul replied.

Exhibition of Specimens Photographs, and Drawings —Ringworm of the Cat infecting Children.

A meeting of the Pathological and Microscopical Section of this society was held on Feb 19th, Mr Rushton Parker, the President, being in the chair

Dr W Alexander exhibited (1) specimens from a case of Abscess of the Liver following Dysentery, and (2) the Organs of a second case of Liver Abscess secondary to an Appendicitic Abscess

Dr R G Henderson exhibited the Anterior Half of a Tongue spontaneously amputated by a rapid ulcerative process which examination showed to be epitheliomatous.

Dr R. J M. Buchanan showed specimens of Bilharzia Hæmatobia from Urine

Sir William M Banks exhibited sections from a case of Spindle-celled Sarcoma of the Breast and photographs of two patients with large Tumours of this description He remarked that they were not, as a rule, clinically malignant and for the most part there was no recurrence after removal.

Mr G P Newbolt showed (1) a Liver with a Tropical Abscess from a dysenteric patient, and (2) a Tuberculous Kidney in the early stage of the disease successfully removed by lumbar nephrectomy

Mr C H B Shears and Mr E M Stockdale showed a Melano sarcoma of the Choroid which had perforated the sclerotic, the growth was of the spindle-celled variety

Mr C G Lee and Mr Stockdale showed sections from two cases of Epithelioma of the Pinna.

Dr J Wiglesworth showed (1) a Brain with Numerous Melano sarcomatous Nodules, these were merely part of a very wide diffusion of similar deposits all over the body, and (2) a specimen of Horse-shoe Kidney

Dr J E Gemmell exhibited the Ovaries of a patient, both organs being affected with carcinoma and cystic disease.

Mr R J Hamilton showed an Eyeball containing a Leuco-sarcoma of the Choroid and microscopical sections of the same.

Dr R. C Dun showed a Sarcoma of the Kidney removed by operation from a child aged three years.

Sir William Banks exhibited a number of casts, drawings, and specimens of Parotid Tumours He remarked that with regard to the innocent variety the commonest were of the mixed type. Of the malignant varieties he thought that sarcoma was rare but that carcinoma was not at all uncommon and he showed a patient from whom he had removed a large growth of this type. The intention of the note was to point out the frequency with which apparently innocent parotid tumours become malignant. Details were given of three cases in which this had occurred in spite of the fact that the growths had remained small, painless, and moveable for long periods. He thought that there should be no delay in the removal of parotid tumours however harmless they might be in appearance He had been taught to consider parotid tumours as among the least dangerous in the body, but he now regarded them with grave suspicion. He considered it undoubted that there was a great general increase in cancer among civilised nations and it seemed not improbable that this proneness to degeneration in parotid tumours was part and parcel of that tendency

Dr Leslie Roberts read a note on an example of Trichophyton in the Cat The animal was infected in Egypt, 20 days after leaving this country the cat was taken to a house where there was a large family of children. A few days later ringworm was observed on the neck of the eldest daughter, within a month 14 individuals were accidentally infected with the fungus as were a kitten and a Skye terrier The infection was subsequently communicated to a school

The following members took part in the discussion of the specimens the President, Dr T R. Bradshaw Dr Alexander, Mr Hamilton, Mr W Thelwall Thomas, Mr F C Larkin, Mr Stockdale, Dr Buchanan, and Mr K W Monsarrat

Nipple in a woman, aged 66 years The patient was under the care of Mr C T Dent at St. George's Hospital The disease commenced 18 months ago as a red spot just above the nipple and now showed an oval red patch surrounding the nipple one and a half inches by one inch in diameter The margin was well defined and the surface was covered with fine scales. There was distinct induration but there were no enlarged glands in the axilla.—Mr E. W Roughton said that Paget's disease was so frequently a precursor of carcinoma of the breast that he considered it the duty of the surgeon to remove the breast with a wide area of skin and to clear out the axillary contents.—Mr F Jaffrey and Mr Campbell Williams both agreed with the diagnosis and recommended radical treatment —Dr E. Cautley showed a man, aged 28 years, with Pseudo-hypertrophic Paralysis. Apparently no symptoms were noted until seven years ago He stumbled a little and had difficulty in getting upstairs. The calves measured 17½ inches in diameter and were very hard. The knee jerks were absent The vasti were a little wasted but no other muscles were involved. The case was interesting on account of the age of the patient, the limitation of the disease, and the comparatively slow progress —Dr James Taylor remarked that the case was very interesting as forming a link in a chain. He himself had known one case in which the signs and symptoms had only developed at the age of 18 years. Previously to this the patient had not only been able to walk but had actually been an athlete and had won prizes for running Another case he had seen at the age of 43 years and the patient had never been able to run. He remained practically unchanged, a typical case of pseudo-hypertrophic paralysis, until his death from pneumonia at the age of 50 years. These cases seemed to illustrate a condition in which there was probably an inherited weakness or defect in the muscular tissue, which might become obvious at any age and progress with varying rapidity —Mr Roughton showed a youth with Dislocation of the Right Shoulder and Right Hip and with deformities of many bones, including the lower jaw There were scars in the region of all the bones affected and the condition was probably due to chronic septic infection during infancy —Mr Jaffrey showed a specimen of a Testicle which before removal had been diagnosed by everyone who saw the patient as one of tuberculous epididymitis but which proved on removal to be rapidly growing sarcoma A secondary deposit in the lumbar glands was recognised within a fortnight of removal of the organ.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY —A clinical evening of this society was held on Feb. 12th, Dr G R Murray, the President, being in the chair —The following were some of the cases exhibited —Dr H. E Gamlen showed (1) cases of Lupus treated by x rays and ultra violet rays, some of the patients being apparently cured and others improving, (2) Rodent Ulcer of the Face cured after 90 minutes' application of the x rays, and (3) Scirrhus of the Breast (?) cured by the x rays He also showed a case of Epithelioma of the Tongue supervening on Gumma, this patient refused operative treatment. At first with x ray treatment there was distinct improvement but now the disease was rapidly becoming worse.—The President showed cases of (1) Paralysis Agitans, (2) Aneurysm of the Aorta, and (3) Insular Sclerosis.—The President and Mr J R. Morison showed a case of Cirrhosis of the Liver treated by operation and cured.—Mr A M. Martin showed a case of Marked Varicose Condition of the Veins of the Left Leg in a man aged 60 years with a small ulcer over the internal malleolus. The treatment proposed was excision of the internal saphena in the leg and ligature also at the saphenous opening —Mr G W Ridley showed (1) a patient after Removal of the Upper Jaw and part of the Nose for Malignant Disease, and (2) four patients after Excision of the Tonsil for Sarcoma.—Dr J Limont showed several examples of Skin Disease (lichen, erythema purpureum pityriasis rubra &c.) —Dr T Oliver showed a case of Aneurysm of the Arch of the Aorta treated by gelatin injection.—Dr Oliver and Mr. Morison showed a woman aged 41 years whose Uterus with the Infant, was removed by Abdominal Section, almost at term for Carcinoma of the Cervix.—Dr W C Beatley showed a case of Exophthalmic Goitre in a girl, aged ten years.—Dr R A Bolam showed a patient with Natural Development of Collateral Venous Channels in Cirrhosis of the Liver —Mr. T G Ouston and Dr Young showed a patient after operation for Congenital Torticollis, together with apparatus for maintaining correction —Mr Morison showed cases of (1) old Tuberculosis of the Rib with affection of the overlying skin, (2) Irremoveable Carcinoma of the Breast treated by Oöphorectomy with improvement, (3) Paralysis of the Brachial Plexus following Dislocation of the Shoulder nine months previously, and (4) Extensive Epithelioma of the Chin with marked Gland Infection treated by ligature of both external carotids

LARYNGOLOGICAL SOCIETY OF LONDON —A meeting of this society was held on Feb 6th, Dr P McBride, the President, being in the chair. —Mr R Lake showed (1) a Microscopic Specimen of Pseudo pachydermia from the Processus Vocalis in a tuberculous subject, and (2) a case of Tuberculous Laryngitis.—Mr Charters J Symonds showed a case of Paralysis of the Left Vocal Cord, the result of lead poisoning in a girl, aged 18 years. The patient exhibited the usual paralysis of the limbs and a marked blue line on the gums The rarity of the laryngeal affection was commented upon.—Sir Felix Semon drew attention to the fact that the form of paralysis varied with the poison, lead having a selective action on the abductors.—Dr L. H. Pegler showed a Septotome for Moure's and other Operations for Deflected Septa.—Mr P R. W de Santi showed a case of Unilateral Enlargement of the Right Side of the Thyroid Gland in a woman aged 50 years. There was great displacement of the larynx and trachea and the patient had had attacks of dyspnœa. Mr de Santi proposed to remove the right half of the thyroid.—Sir Felix Semon showed a case of Tabes with early and unusual implications of various cerebral nerves in which the chief features of interest were (1) complete paralysis of the soft palate in spite of which the swallowing of fluids did not produce regurgitation when the patient drank slowly, (2) non-implication of the tongue until a few days previously; (3) the vacillations of the symptoms, the paralytic phenomena being distinctly more marked on some days than others, and (4) the absence of laryngeal crises —Dr J Donelan showed a case of Ankylosis of the Left Crico-arytenoid Articulation in a woman, aged 23 years.—Dr J Dundas Grant showed a case of Persistent Œdema of the Larynx in a middle-aged woman. The case was discussed by Sir Felix Semon, Dr. F de Havilland Hall, Dr A. Brown Kelly and Dr. Mackintosh.—Dr W Hill showed a case of Tuberculous Disease of the Larynx with intra arytenoid growths, but with no evidence of pulmonary involvement —Other specimens were shown by Mr Hunter Tod, Mr W H. B Stewart, Mr F J Steward, Dr Brown Kelly, Mr E B Waggett, and Dr E. Furniss Potter

BRISTOL MEDICO-CHIRURGICAL SOCIETY —The fifth meeting of the session of this society was held on Feb 11th, Mr G Munro Smith being in the chair —Dr E. Markham Skerritt showed a case of Anomaly of Blood-vessels.—Dr H Waldo exhibited the following cases (1) Two cases of Lupus Vulgaris treated by the Finsen light; (2) a case of Folliculitis, and (3) a case of Lupus Erythematosus —Mr A W Prichard showed a Simultaneous Amputation of both Breasts and Removal of Infected Glands in both Axillæ.—Dr J E Shaw showed a case of Scleroderma with Pigmentation and Muscular Atrophy —Mr J Paul Bush, C M G, exhibited the following cases (1) A Sequestration Cyst of the Cheek, (2) Unilateral Coxa Vara, (3) a patient after Removal of the Clavicle for Sarcoma (the specimen was shown), and (4) a patient after Removal of the Scapula for Sarcoma (the specimen was shown in this case also) —Dr J Michell Clarke showed (1) a case of Graves's Disease, with Unilateral Exophthalmos and a Patch of Hyperidrosis on the Leg; (2) a case of Intracranial Tumour, (3) a case of Thoracic Aneurysm with Indirect Signs, and (4) a case illustrating the Treatment of Pancreatic Diabetes by Opium —Mr F R. Cross showed (1) two cases of Operation for High Myopia, and (2) a case of Thiersch Grafting for Severe Burn of the Face involving both Eyelids.—Dr A Ogilvy exhibited a case of Ruptured Choroid showing the entrance of one of the ciliary arteries through the sclerotic.—Dr C H. Walker showed (1) a case of Cyst of the Iris, and (2) a case of Organised Lymph in the Anterior Chamber from a wound of the cornea nine years previously —Dr R. G P Lansdown showed (1) a case of Amputation of the Breast with Removal of a Rib, and (2) a case of Atrophic Scirrhus of the Breast with Secondary Deposits.—Dr F H. Edgeworth exhibited cases of (1) Chorea, (2) Acromegaly, and (3) Achondroplasia.—Mr T Carwardine showed a case of Perityphlitic Actinomycosis.—Mr H. F Mole showed (1) a case of Injury to the Testis, and (2) a case of latter were by selection for experience and two on account of sarcomatous degeneration of the growth. The operation was undertaken in the 32 cases for hæmorrhage in 20, pressure in seven, abdominal prominence in three, pregnancy in one, and malignancy in one. Pathologically they might be classified as multinodular 20, calcareous one, œdematous seven, cystic one, with carcinoma one, and sarcomatous two. An interesting point in the case complicated with pregnancy was the fact that the placental site was placed over the seat of the tumour; this probably accounted for the fact that an attempt to induce abortion was futile, the tumour preventing contractions of the uterine wall on the placental site. The calcareous growth was removed from a patient, aged 69 years, on account of painful pressure. In operating Dr. Haultain preferred to ligature both ovarian and uterine arteries before amputation of the uterus in simple cases. As far as possible he attempted to ligature the uterine arteries at the point where they commenced to ascend the side of the uterus, transfixing a small portion of the uterine wall and including it in the ligature; by this means all chance of tying the ureter was avoided. He did not pay any attention to disinfection of the cervical canal and did not attempt to avoid passing the sutures through it as recommended by some operators. Out of the 32 cases one only proved fatal; it was a case where panhysterectomy was performed for a very large sloughing intra-uterine tumour and death was due to septic poisoning. All the other 31 patients recovered. There was a singular absence of shock after the operation even in patients reduced by extreme bloodlessness. Convalescence was much more rapid than even after a simple ovariotomy. If the ovaries appeared to be healthy Dr. Haultain left them to obviate the harassing symptoms of an artifically induced menopause. If a fibroid gave rise to no symptoms it should be left alone as far as surgical treatment was concerned; the possible chance of its becoming malignant was too remote to receive consideration. On the other hand, whenever marked symptoms appeared treatment was urgently demanded, as the general tendency was for them to continue and to become aggravated unless the climacteric supervened. In suitable cases Dr. Haultain considered that electricity should have more deference given to it as it could be used in cases where the patient resolutely refused operation. It seldom failed in interstitial tumours. Removal of the ovaries failed in 15 per cent. of the cases, whereas the radical operation effectively cured. The mortality with the latter was 6 per cent. according to some statistics, but that was questionable.

These papers were discussed by Sir J. HALLIDAY CROOM, Dr. HART, and Dr. J. LAMOND LACKIE.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF ANATOMY AND PHYSIOLOGY.

Exhibition of Specimens.—X Ray Photography.

A MEETING of this section was held on Feb. 6th, Professor ALEXANDER FRASER being in the chair.

Dr. E. H. TAYLOR showed two specimens of the Newly born Infant to demonstrate the Topographical Anatomy of the Stomach and other Abdominal Viscera.

Professor FRASER showed two cases of Congenital Absence of the Left Lateral Half of the Diaphragm. One case occurred in a male fœtus which was at about the fourth month and was otherwise perfectly normal. The under surface of the left lung lay upon the suprarenal capsule, the stomach, and the left lobe of the liver. The left free margin of the central part of the diaphragm ran as a strong band from front to back, slightly external to the pericardial sac and above the left suprarenal capsule and kidney. The other case occurred in a full time female fœtus and was only one of many abnormal features that were present. The left pleural cavity contained the lung and several coils of the small intestine (which was well developed), and the left lobe of the liver projected into it. This cavity also communicated with the pericardial sac, the upper half of the left wall of this sac being absent. Between the two pleural sacs dorsal to the heart, but more to the right than the left, a large cavity was found containing a well developed stomach, pancreas, and spleen.

Dr. TAYLOR and Dr. E. J. M. WATSON made a communication on the Value of X ray Photography in connexion with the Structure of Bone. Dr. Taylor dwelt specially on the temporal bone in connexion with operations for the results of suppurative middle-ear disease. Dr. Watson exhibited many beautiful skiagrams showing the structure of different bones.

Dr. W. S. HAUGHTON made a communication relative to the Anatomy of the Skull Stereoscopically Demonstrated by the X Rays. He said that the difficulty of interpreting a single skiagram arose from several causes. The x ray picture was an example of uniplanar projection of multiplanar objects. This caused superposition of shadows. Then the fact that the x rays formed a diverging cone caused magnification and obliquity distortions. These sources of inaccuracy in the "single picture" were eliminated by the beautiful stereoscopic method of Roentgen photography first described by Mr. J. Mackenzie Davidson. By this method a reproduction of the skull could be obtained, perfect in contour and perspective. Dr. Haughton then showed by diagrams on the blackboard how all the above-mentioned sources of inaccuracy were eliminated in the stereoscopic method and afterwards in the reflecting stereoscope showed prints of the base of the skull and lateral views in which general points were well demonstrated, including the relations of the groove for the lateral sinus to the mastoid air cells, the mastoid emissary vein, the internal auditory meatus, the external auditory meatus, the cochlea, the semi-circular canals, the canal for the internal carotid artery, and the foramina in the base of the skull.

PATHOLOGICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on Feb. 11th, Mr. H. A. G. Brooke, the President, being in the chair.—Dr. Joshua J. Cox showed a boy, aged nine years, a typical achondroplasic dwarf. The stunted and deformed condition of the long bones of the limbs, the "trident hands," and the narrowed pelvis were very evident. A series of skiagrams of the skeleton of this boy was exhibited together with skiagrams of the skeleton of a dwarfed child suffering from infantile myxœdema and of a normal child aged nine years.—Dr. Charles H. Melland and Dr. D. Ord gave a demonstration, illustrated by coloured micro-photographic lantern slides, of the Blood in Health and Disease. The former described the process of fixing and staining the films and explained that although a thorough knowledge of the blood could only be obtained by making a count of the corpuscles, red and white, and an estimation of the hæmoglobin, with a thorough inspection of a large area of blood film, it was still possible with care to select portions of the film which appeared, as it were, an epitome of the condition met with, as well as to pick out special fields which showed the presence of peculiar or unusual conditions of the corpuscles. Such a procedure had been followed in the present instance; the selected fields had then been photographed and the corpuscles coloured by hand, the colours of the stained films being reproduced as closely as possible, and in those cases in which there was any ambiguity in the uncoloured photograph the colouring was undertaken with the original microscopic field at hand for comparison and guidance.—Mr. E. Stanmore Bishop showed two Tubo-ovarian Cysts removed from a woman, aged 34 years, the mother of one child, 10 years old. The os had been split. There were no symptoms for four years and then there was flooding for seven weeks, which was followed by metrorrhagia more or less ever since. Physical signs pointed to fibromyoma. Both cysts were firmly adherent and had developed under pressure. After discussing the three modes of origin of tubo-ovarian cyst and Mr. J. Bland Sutton's views on the production of hydrosalpinx Mr. Bishop mentioned a second case and showed the specimen, in which the same symptom of metrorrhagia had accompanied the development of a cyst under pressure of firm adhesions which had converted Douglas's pouch, in which it was found, into a closed cavity. Both patients recovered perfectly.—Dr. G. Robertson Mill showed a Preparation from a fatal case of Acute Obstruction. The terminal loop of the ileum was strangulated by an appendix which completely encircled it and the extremity of which was in turn imprisoned between the free border of the meso appendix and the termination of the ileum.—Dr. J. S. Bury showed a specimen of Sarcoma of the Lung which caused a pulmonary systolic murmur.—Other preparations were exhibited as card specimens.

HARVEIAN SOCIETY OF LONDON.—A clinical meeting of this society was held on Feb. 19th, Dr. W. Winslow Hall, the President, being in the chair.—Mr. T. Crisp English showed a case of Paget's Disease of the Left section on Yaws Pellagra, Lathyrism, Tinea Imbricata, and Pinta. Those who have practised or travelled in the East cannot fail to be reminded of what they have occasionally seen there and will be best able, perhaps, to appreciate their fidelity to nature. It should be added that in addition to these illustrations the work contains some excellent maps and plates

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A Treatise on Surgical Therapeutics of Domestic Animals By P J CADIOT, Professor, and J ALMY Adjunct, in the Veterinary School of Alfort. Translated by A. LIAUTARD M.D V M New York William R. Jenkins. Vol. I., Part 3. Pp. 130

THE names of the authors of this little volume are a sufficient guarantee of the value of the original work to the veterinary practitioner but the translation is somewhat disappointing to English readers. Most curious terms, unintelligible to English ears, are to be found in many places and many new words have been coined For example, anthrax is divided into "bacterian" and "bacteridian," the term "bacterian anthrax" being applied to the disease known as "blackquarter," a malady which is now known by every veterinarian to be due to its own specific organism and not in any way to be connected with the bacillus anthracis. We read on pages 209 and 210 that farcy is "a morvo-farcinous infection and under all its forms susceptible of cure ," and the word "malleinization" has been coined to express the use of the mallein test. Under Tuberculosis "a local relapse implies a new exeresis" and a "bacterioscopic" examination is said to establish the diagnosis of this disease with certainty The following paragraph on page 212 is quite unintelligible to the average mind and reads like a word puzzle "Fungous arthritis should be treated by immobilization of the joint and injections of iodoformed vaseline into the fistulaer those of chloride of zinc (1–10) into the zone neighbouring the morbid center (-cleragenous method of Lannelongue) ' We read (page 215) that "in man some observations have been mentioned which seem to establish the *contagiosity* of cancer,' and as headings of chapters the diseases known as "Stickfasts," "Contractures,' "Nerf-férure," and ' Amyotrophies" certainly require explanation. Perhaps, however, the most curious and erroneous statement is to be found on page 240 the chapter being headed ' Furuncle-Anthrax.' The statement is made that "ordinary *anthrax* is but a voluminous, diffuse furuncle, extending to the subcutaneous connective tissue, or an inflammatory tumour formed by confluent furuncles. Like the generality of human surgeons and of foreign veterinarians, we have no hesitation, notwithstanding the etymology, to apply this word to lesions which have nothing in common with anthrax (charbon) Bacteriology has shown that furuncle and anthrax are promoted in man by the same micro-organism—the staphylococcus pyogenes aureus." We regret that neither the translator nor the publisher can be congratulated on the result of the good intentions, expressed in the preface, to benefit the "English-reading practitioners as well as the students of our veterinary colleges '

Elementary Biology Descriptive and Experimental By JOHN THORNTON, M.A. London Longmans, Green and Co 1902. Pp 270 Price 3s 6d

THE volume before us forms a recent addition to the well known Practical Elementary Science Series published by Messrs. Longmans, Green, and Co , and is intended mainly for teachers who are preparing for the examinations of the Board of Education." The author in his preface exoresses the hope that "besides being serviceable to students preparing for the examinations mentioned the book will prove useful to all teachers engaged in promoting nature study " The work may be roughly divided into three parts dealing respectively with (1) the problems common to both plants and animals, (2) botany, and (3) animal biology Of these the botanical portion is the least satisfactory

In a biological work which is to serve as an introduction to a knowledge of the two constituent sciences, it is a mistake, we think, to enter at all deeply into a consideration of the structure of plants—that is to say, histological details which can only be made out with the aid of a compound microscope. By all means let the structure of plants be dealt with, but only so far as can be ascertained by the use of a good lens. It is a matter for regret that there is too great a tendency to neglect morphological botany, notwithstanding the fact that it may be made one of the most interesting and educative of sciences for beginners. It is not by any means suggested that Mr Thornton is responsible for this, for inasmuch as he has set himself the task of writing a book suitable for a certain examination he must perforce follow the prescribed work The matter is rather to be referred to those to whom the syllabus is due. On the other hand, the author is responsible for his statements of facts, these are generally both clear and correct, but this is not invariably the case For instance, in paragraph 13 the following observations concerning cellulose occur "It forms the fibrous framework of all plants, as well as the envelope round starch grains. Cotton, wool, flax, and hemp consist of cellulose mixed with small quantities of mineral matter, while woody fibre is modified cellulose with colouring and mineral matter." Further, several statements regarding fibres need much improvement, for example, on p. 57 we find that the bast fibres (presumably of the sunflower) are described as having cellulose walls, again, on the following page the conduction of water is ascribed to the wood fibres, and, further on p 133 the following occurs 'The small black seeds of the cotton plant are also provided with fine white hairs or fibres for dispersal. These fibres provide the cotton of commerce " Besides structure, the botanical portion of the book deals also with the morphology and physiology of plants.

That part of the work which is devoted to animal biology is chiefly concerned with the outlines of the structure and physiology of the human body The cat is taken as an example to illustrate "structure in relation to movement as represented by some common quadruped. ' Experiments are interspersed throughout the text and very generally are suitable, it may be pointed out, however, that the following experiment as it stands (p 90) is not conclusive "Collect water passed through some soil in a flower pot. Filter it to remove suspended matter and then evaporate the clear solution in an evaporating dish. A residue is left, showing that soluble matter was taken up from the soil by the water that has passed through it." The work is illustrated by 180 figures, some of which have been specially drawn, while several have been obtained from various sources. Many questions and exercises, with occasional hints and explanations, form a sort of appendix. In conclusion, we are of opinion that, with the exception of those points of weakness to which attention has been drawn, the work will prove useful to those for whom it is intended.

LIBRARY TABLE.

Memoirs and Letters of Sir James Paget Edited by STEPHEN PAGET, one of his sons. Third Edition (eighth impression). With a Postscript by Sir THOMAS SMITH. London Longmans, Green, and Co. 1903. Pp 465. Price 6s net —This the third and cheaper edition of a remarkably interesting work, of which we reviewed the first edition in THE LANCET of Oct. 12th 1901, p. 982, has the advantage of a postscript by Sir Thomas Smith who as he himself says, Duchenne's Birth Palsy —The cases were discussed by the members present.

KIDDERMINSTER MEDICAL SOCIETY —A meeting of this society was held on Feb 6th, Mr J Lionel Stretton, the President, being in the chair —The President showed a large Appendix Cæci removed from a man, aged 25 years, whose peritoneum was found to be infiltrated with miliary tubercle.—The President also showed two patients upon whom he had operated for Anthrax. One of them was a woman, aged 31 years, in whom the pustule appeared on the cheek on Dec. 9th and was excised on the 15th The other patient was a man, aged 44 years, on whose neck the pustule appeared on Jan. 18th and was excised on the 24th. Both patients were treated with powdered ipecacuanha internally and externally and both made good recoveries. The President also mentioned the case of a man who died about two months previously in whom the pustule was not removed He insisted on the importance of immediate excision and advocated the use of ipecacuanha internally and externally Though he was not convinced as to its specific action he had so often seen cases recover under its use that he felt bound to use it until its value was disproved —Mr E Stanley Robinson showed a man, aged 59 years, who was considered to be suffering from Thoracic Aneurysm —Dr W L. Maccormac read notes of the case of a man, aged 55 years, who was admitted into hospital suffering from Dyspnœa after exertion and a harsh, "brassy" cough. The laryngoscope showed some thickening at the upper end of the larynx and the case was diagnosed as one of malignant disease of the larynx Chloroform was being administered in order that tracheotomy might be performed for the relief of the dyspnœa when the patient died from asphyxia —Dr Bertram Addenbrooke read a paper on Medical Electro therapeutics.

ÆSCULAPIAN SOCIETY —A meeting of this society was held on Feb 20th, Dr Thomas G Stevens, the President, being in the chair —Dr B G Morison opened a discussion on Infantile Diarrhœa (Zymotic Enteritis) The cause of the condition he held to be the ingestion of organisms with food. The clinical features and pathology were similar to those of Asiatic dysentery The green coloured stools were due, he thought, to oxidation of a deficient quantity of bile in the intestine This seemed to be confirmed by the altered colour of the stools through the stimulus of rhubarb or euonymin to the normal yellow The essential item in treatment was to avoid fermentation of milk, and this was most simply done by abstinence from milk for 24 hours or more. Albumin-water, meat-juice, or whey might be given advantageously Rest in bed was preferable to being nursed. The drugs most serviceable were salol as an antiseptic, bismuth and chalk as astringents, and ipecacuanha as a cholagogue.—The President said that he had seen very good results in these cases from giving small doses of the solution of perchloride of mercury and again from glycerine of carbolic acid.—Dr S P Huggins said that he had found benefit from feeding on unsweetened condensed milk and giving sodium salicylate.—Dr Morison replied.

HUNTERIAN SOCIETY —A meeting of this society was held on Feb 11th, Dr A L Galabin, the President, being in the chair —The annual oration was delivered by Mr T H. Openshaw, C M.G The subject chosen was "John Hunter, his Influence on Surgery, with some remarks on the Treatment of Appendicitis."—The following officers were elected —President, Dr S H. Appleford, vice-presidents, Dr W A. Dingle, Mr F Wallace. Mr J Adams, and Mr J H Targett, treasurer, Dr R. Hingston Fox, trustees, Mr F M. Corner, J P, Mr F Gordon Brown, and Mr R. Clement Lucas, honorary librarian, Dr T H Arnold Chaplin, orator, Dr J F Woods, secretaries, Dr T Glover Lyon and Mr H L. Barnard, editorial secretary, Dr E W Goodall, council, Dr H R. Andrews, Sir Hugh R. Beevor, Dr A T Davies, Dr R Fortescue Fox, Mr A W Galloway, Dr Galabin, Mr F R. Humphreys, Dr Ernst Michels, Dr W Rawes, Dr J W Oliver Dr F J Smith, and Dr Woods, auditors, Mr F Gordon Brown, Dr Smith, Dr Davies, and Dr Woods.

VACCINATION IN BRISTOL.—During 1902 there were 6898 primary successful vaccinations performed in Bristol as compared with 5776 in 1901

Reviews and Notices of Books.

The Diseases of Warm Countries a Handbook for Medical Men. By Dr B SCHEUBE, State Physician and Sanitary Adviser, Greiz, late Professor at the Medical School in Kioto (Japan) Translated from the German by PAULINE FALCKE, with addenda on Yellow Fever by JAMES CANTLIE, M.B Aberd., F R.C S. Eng, and on Malaria by C W DANIELS, M.B Cantab, M.R.C S Eng Edited by JAMES CANTLIE, M.A, M.B. Aberd., F R.C.S Eng, D P H., Lecturer at the London School of Tropical Medicine, Surgeon to the Seamen's Hospital Society, Albert Dock Hospital, Lecturer on Applied Anatomy, Charing Cross Hospital Medical School, London, Consulting Surgeon to the Alice Memorial Hospital, Hong Kong With all the original Coloured Maps, Charts, Illustrations, &c., together with many additional Plates from the *Journal of Tropical Medicine* Second revised edition. London John Bale, Sons, and Danielsson, Limited. 1903. Pp 594. Price 30*s* net

WE may say at once that this is a full and, so far as is possible considering the many fresh additions that are being constantly made to our knowledge, a very complete book. The editor is quite justified in calling attention in his preface to the range of knowledge, general accuracy, and scientific spirit which characterise Professor Scheube's work and to the care and labour involved in the production of a book of this kind. The desirability of reproducing it in English will be admitted by all who are interested in tropical diseases and in the progress of scientific medicine. The translation of Professor Scheube's work has been successfully carried out by Miss Pauline Falcke

As affording a general idea of the nature and scope of this handbook of the diseases of warm countries we may say that the subjects embraced in it are arranged in six groups—general infectious diseases, diseases caused by intoxication, diseases due to animal parasites, organic diseases, cutaneous and local diseases, and the cosmopolitan diseases in the tropics, with an addendum to the chapter on yellow fever in which Mr Cantlie, who edits the handbook, describes the results of the latest investigations of the United States Army Commission in Cuba, and another addendum to the chapter on malaria by Dr Daniels The method generally followed in dealing with the subjects under consideration is a systematic and good one. It consists of a definition of the disease, its synonyms, history and geographical distribution, etiology, symptomatology, varieties, pathological anatomy, diagnosis, prognosis and treatment, supplemented by a carefully compiled bibliographical list of the literature bearing upon the subject It would be impossible, of course, within any reasonable limits to travel over the ground occupied by an exhaustive treatise of this kind. We must content ourselves by referring to a few of the chapters which we have read with most interest. The volume opens with a consideration of the general infectious diseases and begins with Plague This chapter summarises the facts connected with that disease, together with the results which have accrued from recent experience and scientific investigations during the modern history of epidemic plague

The chapter on Mediterranean Fever is a brief one, but it nevertheless gives an accurate description of what is known. The Malaria of Warm Countries is discussed in a long and carefully written chapter and with the excellent addendum by Dr Daniels, medical superintendent of the London School of Tropical Medicine, may be profitably studied The chapters on Beri beri, Leprosy, and Filarial Disease are admirably illustrated, indeed, the illustrations throughout the volume are, generally speaking, very good. Many of them are from the *Journal of Tropical Medicine* or are new, as will be seen if the reader will turn to the all The medical reader, too, will find little that is faulty or deficient in Miss Sturge's account and explanation of the "healing" side of Christian Science. What Mark Twain's admirable and irresistible articles in the *North American Review* do for the average man and woman of the world in the way of showing the real nature of Christian Science, its grossly material side and its commingled spiritual excellences, that Miss Sturge's book will do for the thoughtful reader and the student of religion, if only such persons can endure the ordeal of reading a just account of Christian Science.

New Inventions.

IMPROVEMENTS IN VAGINAL TUBES

IN THE LANCET of Dec 4th, 1897, p. 1463, I described a new form of vaginal tube the chief characteristics of which were a bulbous end and a comparatively thin rigid shaft. This scientifically adjusted and practicable instrument offered the one disadvantage of the bulb being hollow It has hitherto been considered by gynæcologists and obstetricians that all vaginal tubes must of necessity have a number of perforations terminating into the central canal The common red gum elastic tubes, used hygienically by women, as well as all glass tubes used by surgeons, have been made in this way A tube with several very small perforations, however, cannot easily be kept clean. I have found that, provided a tube be bulbous, as seen in Fig 1, only one bore is necessary, running from end to end, particularly if this bore enlarges at its extreme end, as seen in Fig 2 (section), the bulb dilates every part of the vagina and its fornices, according as it is manipulated and levered while the fluid distributes itself just as widely, practically, as it would when passing through a number of perforations This simply-constructed bulbous tube in glass or vulcanite is thus the easiest possible to keep clean, it may be antisepticised more readily and perfectly than any other vaginal tube in existence. In the case of glass the bulb is not solid between the bore and the circumference, but hollow as seen in Fig 2 (section), and there is no communication between the bore and the cavity of the bulb Experiment shows that a tube having a solid walled bulb could not be made in either glass or earthenware, and if it could be made it would not lend itself for fine manipulation as does a hollow lighter one. The glass bulb illustrated also floats in fluid and may be dropped into a vessel containing fluid without breaking

FIG. 1.

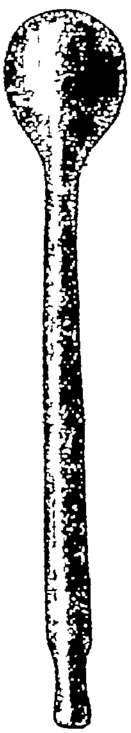
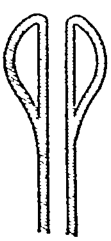


FIG 2.



Section.

FIG 3.

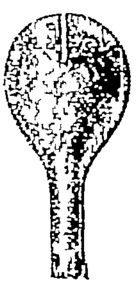
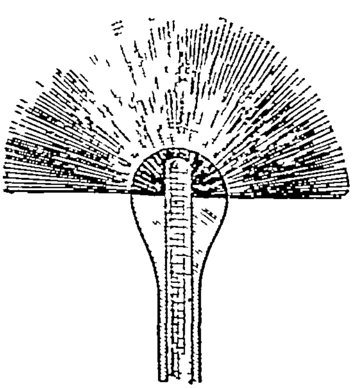


FIG 4



Section.

Another vulcanite form of tube, Fig 3 and Fig 4 (section) has its single bore met near the end by a very narrow bisecting slot, which not only spreads the fluid, as seen in Fig 4, but prevents the tube from being blocked by clot or other material returning in a back flow, as the perforations of tubes commonly used frequently are. This form of tube may be preferred by those who use a Higginson's syringe. The small end of each tube is made to fit any ordinary indiarubber douche or syringe tubing

The glass tubes are made in one design, as illustrated in Fig 2, and with one size of bulb only, namely one and a quarter inches in diameter In vulcanite the bulbs are of two sizes, one and three-eighths and one and one-eighth inches respectively in diameter, and have two distinct designs the one having a single bore and the other a single bore met by a slot. They are supplied by W H. Bailey and Son, 38, Oxford street, London, W

Surbiton. HAYDN BROWN

ROYAL COLLEGE OF PHYSICIANS OF LONDON

A COMITIA was held on Feb 19th, Sir WILLIAM SELBY CHURCH, Bart., K C B, the President, being in the chair The meeting had been adjourned from Jan. 29th.

A report was received from the Laboratories Committee, dated Dec 5th, 1902. On the motion of the Senior Censor (Sir R. DOUGLAS POWELL), seconded by the Second Censor (Dr G VIVIAN POORE) the report was received and adopted.

The Harveian librarian (Dr J F Payne) presented a list of books and other publications which had been given to the library during the past quarter and the thanks of the College were ordered to be given to the donors.

The annual return by the examiners of the results of the examination for the Licence in the year 1902 was received and ordered to be entered on the minutes.

The PRESIDENT then dissolved the Comitia.

ANNUAL DINNER OF THE WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—The members and friends of the West London Medico-Chirurgical Society held the twenty-first annual dinner of the society at the Trocadéro Restaurant, London, on Feb 19th, under the chairmanship of the President of the society, Mr Rickard W Lloyd. The first toast after the customary loyal toasts was The Imperial Forces," proposed by Mr T R. Atkinson who in the course of his remarks on the medical department of the army pointed out that the institution of the Medical Staff College in the metropolis was a great sign of the times. Sir William Taylor, K.C B (Director General of the Army Medical Service), in reply referred to the services rendered by the West London Medico-Chirurgical Society and similar associations in the cause of the wives and children of those who were obliged to go on active service He looked forward to the time when the civil members of the medical profession would know more of the medical department of the army and he trusted that the establishment of the Medical Staff College in London would prove that its members were not unworthy of the consideration of their brethren. The toast of the "West London Medico-Chirurgical Society" was given by Mr F Swinford Edwards and acknowledged by the President Mr C R B Keetley followed with a witty speech in which he proposed "The Kindred Societies." Mr Howard Marsh, who replied in his official capacity as the President of the Clinical Society of London, received hearty applause for a spirited and humorous answer to Mr Keetley's good natured raillery Dr Seymour Taylor proposed 'The Guests," for whom Dr J F W Silk answered After Mr Lloyd had acknowledged the toast of 'The President," proposed by Dr F F Schacht, the officers of the society, Mr T Gunton Alderton (treasurer), Dr E. A. Saunders (senior secretary) Mr H. P Dunn (editor of the society's journal), and Mr W McAdam Eccles (editorial secretary), duly acknowledged the compliment paid to them by Mr Alban H. G Doran.

had been intimately associated with Paget for 50 years. Sir Thomas Smith seems to have been most impressed by Paget's enormous capacity for work. "It was with him a recreation, or rather a passion." "In his own work Paget certainly showed a complete disregard of his health and personal comfort." When quite an old man, however, he seems to have realised that a man can overwork, for he said to the writer of the postscript, "I have worked too hard, Tom." The increasing infirmities of age are irksome to everyone and must have been doubly so to one so active as Paget, but these memoirs and letters so carefully and lovingly edited by "one of his sons" show, again to quote Sir Thomas Smith, "how contentedly he acquiesced in the necessary restrictions of increasing infirmity and with what cheerful submission he resigned his life."

A Concise History of the North Staffordshire Infirmary and Eye Hospital. By RALPH HORDLEY. Newcastle-under-Lyme: G. T. Bagguley. 1902. Pp. 71. Price 5*s.* net.—In 1902 occurred the centenary of the foundation of the North Staffordshire Infirmary and the year was further marked by the laying of the foundation stone of the new nurses' home, a building erected in memory of the King's Coronation. In honour of these two events Mr. Hordley, who was formerly secretary and house steward, compiled this concise history. The institution started as the Dispensary and House of Recovery in Etruria Vale and was erected on a plot of land purchased from Josiah Wedgwood in 1802. Here it remained until 1815, when it was moved to Etruria and was called the North Staffordshire Infirmary. In 1869 another move was made to Hartshill when it was called by the additional title of Eye Hospital. Mr. Hordley's researches into the archives of the institution show the steady progress made in the buildings and in the methods of treatment in vogue. We may add that the last addition—namely, the nurses' home—has cost £10,000.

Bacteria in Daily Life. By Mrs. PERCY FRANKLAND. London: Longmans, Green, and Co. 1903. Pp. 216. Price 5*s.* net.—This is a popularly written but none the less accurate account of the influence of bacteria in everyday matters. Much of the text, we learn from the preface, has already appeared in various periodicals, but a great deal of the book is worth spreading broadcast, not only from a medical point of view but also from those of social and political economy. Thus the chapters on What we Breathe and on Sunshine and Life may well induce county councils and other authorities to do everything in their power to inhibit overcrowding and the smoke nuisance, while the chapter on Milk Dangers and Remedies shows very clearly how the prevailing agricultural depression might be largely lessened if our farmers and landowners would only follow the example of Denmark and see about organising dairy produce in a scientific and cleanly manner. In the year 1898 this country imported in round numbers 360,000,000 pounds of butter, and of this quantity Denmark alone sent to us over 160,000,000 pounds. The last chapter of the book, entitled "Some Poisons and their Prevention," deals with the question of antitoxins and immunity, and though wisely not going deeply into the very difficult subject of immunity, Mrs. Frankland has collected a number of facts from the work of investigators which will give the ordinarily intelligent reader a good idea of the work accomplished in this field of science up to the present time.

The People of Lewis. Report to the Secretary for Scotland by the Crofters' Commission on the Social Condition of the people of Lewis in 1901 as compared with 20 years ago. London: Eyre and Spottiswoode. 1902. Pp. 65—civ. Price 1*s.* 5*d.*—An interesting Blue-book has recently been published on the social condition of the people of Lewis, a large island in the Outer Hebrides. The information contained in the volume is by no means confined to the strict letter of the title, for a good deal is to be found concerning the past history of the islanders. The report was drawn up to give an idea as to the best method of treating the problems conveniently summed up in the expression "the crofter question." The conditions of life which existed in Lewis some years ago were of the most insanitary nature as judged by modern standards; animals and men dwelt not only under the same roof but in the same room and the droppings of the cattle were removed but once a year when the land was tilled in the spring. A form of disease called "dung fever" was usually prevalent at that time of year and not infrequently proved fatal. Another disorder which was not uncommon in old days was one which afflicted young children about the fifth day after their birth. The disorder was investigated some years ago by Dr. C. M. Macrae ("On Tetanus Nascentium.") Notwithstanding these and other drawbacks the birth-rate is very high and the population is increasing rapidly. For a long time this has been a cause of uneasiness to the lords of the soil, one of whom, in the early part of last century, "used every means in his power to keep the population down." This singular statement occurs in the evidence given at an inquiry held in 1827. The land available for crofters has been insufficient for their wants, and in course of time it has happened that those who have had holdings have allowed their families to share their rights with them and new buildings have been put up for the accommodation of the younger people, the amount of land under tillage not being increased. One of the problems on which the Commission has had to report is what in these circumstances should be done. Another point which the Commission investigated had reference to an alleged increase in lunacy amongst the islanders. The result of this inquiry seems to make it clear that the chief change has taken place in regard not to the numbers but to the treatment of lunatics. Formerly they were not interfered with and lived as they chose; at the present time they soon come under observation and are removed to the asylums provided for them. The people of Lewis are a very fine, a most prolific, and a most industrious race. The men take more than their share in national defence. In the Royal Naval Reserve alone the Lewis islanders had over 2000 men in training during last year. The home industries of Lewis are few, but a considerable amount of cloth is still made as well as a little pottery. The pots, which are only manufactured at one place, are rude and primitive in appearance and are little used for home purposes, but it is pleasing to know that considerable quantities of them are sold in the course of a season to the "curio-hunters" for whom they are designed.

The Truth and Error of Christian Science. By M. CARTA STURGE (Moral Science Tripos, Cambridge), with introduction by Rev. H. S. HOLLAND, Canon of St. Paul's. London: John Murray. 1903. Pp. 160. Price 6*s.*—Miss Sturge has so thoroughly exposed the true nature of that conglomeration of mistake, conviction, and blind assertion which goes by the name of Christian Science that her work is perfectly intolerable. To say this is to pay her the truest compliment. No sane mind can tolerate page after page of such mistaken logic and such crooked conviction as are revealed in the works of the "founder" of Christian Science; and in the same way Miss Sturge has so conscientiously expounded and demonstrated this new doctrine that her work, through its very excellence, produces a degree of mental irritation that makes the complete perusal a sheer impossibility. Miss Sturge deserves great credit for the sober and quiet way in which she has sought to understand the sensational statements, the unwarranted conclusions, and the untrustworthy premisses of Mrs. Eddy, and still more for the judicious and impartial manner in which she, so to speak, shows up Christian Science as a mistaken philosophy, if philosophy it can be called at introduction of acid water arise, and the efficiency of the method of meeting these risks should be constantly checked and wherever possible improved upon. When the matter is dealt with on proper lines there is, in Mr POWER'S words, "no difficulty whatever in safeguarding a population supplied wholly or partly from moorland sources from risk of receiving water capable of dissolving lead." A detailed account of the nature of the precautions which should be taken will be found in Dr HOUSTON'S report, and his description of the tests for acidity and "plumbo-solvent" ability, which he has adopted after a long series of comparative experiments, should be particularly useful to those concerned. We are glad to notice that Mr POWER speaks apologetically of the use of the term "plumbo-solvent" It does no credit to the English language and we think if a new term was necessary some more euphonious and accurate word might have been coined

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Adenoma of the Rectum

THE Erasmus Wilson lectures at the Royal College of Surgeons of England were delivered this year by Sir CHARLES B BALL, Regius Professor of Surgery in the University of Dublin. He took as his subject adenoma and adeno-carcinoma of the rectum The choice was a very happy one as it is a subject which has hardly been studied with the attention which it deserves We are quite ignorant of the etiology of adenoma of the rectum and we have not yet determined the relation between the simple benign adenoma and the adeno-carcinoma of the rectum which is the commonest malignant growth of this portion of the alimentary canal. The lectures were very copiously illustrated by lantern slides which showed clearly the macroscopic and microscopic characters of the growths From a very early period in the history of medicine the diseases of the rectum attracted much attention on the part of physicians, for the rectum is the only portion of the bowel which can be examined during life without cœliotomy, and therefore, at a time when necropsies were hardly ever performed, the rectum was the only portion the diseases of which were the subjects of accurate knowledge. It is, therefore, with interest that we turn to the fathers of medicine to see if they have written anything about so striking a condition as adenoma of the rectum. We find that among the works which are attributable to HIPPOCRATES or are the products of his immediate successors is a small treatise on hæmorrhoids This contains a reference to a condition called the "bleeding condyloma of the rectum." It is not improbable that this term includes other forms of growth, such as venereal warts, but it can hardly be doubted from the description and the treatment that it was applied especially to the sessile or pedunculated adenoma of the rectum CELSUS also gives a similar account and all subsequent writers on surgery up to modern times have treated of this pathological condition.

Sir CHARLES BALL pointed out that it is very difficult to draw any sharp line between the benign adenoma and the malignant adeno-carcinoma and said that the only test which our present knowledge affords us is the relation of the epithelial proliferation to the basement membrane So long as this proliferation is simply a superficial development, even though it may produce a definite tumour projecting into the lumen of the bowel, we may look upon it as benign, but if, on the other hand, the proliferating epithelium pierces the basement membrane and invades the submucous layer and the muscular coat, or involves the tissues external to the bowel wall, then we are compelled to regard the growth as malignant, for it manifests all the clinical characters of malignancy In some cases on digital examination the diagnosis between these forms of growth can be made with confidence, the superficial character, the softness, and the mobility of the simple adenoma being obvious, while in the case of the malignant growth its hardness and fixation proclaim at once its malignancy In other instances, however, the assistance of the microscope has to be invoked before any certain diagnosis can be made Hæmorrhoids are confined to the rectum, but these adenomata, both the simple and the malignant forms, are found throughout the entire length of the intestinal tract, though they are much more frequently met with in the rectum The lecturer was inclined to attribute to local irritation the origin of some of the simple adenomata, for he pointed out that in cases of prolapsus recti in young children it is not rare to find small sessile adenomata on the exposed mucous membrane—too small, indeed, to have assisted in the production of the prolapse, but possibly produced by friction against the child's clothes. Upon the exposed mucous membrane of a colostomy, also, similar growths may be seen to appear Sir CHARLES BALL objects on etymological grounds to the use of the word "polypus" for the pedunculated variety of the adenoma and, indeed, its use cannot be defended. The treatment of the benign adenoma is simple, for the more pedunculated forms ligature with removal by scissors is all that is required, while the more sessile varieties may be excised. Sir CHARLES BALL in his second lecture dealt with the "adeno-carcinoma," and showed that there are two distinct clinical types, one commences as a flat nodule in the mucous and submucous tissues, spreading somewhat rapidly and occurring more commonly in comparatively young subjects, the other is more superficial at first, does not grow so rapidly and contains more fibrous tissue, by the contraction of which stenosis of the bowel may be produced leading to intestinal obstruction. The histology and the symptoms were detailed, and much emphasis was laid on the urgent necessity for the early local examination of all cases of chronic diarrhœa, seeing that on an early diagnosis depends the hope of satisfactory treatment of the disease. For when the lymphatic glands are involved and the malignant growth has extended beyond the bowel wall there is but little reasonable expectation of extirpating the tumour

The lectures were excellent and were founded on a vast clinical experience and will doubtless appear in book form, when we hope that a few points which demand further investigation will receive the author's consideration. Sir CHARLES BALL agrees with most histologists in looking on these simple rectal growths as true adenomata and the question arises, are they really adenomata? He has pointed out himself in his first lecture the very close analogy which exists between these "adenomata" of the intestinal mucous membrane and cutaneous warts. Now the chief reason for considering these adenomata to be glandular in structure is that on

THE LANCET.

LONDON SATURDAY, FEBRUARY 28, 1903

Moorland Waters and Lead Poisoning

A REPORT has just been issued by the Medical Department of the Local Government Board which gives details of a prolonged research undertaken by Dr A. C HOUSTON on the power which certain moorland waters possess of dissolving lead The object of the research was to determine the causes of the acquisition by water of this "plumbo-solvent" ability and to ascertain the extent to which the large moorland gathering grounds of Lancashire and Yorkshire are liable to furnish water capable of exercising the objectionable property of acting upon domestic lead service pipes So far as the cause of the phenomenon is concerned, Dr HOUSTON'S completed records point to conclusions which are substantially the same as those which the present medical officer of the Local Government Board, Mr W H. POWER, C B, drew tentatively in 1895 as a result of his own earlier inquiries into lead poisoning in Sheffield and of study of the data subsequently obtained in his department

Briefly stated, a water which is capable of dissolving lead is acid and its acidity is ultimately to be referred to drainage from peaty soil. The formation of acid takes place within the peat itself and results from the action of specific bacteria, which, when isolated, possess the power of rendering by their growth a sterile neutral decoction made solely from peat both acid and possessed of "plumbo-solvency" The degree of acidity of a given supply is determined by the presence of peat on the gathering area and by the conditions under which the drainage of the peat gains access to the supply The degree of its "plumbo-solvent" ability, broadly speaking, corresponds to the degree of its acidity, although the ratio is not necessarily quite the same for all peaty waters. The natural conditions which favour the access of peaty water to a supply are, of course, numerous and varied. The most dangerous period is commonly when a sharp storm succeeds a long period of drought, the "first washings" of peat in these circumstances being particularly acid. Hence, as Dr HOUSTON shows, there is much advantage in placing "leaping weirs" across the tributary streams concerned, arrangements designed to exclude these first washings automatically from the supply Whether the water derived from peat which ultimately reaches the waterworks reservoir is acid or not depends to some extent upon the distance traversed and upon the character of the bed of the stream, but is mainly determined by the extent to which it becomes mixed with spring water, which (at any rate in the Lancashire and Yorkshire districts) seems habitually to possess acid-neutralising properties. Out of 58 reservoirs served by the gathering grounds of 23 waterworks visited by Dr HOUSTON no less than 35 contained acid water able to dissolve lead. Among these are reservoirs of such important municipal supplies as Bradford, Halifax, Keighley, and Oldham In most instances the source of acidity could be traced to particular peaty streams and their small tributaries The occasional ingress of large volumes of acid water in times of storm by way of these feeding streams, and in part the fact that the bed of the reservoir is frequently itself peaty, account for the circumstance that the water of storage reservoirs was in some instances found to possess an almost constant degree of acidity year after year

Fortunately acid water from such reservoirs is seldom supplied directly to the consumer Most large waterworks in Lancashire and Yorkshire have service reservoirs which receive their water from more than one source of storage, and Dr HOUSTON gives many instances where, under normal conditions, admixture with a large volume of neutral water in itself suffices to render the mixed water harmless as regards lead. Moreover, the ordinary process of sand filtration exercises a considerable effect in counteracting acidity In several instances it is customary to add lime or whiting at the waterworks as a matter of routine, and this, when properly done, prevents the water from acting on lead. The practical question, however, is whether the precautions taken are uniformly efficient Wholesale poisoning such as occurred in Sheffield in 1886 and in Mossley in 1893 is comparatively rare But there have been several recent occasions in other Yorkshire and Lancashire towns where prevalence of lead poisoning has occurred to a minor extent And, as Mr POWER points out in his introduction to Dr HOUSTON'S report, "it is important to remember that if owing to temporary omission of precaution a water supply becomes possessed of plumbo-solvent properties for only a brief period, or if again a water habitually exercises only a slight solvent action on lead, it is likely that the number of cases of lead poisoning occurring at a given time will be small and that few will come under the notice of any one medical observer It is easy to understand that in such instances mischief may be caused unknown to the responsible authorities, or that even if mischief is suspected, the matter may receive insufficient attention through failure to realise that in such circumstances the evidence that the poisoning is attributable to the water must of necessity be incomplete" The warning here given will be indorsed by medical officers of health who have had occasion to be suspicious of the occurrence in their districts of lead poisoning due to water, and it should not be forgotten by waterworks engineers It is unfortunately too common for the "waterworks department" of a large municipality to discourage advice from experts of other departments and the danger of this policy is obvious where any question of lead poisoning is likely to arise. All assistance which medical officers of health can give should be welcomed and the borough analyst, as the official chemist, should be used, not merely, as at present, to give an occasional assurance that a particular sample of tap water contains no lead, but also to examine systematically and frequently representative samples taken at different points in the distributing area and from the reservoirs and filters In other words, every authority supplying moorland water should know precisely where the risks of the

There is yet another uncertain element in an examination and that is luck. Of course, in a theoretically perfect examination luck should have no place, but practically it often influences the result A question may be put which bears on a case recently seen or a chapter recently read and so success may follow, while if a similar question on another part of the subject had been given failure would have resulted. Yet the fact remains that a well read man who knows his practical work ought to be able to pass the examination even though he may not have found in his books the answers to all the questions exactly in the words in which he must express them. There is one danger in reading which needs to be guarded against and that is the tendency to dip into too many books. One work mastered is of far greater value than two half learned. Let the student, therefore, choose his text-book with care and then proceed to master it. When that book is finished he may, if time permit, peruse another and he will derive benefit from seeing the same facts presented in a different way

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The Sale of Poisons

THE report of the Departmental Committee appointed by the Lord President of the Council "to consider Schedule A to the Pharmacy Act, 1868, and to report the alterations therein which it deemed expedient and whether a third part should be added thereto," was issued last week For some time past the rumour had gained currency that the committee had decided upon the adoption of a third part in the schedule which would concede some relaxation in regard to the sale of poisonous materials for agricultural and horticultural purposes. As a matter of fact, the committee has decided that such a part might be added without undue risk to human life. On the face of it this recommendation is of course directly opposed to the vital principle of the Pharmacy Act which practically placed the sale of poisons exclusively in the hands of qualified persons—that is to say, pharmacists who have been duly registered in accordance with the provisions of the Act. The vendor of preparations for use in connexion with agriculture, horticulture, or sanitation is not, according to the recommendations of the committee, to be a qualified man but only a licensee, the sale of such preparations being subject to regulations to be laid down by the Privy Council.

There can be no doubt that some inconvenience has been experienced by the agricultural and horticultural industries in obtaining what are powerful aids to those businesses—namely, arsenical sheep dips and weed destroyers. As a matter of fact, large quantities of these preparations have been sold illegally and in contravention of the requirements of the Pharmacy Act, so that the Pharmaceutical Society has not been able to exercise fully the powers conferred upon it with a view to restrict the sale of poisons to registered persons Now and then, however, action has been taken and convictions have been obtained We have recorded in the columns of THE LANCET instances in which the proceedings were based upon the sale by seedsmen or florists of a weed killer containing arsenic. Since these convictions were obtained some uneasiness has been felt amongst the retailers of this class of poisonous preparation, many of them hesitating to continue the sale for fear of the law being carried into effect in their cases also So far the Pharmaceutical Society had scored some sort of a triumph and it cannot be said that it was exceeding its duties in this matter in the least degree or was pursuing a vexatious line of action. It possessed full powers under the Pharmacy Act to restrict the sale of poisons even for the specific purpose indicated. The success of these actions, however, was the beginning of a strong movement amongst the agricultural and horticultural interests to secure the removal of the restrictions under which they laboured, with the result that a departmental committee was appointed and its conclusion now is that certain concessions should be made It is of opinion that preparations for use in connexion with agriculture, horticulture, or sanitation (including arsenic, the alkaloids of tobacco, and carbolic acid) might be placed in a third part of the schedule, and that they should be sold only by licensed persons and be subject to regulations to be made by the Privy Council.

Although it seems to us that this recommendation suggests a somewhat hazardous experiment, it must be admitted that the arguments in favour of such recommendations being adopted are not without force It should be remembered that the Pharmacy Act was drawn up in 1868, at a time, that is, when there could not have been the slightest idea that this Act would ultimately apply to industries dependent upon the use of poisonous materials. No one can contend for a moment that the sale of a weed killer or insecticide requires the supervision of a particularly well educated or qualified person such as is the registered pharmacist. But it is to be hoped that in the event of the committee's recommendations being adopted at least an intelligent person will be chosen. The Pharmacy Act in reality appointed the registered pharmacist to be the qualified vendor of poisons intended for medical application, because obviously only a responsible person with an accurate knowledge of poisons should be trusted to sell or to dispense preparations containing them The employment of poisons for agricultural purposes cannot be said to relate in any way to the business of a pharmacy Whilst, however, we are inclined to agree with the committee that the industries of agriculture and horticulture cannot be conducted effectively on modern principles without the extensive use of poisonous materials we are by no means certain that the relaxations suggested can be conceded without, as the committee puts it, undue risk to human life. At the same time, we are not sure that, if every hamlet and village could have its qualified pharmacist who would be authorised to sell poisonous materials, the public interest would be more effectually safeguarded. The risk, it seems to us, begins after the sale is effected and when the article is in the hands of the purchaser The committee practically adopts the view that if the number of registered pharmacists were increased—that is, if every little place in the United Kingdom could have its pharmacy—there would be no necessity to extend the sale of poisons to licensed persons or to persons who are not registered as pharmacists One complaint of the farmer and gardener is that there are not enough pharmacists in the United Kingdom to distribute the poisonous materials which they require. Therefore the committee suggests that an ironmonger or a microscopic examination tubular cavities can be seen lined by a modified columnar epithelium, resembling somewhat the Lieberkühn follicles of the bowel. In a section of an ordinary papilloma of the skin an exactly similar structure is visible. The digitate processes of the wart give rise to cleft-like spaces between them lined by the epithelium of the part, and therefore we would suggest that the so called adenoma of the rectum is simply a papilloma growing from the rectal mucous membrane and that the so-called glandular spaces are merely the fissures between the papillary processes In the more marked "villous" adenomata this structure is obvious and it is extremely probable that in the conglomerate forms the same structure obtains. The rectal adenomata also resemble the cutaneous papillomata in the frequency of their occurrence in the young, and in both forms the removal of a single growth may be followed by the appearance of a large number of similar tumours This is not rarely observed with warts and a few cases have been recorded in which a similar result occurred on the removal of a single rectal adenoma Mr THOMAS BRYANT published in THE LANCET in 1898[1] a very striking case in which after the removal of one "polypus" the rectal mucous membrane ultimately became almost covered with sessile outgrowths There is yet another similarity between rectal adenomata and cutaneous warts. They are both very liable after existing for years without apparent change to spread into the deeper tissues and to become carcinomatous. We suggest that the "adenoma" of the rectum may be truly a "papilloma"

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The Choice of Books

THE selection of a text-book by the student of medicine is often extremely difficult, yet on a judicious choice of works for his reading depends much of his success at examinations. That this difficulty in choosing is felt by many is clearly manifested by the frequency with which we are asked to advise on a course of reading for some examination. We always answer these correspondents to the best of our knowledge, but we often find it impossible to name an individual book which will fulfil exactly the requirements In the Students' Number of THE LANCET we give every year lists of those works which we consider to be on the whole the most suitable for students. It must, however, be acknowledged that whatever care be devoted to the making of such a selection the result will not be always perfectly satisfactory in the case of every student There is no work on any subject which is suitable for all candidates and for all examinations Even when there are two books of equal standing it may be almost impossible to say which is the more suitable of the two To take an instance a few years ago the two chief text-books on physiology in the English language were FOSTER'S Physiology and LANDOIS'S work as translated and edited by STIRLING No one conversant with the subject would deny that each of these treatises was a work of the highest class and that either could be studied with great benefit by a candidate for any of the higher examinations in physiology, yet it would be difficult to imagine two books more different in style and structure. The treatise of LANDOIS and STIRLING is a vast storehouse of facts in which the reader finds all the information which he could possibly require in an examination, but the very presence of so many data is in itself liable to confuse the mind. In FOSTER'S Physiology, on the other hand, a wide view is taken of the whole subject and the trend of research is clearly shown, but there is a total disregard of the individual unconnected fact, which is sometimes trying to a student searching for specific information. We have chosen this example to show that in many cases no single text-book, however perfect it may be, is necessarily sufficient for a particular examination.

The proper foundation for a student's knowledge should be laid in his lectures and his practical work. In some cases the lectures may entirely obviate the necessity for any text-book and we have known a candidate to obtain the gold medal in medicine at the M B examination of the University of London who had never read any work on medicine other than the notes of his lectures. Of course, this was an exceptional case, but as a student has to be "signed up" for attendance at lectures he should derive as much benefit as possible from them. To the practical work especially should he pay attention, for the knowledge learnt by practice is much more easily retained than is that learnt only from a book Still, in nearly all cases a treatise on the subject in which the candidate is to be examined needs to be read In the first place examinations differ greatly among themselves. Even when two examinations are of about the same degree of difficulty it does not necessarily follow that the same text-book will suit both. The experienced teacher will know and recognise how true this is. Candidates, moreover, vary greatly, not merely in mental capacity but also in the build of mind, so that for no definite reason a work that is easily read by one student is wearisome and distasteful to another The mode of presentation of the facts and theories of a subject may be to the liking of one candidate, while to another it may prove utterly unsympathetic. There is also such a condition as mental dyspepsia. In the case of food, it is not merely necessary that an article of diet should contain a large amount of proteid or fat to render it suitable as food but that it should also be readily digested and absorbed, so is it with mental diet. If the information in a work is so concentrated that it cannot be digested and absorbed into the mind of the reader it cannot nourish him mentally but will serve only to irritate

We have said that examinations and candidates differ, examiners differ also Some men are born examiners, they can ascertain both in *viva voce* and in written examinations exactly what the candidate knows, they are reasonable in their requirements and considerate in their manner and the result of the examination may be trusted as correct. Others, with the best intentions in the world, never make good examiners. The questions which they set are obscure in meaning and the candidate in addition to his ordinary anxiety about the examination fears that he has misinterpreted the question, or the student is expected to know some rare fact of which probably he has never heard. Some examiners put questions which can be answered word for word from a text-book, others ask for information which may require extensive synthetic mental processes temper, and energy in the performance of their almost parental duties, then the results should be very good.

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[1] THE LANCET April 2nd 1898 p 924

THE ROYAL DENTAL HOSPITAL AND ITS ANÆSTHETISTS

WE are very glad to learn that the summary dismissal of the anæsthetists of the Royal Dental Hospital from their appointments is not to take place Our readers are familiar with the situation which was recently set out in our columns.[1] At a meeting of past and present anæsthetists of the hospital on Feb 10th the following motion was unanimously carried —

> That this meeting whilst fully endorsing the protest recently made by the staff of anæsthetists to the managing committee, desires to express to the committee the opinion that by the radical change in the anæsthetics department which is proposed no small degree of responsibility will be incurred, and that such a departure from a time-honoured system as that contemplated is not only opposed to the interests of the hospital but to the safety of the patients treated within its walls.

The resolution was considered by the managing committee of the hospital at its meeting on Feb 19th, when it was resolved —

> That the changes recommended in the report of the sub-committee appointed Nov 16th, 1902, and adopted by this committee on Dec. 18th, 1902, be deferred.
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> That with the object of having the question reconsidered the anæsthetists be asked to submit to the managing committee a scheme for the efficient working of the anæsthetic department of the hospital.

The managing committee in communicating this resolution to the anæsthetists has expressed its assurance that the anæsthetists will willingly carry out the duties of the department during the interregnum. This we are sure that they will do, and we trust that they will also bring a business sense of what is really wanted to the drawing up of a plan for the proper working of their department. It is so usually taken as a sign of strength and wisdom not to change a declared intention that we congratulate the managing committee upon not being afraid to wait and to reconsider its startling decisions. We hope that it will find itself able to adopt, at least in essentials, the scheme to be submitted to it by the anæsthetists

A FORGOTTEN EMBRYOLOGIST

PROBABLY few of the readers of THE LANCET have heard of the embryologist, Sébastian Graf von Tredern, the romance of whose life and work forms the subject of a brief feuilleton in the *Wiener Medicinische Wochenschrift* of Feb 14th. Born in France, at Brest in 1780 and exiled to Russia in his fifteenth year, he became an officer in the Russian navy, then studied medicine in Germany, at Würzburg and Göttingen, graduated as doctor of medicine at the University of Jena, and a little later returned to France to enter the navy as a surgeon, being sent to Gaudeloupe in the West Indies he founded a hospital there and died shortly afterwards in his thirty first or thirty second year, though the exact date of his death is unknown. His father, a member of an old Breton family, was a captain in the French navy but being exiled to Russia after the battle of Quiberon in 1795 and being kindly received by the Emperor Paul he entered his son Sebastian as a midshipman in the Russian navy While stationed at the harbour of Reval in Esthonia he began his noteworthy researches on the embryology of the chick, though it is unknown whether he had received any previous training in natural history The memory of the young officer who dissected animals, kept hens to brood over eggs, and who was moreover, a clever painter lived long in the minds of his contemporaries. He left the Russian navy in August, 1801, being then 21 years of age, and till October 1804 nothing is known of him, but on this date Sebastian Graf von Tredern of Livonia matriculated as a student of medicine at Würzburg While at Würzburg he worked with Döllinger and pursued his embryological researches with the utmost diligence. None of his contemporaries seem to have had the slightest suspicion of his French nationality, as he was regarded as a German from Livonia, and his amiable personality, good fellowship, and skill in the concoction of punch and similar beverages—no doubt the result of his naval experience—rendered him a universal favourite. In 1807 he repaired to Göttingen and discussed the publication of a large work on the development of the chick with Blumenbach who advised him to use a small part of his rich collection of material as a dissertation for his doctorate. This advice von Tredern acted upon and worked in Göttingen, here, again, according to the statements of some of his contemporaries, he was regarded as a German, his real nationality being concealed. Having prepared his dissertation he had it printed in Jena and was awarded his doctorate with distinction. In this work he announces his intention of carrying out a complete work on the subject, which intention unfortunately he did not carry out. In 1811 he passed the State examination at Paris and entered the French navy and shortly afterwards died at Gaudeloupe. With regard to the dissertation, it consists of only a few pages but has attached to it a splendid plate, the figures of which, though simple outlines, show a wonderful richness in detail, and the whole work indicates such great ability, such wide knowledge of the literature of the subject, and such capacity for research that the abandoning of the work and the early death of its author were undoubtedly a great loss to embryological science The reasons for his giving up research for practice and his return to France are unknown and are among the mysteries with which this strange history of a short life abounds

AMALGAMATION OF POOR-LAW UNIONS IN WESTMINSTER

THE Westminster city council has suggested that the three unions in that city should be amalgamated. The St. George's union contains a population of 128,000 the Westminster union has 33,000, and the Strand union has only 21,000 When the disparity in the sizes of these unions, the great number of separate official buildings, and the multiplication of staffs necessary for the carrying out of the work of the Poor law relief are taken into consideration, the fusing of the three appears to be a wise and economical procedure. The point, however, that more especially interests us in the proposal to amalgamate the three unions is the opportunity that would be afforded after the junction of initiating a much needed and often suggested reform—namely that of a better classification of the indoor poor Time after time has a demand been made for the separation of the infirm from the able-bodied and of the quiet and well behaved from the noisy and dissipated The public asks for a separation that shall be complete and that will allow an entirely different treatment of the two classes in the matters of comforts and privileges. Accommodation in adjoining rooms is not the separation that is required Hitherto it has been found impossible to effect a classification satisfactory in all respects in any one workhouse. Two difficulties are met with—the classes are too numerous for arrangement in one building, ages, sexes, and morals rendering them so, and the numbers in the various classes are ever changing Thus there might be at one period great overcrowding in a certain class and at another great waste of space owing to diminished numbers. The London unions at the present time own about 38 workhouses. It is futile to urge that in each of these there should be a classification of the inmates. If the workhouses themselves could be classified a solution of the problem would be in sight. Some of them might be set apart for the reception of the married couples, others might be devoted to the infirm and others to the aged but not infirm. It would then be possible to corn merchant might be licensed to sell these poisonous materials where a pharmacist does not exist for the purpose.

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[1] THE LANCET Feb 14th 1903 p 453.

On the other hand, in a well and sensibly written minority report Mr WALTER HILLS maintains that the demand for the relaxation of the statutory restrictions emanates, not from agriculturists or from horticulturists, but from those persons whose natural desire is to promote the sale of their own particular preparations and he cites the remark of a witness who stated as a reason for objecting to the Pharmacy Act that he could not readily introduce poisonous novelties through pharmacists. He points out that this is distinctly a manufacturer's objection and is, in fact, the predominant note throughout the inquiry Some regard, he adds, must be given to the public side of the question and in his opinion it is an important advantage that pharmacists do act as a restraint upon the development of the retail business in poisonous novelties and do to that extent carry out the object which the legislature had in view in passing the Act. Mr HILLS, we think, was wrong if he thought that this admission could help his cause, for surely this statement supports the contention of the rest of the committee that the Pharmacy Act interferes with farmers and gardeners obtaining poisonous materials for a legitimate purpose conveniently and that the industries of agriculture and horticulture cannot be conducted *effectively* on modern principles without the *extensive* use of poisonous material (the italics are ours) We have misgivings as to the probable effect of the committee's recommendations should they be adopted in regard to the exemption of industrial poisons from the provisions of the Pharmacy Act. If the representatives of the trade are right in stating that there are not sufficient pharmacists in the country to meet their needs, cannot this deficiency be made good by appointing intelligent licensees, not universally throughout the country, but only in those thinly populated places in which it would not be profitable for a qualified druggist to pursue pharmacy as a profession? We strongly urge that the number of licensees should be strictly limited and that the privilege of selling industrial poisons should be extended only to those districts in which the druggist's shop is within decidedly less easy reach than the ironmonger's or other shops

As to the additions which it is recommended should be made to the poisons schedule the committee is in the main agreed The additions to Part I of Schedule A are cocaine and its salts, preparations containing 1 per cent. or more of morphine picrotoxin, and vermin killers containing poisons in Part I The additions to Part II. of the schedule are acetanilide and its preparations, preparations of cocaine, digitalis and its preparations, preparations of morphine containing less than 1 per cent, soluble salts of oxalic acid, mercuric iodide, mercuric sulpho-cyanide, strophanthus and its preparations, and sulphonal. It will be evident from two substances included in this list—viz., acetanilide and sulphonal—that many drugs used for the relief of pain and sleeplessness will have to be marked "poison." Finally, Mr ALEXANDER CROSS in a supplementary report makes the suggestion that power should be given to local authorities to grant licences to suitable persons to assist medical men in dispensing prescriptions when it becomes necessary to do so in the absence of the medical man, whether such persons have passed the Pharmaceutical Society examination or not. Our readers will agree with us in thinking that the suggestion is too ridiculous to be discussed. We can hardly believe that Mr CROSS is serious when he suggests that local authorities should have the power to grant licences to suitable persons for dispensing prescriptions. What do "local authorities" as a rule know about poisons? and how are they going to lay their hands on 'suitable persons"?

Annotations.

"Ne quid nimis.

COTTAGE HOMES FOR PAUPER CHILDREN

THE Hackney board of guardians has decided to spend about £50,000 upon the provision of cottage homes for the children of the union. The Plymouth guardians have adopted a similar method for the accommodation and education of their little ones In the latter case new structures are not to be erected for the purposes mentioned. Substantially built houses in good residential districts have been purchased These not being aggregated have received the name of "Scattered Homes." At Bath, at Sheffield, and at many other places separate buildings, each containing a small number of children, are now established Boards of guardians in different parts of the kingdom are moving in the same direction. Apparently at no distant date we may expect to see all the healthy "children of the parish" located in medium sized detached houses. The large district schools are out of favour They will probably soon be broken up into separate homes They have had a bad name given to them and the name has been as potent as the arguments in undermining their reputations. Yet the schools have done good work and they effected a vast improvement on the conditions that preceded them. So think many who have been intimately connected with their administration for long periods Be this as it may, cottage homes are now to be substituted They represent the embodiment of the latest suggestions for what has been called the depauperisation of the parish child They are being instituted in the fervent hope that the boys and the maids in due time may leave them with regret, taking with them no taint of pauperism, having healthy bodies and self reliant natures, possessed of knowledge of what a home really is and of the various duties that must be performed in every house in order to make it and to keep it a healthy and comfortable place of abode To this end the amount of education to be given by means of books will be just so much as is possible in the time afforded, but instruction in such matters as the preparation of the daily food, the making and the repairing of the clothing, and the arrangement and cleansing of every department of an ordinary dwelling will be imparted in an interesting and practical manner Will this new system be a continued success, or will a departmental committee after a few years swoop down upon it and urge its abolition with a report on its shortcomings? Time only can give the answer So far the system has certainly presented itself in a very favourable light, but we are convinced that it will stand or fall, not by reason of its perfection or imperfection, but by the merits and action of those upon whom the duty of carrying it out may be placed. By far the most important of these will be the matrons or 'mothers." Provided that the guardians exercise a wise discrimination in the selection of suitable persons to hold office as foster mothers and that these on their part exhibit skill, good of the population. The parents seldom or never pay any fee and the consequence is that the public vaccinator, who in rural districts is generally the local medical man, fills up the certificate for nothing as an act of charity It is no part of the duty of the medical profession to protect the Government from enlisting unfit employés, and, in our opinion, the Post Office should certainly pay for the certificate or else should send one of its regular medical officers to make the examination. But even where there is a local postal medical officer it would seem that it is at present no part of his duty to examine candidates for the post of telegraph messengers. Medical men take much time and trouble and spend large sums of money in fitting themselves for registration, but the benefits of registration are very small. The recently appointed Postmaster General might well see, we think, if he cannot do something to remove the grievance to which we have alluded

THE DISTRIBUTION OF PLAGUE

As regards Egypt the Director General of the Sanitary Department states that during the week ending Feb 15th neither cases of, nor deaths from, plague have occurred in Egypt The last case occurred at Tant-el Ghezireh on Feb 6th. As regards the Cape Colony the medical officer of health of the colony states that for the week ending Jan 31st 2 cases of plague were discovered at Port Elizabeth—namely, a native male who was admitted to the observation ward on Jan. 27th and who died from plague on the 29th, and a coloured male who was admitted to the plague hospital on Jan 31st and who died on the same date 1 case remained under treatment at the plague hospital, Port Elizabeth, at the end of the week. No case of plague has occurred at any other place in the colony

THE BRITISH GYNÆCOLOGICAL SOCIETY

A REVIEW of the history of the British Gynæcological Society formed the theme of the address delivered by the incoming President, Dr Heywood Smith, at the meeting of the society held on Feb 12th, an account of which will be found in THE LANCET of Feb 21st, p. 524 The life of the society is largely contemporaneous with the growth of gynæcology as a special branch of medicine, and in the account given by the President of the work done by the Fellows of the society the successive stages in the development of many of the operative procedures practised at the present day upon the pelvic organs can clearly be traced. If it were possible to assign to any one body of practitioners the credit for the popularisation and perfection of a special operative method, the Fellows of the British Gynæcological Society might well put forward such a claim with regard to the sub-peritoneal or intra peritoneal treatment of the stump in abdominal hysterectomy Indeed, Dr Heywood Smith was one of the first, if not the first, to practise this operation in this country, an advance in the method of treating the stump of the uterus of proved value. The Fellows of the Gynæcological Society have always considered the exhibition of specimens and the reading of clinical cases of the utmost importance, and have placed a higher value upon such contributions than upon the reading of set papers. Of the practical value of the meetings of the society the reports in the journal bear abundant testimony and the President may well say that it has done much for the advancement of the art of gynæcology The British Gynæcological Society dates its foundation from the year 1884 when it was started by a small band of workers, chief amongst whom were Dr Robert Barnes, Dr Alfred Meadows, and the present President. The society was an offshoot from the Obstetrical Society of London, and we, in common with many leaders of the medical profession, regarded the split at the time of its occurrence as distinctly regrettable This, however, is ancient history, and to-day the society is a successful and progressive one, possessing a good membership and a valuable quarterly journal. The abstracts of foreign literature which form one of the main features of the journal have been of great assistance to workers in gynæcology, and the society is to be congratulated upon the energetic band of workers who have devoted so much time to insuring the success of this part of the publication. The record of the meetings held up to the present date, some 234 in number, bears testimony to the vigour and energy of the Fellows and to the daily advance in the importance of the science and art of gynæcology An example of the growing specialisation of the work of the gynæcologist is shown by the fact that the council of the society has quite recently determined to institute an examination for the purpose of establishing a criterion by which the efficiency of nurses, especially those devoting themselves to gynæcological nursing, can be determined and to grant a certificate in monthly and gynæcological nursing to those candidates who are approved by the examiners. An important point is that no nurse will be allowed to enter for the examination unless she has had three years' training in a hospital. We are inclined to doubt the wisdom of this new step so far as monthly nurses are concerned Not only has the Obstetrical Society of London been carrying on for many years a similar examination, but the recent establishment of the Midwives Board appears to us to fulfil all the requirements of the case The Obstetrical Society, as soon as it is possible for it to do so, will no doubt hand over the conduct of its examinations to the new board and we do not see what advantages a certificate in monthly nursing granted by a private society like the British Gynæcological Society can have over a certificate granted by an official board instituted by Act of Parliament No doubt a certificate in gynæcological nursing will be found of advantage by nurses intending to devote themselves to that particular branch, and possibly such specialisation in nursing has some advantages. Since, however, it will be purely optional for any nurse to enter for the examination of the society or not, we fail to understand how it is "to prevent the market being flooded with so-called nurses who trade upon the public with inadequate qualifications."

THE PATHOLOGICAL ANATOMY OF SYPHILIS AND OF PARA-SYPHILITIC AFFECTIONS AS OFFERING A BASIS FOR TREATMENT

FOLLOWING upon the communication of Dr Leredde of Paris, to which reference was made in an *annotation in* THE LANCET of Feb 21st, p. 539, Professor J Renaut of Lyons contributes a paper on the subject of the pathological anatomy of syphilis and of para syphilitic affections to the *Philadelphia Medical Journal* of Jan. 17th. The gumma has hitherto been generally regarded by pathologists as the typical lesion of syphilis Professor Renaut shows that the reaction of the living tissues to the presence of the microbes of syphilis, glanders, and tuberculosis produces local changes of varying character The gumma is not the only neoplastic product arising from syphilis and moreover its structural character is variable according as it is one of the liver, the myocardium, or the brain, and all these gummata are different from those of the skin. A cerebral gumma is a nodule of which the periphery is constituted by proliferated neuroglia cells and fibres, the interior being a mass of degenerated brain substance the vessels of which have undergone obliterative endarteritis "Each tissue," adds Professor Renaut, "makes its gumma as it can.' The chief lesion of constitutional syphilis is arterial and even in the skin the rash of early secondary syphilis is the outcome of a paresis of the circular muscular fibres of the terminal arterioles of the bestow upon these broken down inmates more comforts, a greater freedom, and opportunities for interesting occupation To all these amenities the aged poor are admitted to be entitled, but there is little hope that they can ever obtain them so long as they share residences with the young, the able-bodied, and the badly behaved The new union will possess four workhouses and several other large buildings, such as schools or receiving houses Here then is a chance for the distribution of the poor upon an approved system—a system that would be much more kind but not more costly than the one which now obtains It is to be hoped that the guardians of the three unions will look upon the proposed scheme with favour To do so will, however, demand the exercise of a certain amount of magnanimity, for under the new conditions some of the guardians must necessarily cease to hold office.

PARATYPHOID FEVER

A DISEASE closely resembling typhoid fever and due to a similar and no doubt allied organism has of late attracted considerable attention from pathologists in France, Germany, and America. In the *Boston Medical and Surgical Journal* of Feb 5th Dr Joseph H. Pratt has published three cases of the disease and has reviewed its literature In certain typical cases of typhoid fever the Widal reaction is persistently absent. In 1897 Gwyn studied such a case in Osler's clinic at the Johns Hopkins Hospital. There were pyrexia, enlarged spleen, rose spots, delirium, diazo reaction, and intestinal hæmorrhage. From the blood a bacillus was obtained intermediate in type between the typhoid and colon bacilli. This bacillus belonged to a group which includes the bacilli of meat poisoning, the bacillus psittacosis, and the bacillus of hog cholera. Members of this group cause fermentation of glucose, thereby resembling the colon bacillus, but, like the typhoid bacillus, they do not form indol or produce gas in lactose media. In 1895 Gilbert gave the name "para colon" bacilli to this group and in 1896 Archard and Bensaude termed them "paratyphoid" bacilli The literature of the subject is already considerable. Two species of paratyphoid bacilli have been described by Schotmüller who terms them the "A" and "B" types. Both acidify milk, but the acidity produced by the "A" paratyphoid bacillus persists, while that produced by the "B" paratyphoid bacillus changes to alkalinity Archard and Bensaude reported the first two cases of "paratyphoid fever" in 1896. At present only 84 cases have been recorded; but the list is rapidly growing The following is an outline of Dr Pratt's cases In Case 1 a soldier who was invalided from Cuba while convalescent from typhoid fever complained of swelling of the right testicle. Incision was followed by the discharge of pus containing the "B" paratyphoid bacillus In Case 2 a girl, aged 18 years, was operated on for cholelithiasis The gall bladder contained four calculi of the size of chestnuts and apparently composed of pure cholesterin. From the centres of these the "B" paratyphoid bacillus was cultivated. In Case 3 a man, aged 38 years, had an illness characterised by abdominal pain and tenderness and pyrexia of two weeks' duration. During the third week left saphenous phlebitis developed. The blood serum agglutinated the "A" paratyphoid bacillus in high dilution and failed to agglutinate the "B" paratyphoid and the typhoid bacilli even in low dilution We may point out that of the conditions present in these three cases two—orchitis and phlebitis—are recognised complications of typhoid fever and that the other one—gall stones—has been shown by Gilbert and Fournier to be probably a result of typhoid infection of the gall bladder As to the pathology of paratyphoid fever, only four cases have been fatal and one of these was secondary to typhoid fever In the remaining three cases there were no intestinal ulcers and the Peyer's patches and solitary follicles were normal. But the fact that intestinal hæmorrhage occurred in five cases seems to show that intestinal lesions may occur In two fatal cases the paratyphoid bacillus was found in the blood taken from the heart, liver, lungs, and spleen. Perhaps some of the reported cases of typhoid fever without intestinal lesions are examples of paratyphoid fever Paratyphoid fever is usually a milder disease than typhoid fever and diarrhœa and termination by crisis appear to be more frequent. The duration has been from 12 to 84 days. Chills have occurred at the onset. Epistaxis has been observed in a number of cases First and second relapses have been observed. Rose spots and a palpable spleen were present in about half of the cases. The pulse was usually slow The urine frequently contained albumin. In uncomplicated cases there was no leucocytosis. The number and frequency of the complications are striking Bronchitis pneumonia, pleurisy, endocarditis, thrombosis, cerebral embolism, phlebitis, meningitis, peritonitis, cholecystitis, nephritis, cystitis, furuncles, osteomyelitis, myositis, and suppurative arthritis have been observed As to the diagnosis, our knowledge of paratyphoid fever is largely due to the practice of making blood cultures during life. This procedure has been shown to be a valuable means of early diagnosis of typhoid fever at a time when Widal's reaction is absent and the clinical phenomena are not characteristic [1] Similarly, the paratyphoid bacillus can be found early in the blood. In a number of cases the diagnosis has been made by cultivating the bacillus from the urine or fæces and showing that it was agglutinated by the patient's blood. If the bacillus cannot be cultivated from the blood, urine, fæces, or some lesion the diagnosis is justified if the blood agglutinates a paratyphoid bacillus in high dilution and fails to agglutinate the typhoid bacillus or agglutinates it only in very low dilution. The blood should be tested with both species of paratyphoid bacilli. A reaction with low dilution is valueless, as it may be obtained in typhoid fever and in other diseases.

THE MEDICAL PROFESSION AND MEDICAL CERTIFICATES

IT is a well known fact that no profession does so much for nothing as the medical profession. We are not referring to cases in which medical men give their services out of charity but to cases in which the Government or bodies such as the school board or friendly societies demand certificates for nothing We should say that by a convenient fiction it is not the school board that demands certificates but the magistrate For instance, all registered medical men are bound to give gratuitously a certificate of death, under a penalty of 40*s* if they refuse. The London School Board never pays for a certificate except when one has been taken exception to, and then it gives 2*s* 6*d* for confirmation of the certificate. The Post Office also, a Government department which earns some £4,000,000 for the revenue, practically places a quantity of gratuitous work on the shoulders of medical men. The regulations for the appointment of telegraph messengers state that "candidates will be required to produce a satisfactory certificate of health from their own medical attendant on a form to be provided for the purpose and a certificate of having been successfully vaccinated within the last seven years" Now what happens, in rural districts at any rate, is this The candidate applies to the public vaccinator for vaccination or revaccination and brings with him his form for a certificate of health to be signed by the public vaccinator The wages of a telegraph messenger are low—i e, 7*s* or 8*s* a week to commence with —and the candidates mostly come from the poorer stratum published in the *New York Medical Record* of Jan. 31st. He concludes that mental disease is not so frequently due to arterio-sclerosis as is commonly believed. Observations on the heart and aorta of the insane showed that arterio-sclerosis was exceedingly frequent, but mental disorder could be ascribed to such a morbid process only when it affected the blood vessels of the brain. In many cases of advanced chronic insanity or dementia such a condition undoubtedly existed. The progress of arterio-sclerosis in the brain was associated with loss of memory of the immediate past and attacks of mental confusion and transitory delirium. Such dements were found to be liable to indulge in petty larceny and sexual misconduct and they were frequently guilty of attempts to set fire to houses. Mental disease occurring in that period of life when arterio-sclerosis was most common showed, adds Dr Meyer, no peculiarity in its nature and course that could not be fairly accounted for by the commencing cerebral decadence of later life which was a prominent feature especially in neurotic subjects. Both senile and pre-senile decay of brain power was associated with arterio-sclerosis, but no special arterio-sclerotic insanity could be said to exist. When arterio-sclerosis was associated with insanity the prognosis was naturally more serious as there was no special treatment for such a diseased condition of the arteries of the brain.

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[1] THE LANCET Feb 8th 1902, p 390

KING EDWARD'S HOSPITAL FUND FOR LONDON

THE annual meeting of the general council of King Edward's Hospital Fund for London was held at York House, St. James's, on Feb 24th, H.R.H. the Prince of Wales being in the chair The treasurer, Lord Rothschild, submitted the account of receipts and expenditure during the past year ending Dec. 31st, 1902. He mentioned especially the munificent gifts of Lord Strathcona and Lord Mount-Stephen Mr Edgar Speyer, and Mrs. Lewis. The receipts during the year had been £604,802 18*s* 5*d*, of which £28,729 12*s* 5*d* were annual subscriptions, £400,000 was the value of the capital given by Lord Strathcona and Lord Mount-Stephen, and the coronation gift was £118,663 13*s* 1*d* while the balance was made up by other donations and income from investments. £101,000 were distributed in gifts to the hospitals, made up as follows annual grants to 25 hospitals, £29,150, donations to 80 hospitals, £70,850, grants to 14 convalescent homes, £1000, which amount was received from the trustees of the London Parochial Charities. It may be interesting to mention the eight hospitals which have been allotted the largest grants, viz., London Hospital, annual £5000, donation £3500, Guy's Hospital, annual £5000, donation £2000, Royal London Ophthalmic Hospital annual £2000 donation £2500, University College Hospital, annual £1000, donation £2500, West London Hospital, annual £1500, donation £2000, King's College Hospital, annual £1000, donation £2000, Tottenham Hospital annual £1000, donation £2000, Metropolitan Hospital, annual £500 donation £2500 This accounts for £36,000 of the sum distributed. The working expenses amounted to £1942 2*s* 3*d* Of the balance of £501,860 16*s*. 2*d* £425 136 6*s* had been added to capital account (making it £447,225 15*s* 1*d*) and £76,724 10*s*. 2*d*. had been added to the general funds account (making it £229 583 6*s*) Thus the total amount of assets after deducting liabilities to sundry creditors, (£323 18*s* 5*d*) amounted to £676,809 1*s*. 1*d* to Dec. 31st, 1902, of which £662,000 were invested, producing an income of £24,000 a year The Prince of Wales, who was congratulated on the success of the Fund said that the King in his original letter in 1897 stated that their endeavour should be to raise an annual sum of from £100 000 to £150 000, but that to make up their income to £50,000 a year from investments an addition of £870,000 to the capital would be necessary The visiting committee had been largely increased. It was composed of 23 medical men and 23 laymen An important resolution had been passed requesting promoters of new hospitals or those reconstructing or extending within the area dealt with by the Fund to submit their proposals to the Fund, as it was felt that an independent authority like that Fund, possessing the willing and expert services of the highest representatives of the medical faculty, could render valuable assistance in such circumstances. The distribution committee was considering what steps could be taken to bring about the desired results in the amalgamation of certain hospitals and the removal of others to places where they were more needed The scope of the Fund would this year be extended so as to include the London County Council area, when outside the seven mile radius of Charing Cross, which would include new districts containing many poor and densely populated suburbs. The committee desired to point out that those who live outside London may reasonably be expected to give something to the hospitals of the capital of the Empire since 25 per cent. of the patients in London hospitals came from outside the metropolis The Lord Mayor (Sir Marcus Samuel) said that the preparation of accounts in a proper form was as good a work as the distribution of the money, and also that the time was coming when it would be necessary to stop instituting new foundations until those existing had adequate support Sir John Aird and Lord Rothschild having spoken the Prince of Wales in continuation said that they desired to express sincere gratitude to those who contributed small sums—shillings and pennies, and recognised that the results this year were exceptional and could not be looked for again. He assured his audience that His Majesty watched the growth and vitality of the Fund with as much interest and satisfaction as he did when he was President. The Prince concluded by saying that he was well aware of the heavy sacrifices of time involved by the labours of the council, committees, and officials, for which he offered them his grateful thanks and trusted that they would be kind enough to serve for another year in their respective capacities.

COAL SMOKE ABATEMENT

FROM some remarks which were made at the annual general meeting of the Coal Smoke Abatement Society held under the presidency of the Duke of Argyll at Grosvenor House on Feb 24th, it is clear that no country and no place where coal is used are free from the pernicious effects of smoke, but it does not follow that no attempt should be made to combat these effects. In this country public attention has often been called to the evils of coal smoke—its injuriousness to health, its destructive effects upon trees and flowers, its ruinous action upon pictures and furniture have all been noted. But until the advent of the Coal Smoke Abatement Society no organised effort was made to check the ills of which so many complain and which are so undoubted and so serious At the annual meeting of the society Sir William Richmond, R.A., the president, said that the delightful weather which we had been having for the last two months was in some measure due to the society and there is, we venture to think, a great deal of truth in this audacious statement. From Jan. 1st to Dec. 31st, 1902, the society's inspectors reported the result of 2470 observations which led to the detection of 1831 nuisances and 1701 complaints were forwarded to the corporation of the City of London, the London County Council, borough and district councils, and the port sanitary authority of London. In consequence of these complaints 88 summonses were issued and in 72 cases conviction was obtained with penalties and costs amounting to over £200 The total of the work done since the society was established in 1899 is as follows.

skin close to the surface. Thus are produced the areas or patches of cutaneous hyperæmia and redness which constitute the rash. A little amount of endarteritis is also produced, adds Professor Renaut, in these terminal arterioles of the skin but the lesion is slight and transient as regards the skin. In the later secondary stages of syphilis the endarteritis which may recur in the vessels of the skin, of the viscera, or of the nervous system is more marked. As a result ischæmia of the affected arterial territories follows and the tissues the nutrition of which depends upon the arteries suffer from defect of nutrition. The diseased arterioles become dilated irregularly and hyperæmia or even stasis of circulation results according to the character of the arterial change. Wherever it appears the special virus of syphilis produces subacute endarteritis obliterans, "causing chronic œdema and interstitial proliferation." At first diffuse and affecting vast arterial territories of the skin and body the morbid process limits itself later to special organs and viscera. Thus in tabes it affects the posterior spinal ganglia and columns, and in general paralysis the cerebral cortex and the central grey substance of the ponto-bulbar region. A comparison of the vascular and perivascular changes in syphilis proper and in the para-syphilitic affections, in the opinion of Professor Renaut, leaves little doubt that the two sets of changes are essentially not distinct one from the other They are, on the contrary, explained by him as depending upon the development of endarteritis, the differences being due to the extent to which endarteritis has advanced This progressive endarteritis, says Professor Renaut sets up an œdema and a sclerosis of the parenchymatous tissue "as the vasculitis progresses so does the sclerosis." In the central nervous system this sclerosis often affects "systems" of nerve cells and fibres as in tabes dorsalis (posterior root neurons) The central nervous system is generally attacked late—i.e , some years after syphilitic infection. And the vascular and interstitial changes produced in the brain by syphilis set up in turn a vicious circle of processes which continually interfere with the nutrition of the nerve cells and lead to their ultimate destruction. The successful treatment of the vascular changes, so as to arrest if not to abolish such changes, must hence, he is of opinion, be the basis for a rational therapy

THE OVEN AND THE SCREEN

IT is to be feared that many excellent modes of cooking which prevailed in the past are now abandoned simply to save trouble. The modern cook, or the person who calls herself such, although she may be positively instructed to roast meat in the good old fashioned way in a screen in front of the fire, commonly ignores her instructions at every possible opportunity and puts the joint in the oven. The introduction of the "kitchener" or the closed range and of the gas cooker probably accounts for the preference which is given to baking while it does away with the necessity of basting and other little but important culinary attentions which roasting involves. There can be little doubt that by this exchange of method not a few persons are dietetic sufferers. The preference for meat openly roasted before the fire is not a mere sentiment, for the flavour of meat so cooked is infinitely superior and the tissue is generally more tender than when it is baked. Now the flavour and tenderness of meat have much to do with its digestibility and consequently with its real value as a food. Without relish and appetite digestion is sluggish and heavy Indeed, it has been said that the process of digestion commences before ingestion and certainly the digestive functions are stimulated to healthy activity by the sight of a tender and well cooked morsel as well as by an excellent flavour or aroma. It has been shown that the mere inspection of good tempting foods starts the digestive machinery and immediately excites the flow of the gastric juice. It is, therefore, not unreasonable to suppose that there must be a difference of some dietetic importance produced in the organism when, on the one hand, a baked heavy looking joint is in contemplation and when, on the other, it is a bright attractive-looking, because an openly roasted, joint. Persons who have their meat from the same butcher naturally exchange opinions about the quality of the meat and it will often be found that when complaints are made chiefly in regard to the toughness and tastelessness of the joint the secret of it frequently is that baking is adopted instead of roasting As a matter of fact, there is a great difference between the two methods of cooking, baking and roasting In the former case the meat in reality is cooked in hot air which has a tendency to decompose the fat into acrid substances. When the door of an oven in which a joint is cooking is opened the fumes escape, smelling like a tallow candle which has just been blown out. The smell from a joint being roasted has not this character but, on the contrary, is agreeable In roasting the joint is cooked by radiation—that is, by the bombardment, so to speak, of heat waves. The air between the fire and the joint might be quite cool yet roasting would proceed all the same Roasting also is a less rapid method of cooking than is baking and slow cooking has very decided advantages in regard to preserving the nutritive value of the meat. The civilised cook might learn a good deal from the methods of slow cooking adopted by savage tribes. By one method, in which stones made hot with glowing charcoal are employed, a large joint, no matter how tough, may be exquisitely cooked and made tender and tasty and it is doubtful whether any form of so-called civilised cooking can compare with it. The navvy who fries his chop or steak on his spade over a few lighted sticks probably gets more nourishment and derives greater relish from the meat cooked in this way than if it had been baked in an oven.

AN EXPENSIVE FAD

"CONSCIENTIOUS" and other objectors to vaccination should read and digest the statement of the finance committee of the Metropolitan Asylums Board lately made upon the cost of the recent epidemic of small pox. It is conceivable that the pocket of the conscientious objector may be as sensitive in one direction as his conscience is in another and that the heavy drain which he, with other ratepayers, incurs through the epidemic which is fostered by non vaccination may influence his conduct in the future towards the rational measure of efficient vaccination and revaccination. Ordinary arguments and demonstrations do not appeal to the "crank" where his particular pet opinion is concerned, otherwise, of course, the demonstrated value of efficient vaccination would long since have been universally admitted. Half a million of money, however, spent from the rates upon a small pox epidemic constitutes a substantial argument even in the mind of an objector We recommend all those who do not approve of vaccination to descend from the heights of argument, where their prejudices render them unassailable, and to tackle the question on a purely material and pecuniary basis. Let them work out how much money would have been saved if all those upon the care of whom half a million pounds were spent had been protected from small pox by due attention to vaccination and revaccination at the expense of the ratepayer

ARTERIO-SCLEROSIS AND MENTAL DISEASE

THE important part played by arterial degeneration in determining cerebral disorders in later life has led Dr Adolf Meyer of New York, director of the State Pathological Institute, to inquire into the connexion, if any, between arterio-sclerosis and mental disease and an account of his studi is university students are generally much younger than with us, as 16 is a common age for a lad who is entering a university. At the university they have to pass two examinations—the first for the title of "licentiate" and the second for that of "doctor"—and medical students are obliged to go through both courses. They stay at the university about four years.

The medical school at Madrid is in a building distinct from the university and contains dissecting- and lecture-rooms and laboratories which were unfortunately closed for the vacation when I wished to see them.

Besides the ten universities enumerated above there have been others in Spain which are now closed—e g, that at Toledo, which was founded in 1438 and suppressed in 1807. The most typical and interesting, as well as the oldest, of the Spanish universities is that of Salamanca which was founded in Valencia in 1209 and transferred to Salamanca in 1240. The university of Salamanca played quite an important part in the history of Spain, for from it came almost all the distinguished Spaniards of the sixteenth and seventeenth centuries, though probably Don Quixote's "Bachelor of Salamanca" is the member of this university best known in England. It was to Salamanca that Gil Blas was going when he began his travels. The university was a most distinguished corporation and its representatives with the other grandees swore fealty to the kings of Spain at their accession, it received solemn visits from royal personages, as did our English universities under the Tudors and Stuarts, and, like Oxford and Cambridge also, it advanced money to the kings which was not always repaid. In 1710 the university of Salamanca gave to King Philip V 330 000 reals and 100 men whom they equipped for war and maintained as English nobles did in feudal times. The Popes on their election informed this university by special letters of their elevation to the Pontifical chair and sent cardinals as legates to visit it and to reform the abuses that crept into its administration, though the Spanish kings were jealous of their interference. Katharine, the daughter of John of Gaunt, presented 2000 florins of gold to the university and her son, King John II., gave to it a palace near to the university buildings for a hospital. John I had bestowed more than £7 annual income on Salamanca, which Henry III commuted for the third of the revenues from three townships, and the university maintained 70 professors and raised its magnificent buildings on this income, with the addition of one-ninth of the tithes of the bishopric of Santiago given by Pope Clement V. The university was governed by a rector and he and the professors were chosen annually by the scholars and Masters of Arts until the end of the sixteenth century. The meetings of the governing body were often boisterous and violent, at times the dignitaries even came to blows. When two professors lectured at the same hour they would often quarrel about their auditors and fees. Cervantes in one of his novels says that "students did not come to Salamanca to learn laws but to break them," and this was likely enough after the Reformation, for great numbers of Roman Catholics from Ireland, England, France, Germany, Flanders and Italy went there to be taught and no doubt quarrels were of frequent occurrence among young men of so many different nationalities. "The College of the Noble Irish" still exists and is a very handsome building, with spacious and stately rooms and a large library of old works on divinity and a score or two of modern books and even a very few novels among them. The college is somewhat out of repair and the wall paintings and furniture might be renewed with advantage. In its most flourishing time Salamanca numbered 10 000 students but now there are not 500. Salamanca itself is quaint and interesting—a typical old world Spanish city with a large square containing shops under a colonnade decorated with plaques of the heads of the kings of Spain and other distinguished persons, the latest of whom has been dead 200 years. The streets are narrow, the houses are tall with curiously wrought iron gratings to the windows which are far above the heads of the foot-passengers and there are many convents and churches and very beautiful pavements. In the main square where is now a garden there used to be bull fights formerly. The houses are mouldering away and the servants at the chief hotel are as ignorant of any tongue but their own as those at an inn in York or Exeter. In such a place it is easy to picture the old university life of which records have come down to us—the college inns, which were perilous to life and property even though they were licensed by the senate, the mess tables for the students, who were of all ages from mere boys to middle aged men, and the lads thrusting their left hands into the dish and hacking off with the knives which they carried in their boots or at their girdles their portions of meat and occasionally of other students' fingers, the brokers' shops for the sale of all sorts of clothes, both new and second hand, the 52 printing houses and 84 bookshops, employing 3600 persons, the broken meats given at the monastery gates to poor students and other beggars, the wine parties given by those who were canvassing for votes from the students in the professorial elections, the nocturnal adventures and serenades beneath those quaintly barred windows, the fights with the city watch and the other disputes and scandals which were always alarming the town and requiring the intervention of the rector—and small wonder, seeing how many young men from different proud and hot blooded nations were here assembled. The university was founded literally under the shadow of the Church and was never free from ecclesiastical influence and such influence is evident in all the educational institutions of Spain to this day. Students were not liable to any civil authority but were tried by the vice-chancellor—a practice which led to so many scandals that eventually the king appointed three conservators on behalf of the city to be assessors with the vice-chancellor when he tried the students for serious offences against the citizens.

An interesting feature of university life at Salamanca was the existence of a number of colleges in that city known as the "Greater Colleges" independent of, and even rivalling, the university itself. There were originally four Greater Colleges at Salamanca which were intended for students of theology and canon law and produced so many distinguished students that they eventually destroyed the prestige of the university. At first the competition between these Greater Colleges and the university was healthy for both, but the colleges became too great and wealthy and by the middle of the eighteenth century they had degenerated into hot-beds of vice and were so powerful as to be able to defy the reforms which were attempted. Before the French invasion there were six of these Greater Colleges in Spain, but the French suppressed all but two in Salamanca and one in Valladolid. Besides these so-called Greater Colleges there were four other colleges of the great military orders. These were established in spite of the opposition of the theological colleges and contested their supremacy, one of them—viz., that of the order of Calatrava—still survives. In addition to these there were several other smaller colleges also independent of the university, which are now represented by only one—that of St. Patrick, otherwise "The College of the Noble Irish," mentioned above. Each of these various colleges had its own rector and its own laws, and the result must have been a bewildering chaos. The architecture of those of the university buildings which remain is generally of the Renaissance style modified by Mauresque details, but some parts are Gothic, and so is the heating of the fine library by stoves with flues passing out through the ceiling. There is a very handsome door of hammered iron to the library. The collection of Greek and Latin codices is a very valuable one and has been augmented by those removed from the libraries of the Greater Colleges and from those of the Jesuits and of other convents which have been suppressed.

The university of Granada has now but 500 or 600 students. The university buildings were erected by the Jesuits and are very large and well adapted for their purpose.

Valladolid university (founded in 1346) has about 1000 students, about one-fourth of whom take up medicine, in which faculty there are 16 lectureships with a clinical professor, two assistants, and "a corresponding number of resident pupils." The hospital was built in 1857.

The university of Valencia was founded in 1441 and has now about 2000 students. In this town there is also an independent college (del Patriarca) like the College of St. Patrick at Salamanca.

Barcelona has a university which was founded in 1450. The present buildings are modern dating from 1873. The library contains 160 000 volumes and has a reading room for 120 students. There are about 2500 students here.

The rector of a Spanish university can have but little time to devote to his university, for he has to supervise the schools of all classes in his district, which may include several provinces, he is also president of the "consultative university council" of the district which council is composed of the deans of the faculties, of the directors of the superior schools, and of other persons nominated by the Government, 6600 observations have been kept by its inspectors, 4623 nuisances have been reported, 4423 reports have been notified to local authorities, and 330 summonses have been issued, the total fines amounting to £1287 There can be no doubt that considerable practical good has been effected, and if we do not entirely owe the presence of spring during the winter months of January and February to the Coal Smoke Abatement Society we see no reason why the society should not claim credit for a proportion of our unwonted sunshine Among the speakers at the meeting at Grosvenor House, in addition to the President, were Dr H. A. Des Vœux (the treasurer of the society), Lord Robert Cecil, K.C , Sir James Crichton Browne, F R.S , and Mr W D Caröe, and full testimony was borne by all of them to the injury which coal smoke does to the public health and to its demoralising effect upon the people The report of the society, which contains some very instructive illustrations, can be obtained at 25, Victoria street, Westminster, S W

THE LATE MR W J C MILLER

In our issue of Feb 21st, p 541, we announced the death of Mr W J C Miller who will be known to most of our readers, if not to all, as the late registrar of the General Medical Council. His death occurred on Feb 11th from bronchitis following influenza, but for some years past he had been suffering from hemiplegia William Miller was born in 1832 and was educated at the West of England Dissenters' Proprietary College, Taunton. One of his fellow scholars there was the late John Wale Hicks who entered the medical profession and who, afterwards taking holy orders, became Bishop of Bloemfontein Mr Miller on leaving Taunton became a teacher at Huddersfield and here began his connexion with the *Educational Times* of which journal he was mathematical editor for nearly 40 years In 1876 he was appointed registrar to the General Medical Council and took up his abode at Richmond, where he wrote those charming essays about bird life upon many of which we have commented in our pages. In November, 1896, during the session of the General Medical Council, he suffered from aphasia and finally sent in his resignation on May 21st, 1897 The Council had no power to grant a pension, but Mr Miller was presented with £1000 as a gratuity A faithful servant of the medical profession he practically finished his life's work in harness His last days were passed at Bournemouth.

THE PREVALENCE OF SMALL-POX

The Local Government Board for Scotland intimates that during the period from Feb 1st to 15th inclusive 2 cases only of small-pox have been notified to it—viz , another case in Leith Burgh and 1 intimated from Grangemouth Burgh, the case of a seaman on board a ship which arrived at the latter port on Feb 12th

The 130th anniversary dinner of the Medical Society of London will be held at the Whitehall Rooms, Hôtel Métropole, on Saturday, March 7th, at 7 30 p m Mr A. Pearce Gould, the President, will take the chair In addition to the Presidents of the Royal College of Physicians of London, of the Royal College of Surgeons of England, and of the "Sister Societies," the President and Council will have the honour of including among their guests the Lord High Chancellor, Lord Sandhurst, the Hon. Robert P Porter, late U S A. Commissioner in Cuba, Mr Balfour Browne, K C , Mr Montague Lush, K.C , Sir Thomas Smith, Bart., K.C V O , and Sir Thomas Barlow, Bart., K.C V O

Sir Henry Burdett, K.C B., will open a discussion at the Caxton Hall, Westminster, on March 3rd, before a meeting of the Hospitals Association, on Hospital Sites and Population in London Ought any, and if so which, of the large hospitals to be moved from their present sites to new ones situated (*a*) in more congested districts or (*b*) in the country? Sir Trevor Lawrence, Bart , treasurer of St. Bartholomew's Hospital, will take the chair at 5 p m. and tickets can be obtained on application to Mr Sydney Phillips at St. Thomas's Hospital.

The death is announced on Feb 18th of Dr Thomas Peregrine, formerly of Half Moon street Dr Peregrine was in his ninety third year He was educated at St George's Hospital and at Edinburgh University where he took the degree of M D in 1833. He became a Member of the Royal College of Surgeons of England in 1837 and a Member of the Royal College of Physicians of London in 1859 He was also at one time Senior Warden and a member of the Court of Examiners of the Society of Apothecaries of London.

A sessional meeting of the Sanitary Institute will be held at the Parkes Museum on Wednesday, March 11th, at 8 p m., when a discussion will take place on Sewage Disposal and the Qualities essential in a Sewage Effluent. The discussion will be opened by Dr George Reid, medical officer of health to the Staffordshire county council, and a general discussion will follow

At the next meeting of the Society of Anæsthetists on March 6th, at 8 30 p m , Mr A. Vernon Harcourt, F R.S , will read a paper on, and will show, his new chloroform regulating inhaler by which the percentage of chloroform in the vapour inhaled can be, it is claimed, positively controlled. All members of the medical profession are invited to be present.

The report of the Departmental Committee appointed by the Home Secretary four months ago to draft a scheme for the regulation of cremation proceedings has been issued The suggestions of the committee are clear and careful and have important medical bearings to which we shall shortly have occasion to direct attention.

THE UNIVERSITIES OF SPAIN

(From a Special Correspondent)

Spain is divided for educational purposes into ten districts, each with a university—viz., Madrid, Barcelona, Valencia, Seville, Granada, Valladolid, Santiago, Saragossa, Salamanca, and Oviedo There is a faculty of medicine at each of these universities except at Salamanca and Oviedo Each faculty is ruled by a dean (who receives from £190 to £220 per annum) and there are from 16 to 19 professors who are paid from £102 to £175 yearly according to seniority , one professor at Barcelona has an income of £245. At Madrid there are five extraordinary professors for the M.D degree, as it is almost exclusively in this university that this degree is obtained, but these professors are not more highly paid than are the rest. There are in all about 16 000 students at these ten universities and of these about 7000 are studying medicine, for in Spain every medical man must have a university degree to qualify him for practice. This rule is not an absolute guarantee of the efficiency of the practitioner, for a boy may enter the university at 12 years of age and be a fully qualified doctor at 16 and may then practise if he can find patients to trust him or a newspaper to advertise his precocity, as sometimes happens.

University students must first go through the curriculum at one of the *institutos* or schools for middle class boys who receive a higher education than do the pupils in the State schools which latter are equivalent to our board schools Boys who have finished their school training pass an examination and receive the degree of Bachelor (B A), which is a necessary step before they can be admitted to a university, so that this examination is equivalent to matriculation in an English university Spanish they would whirl round the angles so dexterously, and skip up two or three stairs at a step, that before all the young vultures after knowledge were fairly into a ward, the surgeon general for the week would be deliberately pacing the next, and this used to be called 'Hospital Practice.'" "True, said I, but how is it now?" "Now! why it is altogether different, as you will soon have an opportunity of observing and here is the instrument that has effected the change (pulling from his pocket one of your Lancets, Mr. Editor,) you see what is said here of 'Hole and Corner Surgery,' well, they were so phlebotomised with this Lancet, that they have been completely cured of their *cynanche* and sullenness, and the point of consistency is now exceeded as much as their exertions before fell short of their duties. We have quite an overflow of instruction, quite a gratuity of prelections, we have clinicals upon clinicals, demonstrations, observations and examinations following so closely the heels of each other, that we have scarcely time to digest our dinners, much less the discourses."

I felt highly gratified at the explanation my old acquaintance had given, and could not resist the strong inclination I felt of thanking you, Sir, for the beneficial change which has been effected in the Borough, and have to request, for the benefit of the younger members of the profession that you will shortly explore other *dark places of the earth*, and rid them of their malpractices as effectually as you have done the "holes and corners of St Thomas's Hospital.

Yours truly,
A TOURIST.

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN 76 of the largest English towns 8433 births and 4841 deaths were registered during the week ending Feb. 21st. The annual rate of mortality in these towns, which had been 18 1, 17 9 and 17 1 per 1000 in the three preceding weeks, further declined last week to 16 7 per 1000 In London the death rate was 17 6 per 1000, while it averaged 16 4 per 1000 in the 75 other large towns. The lowest death rates in these towns were 4 1 in Burton-on-Trent and in King's Norton, 7 4 in Willesden, 7 9 in Aston Manor 8 0 in East Ham, 8 7 in Birkenhead, 8 9 in Smethwick and in Tynemouth, and 9 1 in Handsworth, the highest rates were 20 4 in Burnley 21 0 in Wigan, in Salford, and in Oldham, 21 2 in Liverpool, 21 4 in Hanley and in Rhondda, 23 3 in South Shields and 24 1 in Great Yarmouth. The 4841 deaths in these towns last week included 452 which were referred to the principal infectious diseases, against 493 512, and 457 in the three preceding weeks, of these 452 deaths 120 resulted from whooping-cough, 94 from measles, 78 from diphtheria, 70 from diarrhœa, 49 from scarlet fever, 28 from 'fever' (principally enteric) and 13 from small pox. No death from any of these diseases was registered in Hastings Plymouth, Burton-on Trent, Handsworth, King's Norton, Aston Manor Grimsby Wallasey, St Helens Warrington, Gateshead, or Newport (Mon.), while the highest death rates from the principal infectious diseases were recorded in Devonport, Stockport Wigan, Manchester, Oldham, Preston, Rotherham, and Middlesbrough. The greatest proportional mortality from measles occurred in Devonport, Wigan, Salford, and Middlesbrough, from scarlet fever in Stockport and Oldham, from diphtheria in Hanley and Bury, from whooping-cough in Hornsey Southampton Great Yarmouth, Stockport, Oldham Preston, Rotherham, and Rhondda, and from "fever in Middlesbrough Six fatal cases of small pox were registered in Liverpool two in Manchester, two in Leeds, and one each in Birmingham, Oldham, and Rotherham. The number of small pox patients under treatment in the Metropolitan Asylums hospitals which had been seven, six, and six at the end of the three preceding weeks, had increased to eight at the end of last week seven new cases were admitted during the week, against six four and one in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital on Saturday Feb. 21st, was 1893, against numbers declining from 2528 to 1919 on the eight preceding Saturdays, 206 new cases were admitted during last week, against 228, 189 and 246 in the three preceding weeks The deaths referred to diseases of the respiratory organs in London, which had been 355, 315, and 257 in the three preceding weeks, rose again last week to 274 but were 218 below the corrected average number. The deaths in London directly attributed to influenza numbered 25 last week, having been 25, 39, and 24 in the three preceding weeks The causes of 62, or 1 3 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner All the causes of death were duly certified in West Ham, Bristol, Manchester, Salford, Leeds, Newcastle-on-Tyne, and in 44 other smaller towns, the largest proportions of uncertified deaths were registered in Leyton, Hanley, Liverpool, St. Helens, Sunderland, South Shields, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 21 3, 21 7 and 18 1 per 1000 in the three preceding weeks was again 18 1 per 1000 during the week ending Feb. 21st, and was 1 4 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 11 3 in Greenock and 12 4 in Leith to 22 6 in Aberdeen and 24 8 in Perth. The 592 deaths in these towns included 26 which were referred to whooping-cough, 18 to diarrhœa, 12 to measles, eight to "fever," seven to scarlet fever, and five to whooping cough, but not one to small pox. In all, 76 deaths resulted from these principal infectious diseases last week, against 81, 80, and 85 in the three preceding weeks. These 76 deaths were equal to an annual rate of 2 3 per 1000 which was 0 7 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 28 and 32 in the two preceding weeks, declined again last week to 26, of which 20 were registered in Glasgow, two in Dundee, and two in Paisley The deaths from diarrhœa, which had been 19 and 16 in the two preceding weeks, rose again last week to 18, and included eight in Glasgow, five in Dundee, and three in Edinburgh. The fatal cases of measles, which had been 20, 16, and 15 in the three preceding weeks, further declined last week to 12, of which 10 occurred in Aberdeen and two in Edinburgh. The deaths referred to different forms of "fever,' which had been five, six, and 11 in the three preceding weeks, declined again to eight last week, and included seven in Glasgow The fatal cases of scarlet fever, which had been four four, and eight in the three preceding weeks declined again last week to seven, of which three occurred in Glasgow and two in Paisley The deaths from diphtheria, which had been seven and three in the two preceding weeks rose again to five last week, and included two in Edinburgh and two in Aberdeen. The deaths referred to diseases of the respiratory organs in these towns, which had been 173, 134 and 112 in the three preceding weeks, further decreased last week to 109, showing a decline of 115 from the number in the corresponding period of last year The causes of 23, or nearly 4 per cent. of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN

The death rate in Dublin, which had been 24 8, 26 4, and 25 0 per 1000 in the three preceding weeks, further declined to 20 6 per 1000 during the week ending Feb. 21st During the past four weeks the death rate has averaged 24 2 per 1000 the rates during the same period being 17 5 in London and 16 1 in Edinburgh. The 150 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 32 from the number in the preceding week, and included 18 which were referred to the principal infectious diseases, against 10 nine, and four in the three preceding weeks, of these, six resulted from measles, four from scarlet fever, three from diphtheria, three from whooping-cough, one from fever, and one from diarrhœa. These 18 deaths were equal to an annual rate of 2 5 per 1000 the death rates last week from the same diseases being 1 9 in London and 1 3 in Edinburgh. The six fatal cases of measles showed an excess of four over the number in the preceding week The deaths from scarlet fever which had been three, two, and three in the three preceding weeks further rose last week to four The fatal cases of diphtheria, which had been three and one in the two preceding weeks, rose again to three last week. The three deaths from whooping-cough corresponded with the number in each of the two preceding weeks. The 150 deaths in Dublin last week included 21 of children under one year of age and 37 of persons aged 60 years and upwards, the deaths both of infants and of elderly persons showed a considerable decline from the numbers recorded in and he has also to keep in good humour the various civil governors of the provinces in his district who are appointed by the Government and are *ex officio* chairmen of what may be considered as the school board of the province. Probably the universities suffer from the multifarious character of the rectorial duties, though the general education of each district may be benefited by this superintendence The State appoints, or approves of the appointment of, all the heads of the educational department in each province, but education in Spain is still cramped and limited by ecclesiastical interference, as it was in the time when the university of Salamanca was in its most flourishing state. The annual cost of the Spanish universities is borne by the State and is nominally about £130,000, but against this must be set the large sum which is paid by the students for university fees, so that the universities are no great burden on the Spanish exchequer

MEDICINE AND THE LAW

Frauds by a Pretended Medical Man.

AN impostor named Bruno Kohnfeldt was sentenced on Feb 18th at Clerkenwell sessions to four years' penal servitude for a series of frauds after previous convictions and his female accomplice to a shorter term of imprisonment The case is worthy of the attention of medical men and of members of other learned professions, because it shows how easily they may become the victims of begging letter writers owing to their names appearing with their addresses in official directories and also how a little care and trouble may sometimes expose fraud of this kind. Kohnfeldt's plan was to represent himself as a medical man benevolently interested in a patient in reduced circumstances. The person on whose behalf he solicited assistance was stated to have been at college with the person addressed and a university calendar supplied a suitable name. He presumably took his chance as to the person addressed having more or less lost sight of the person written about, as he also accepted the risk of what might occur if inquiry was made. To take an example from the evidence of a particular case given at the police-court, Kohnfeldt wrote to the Bishop of London saying that he had attended in illness a gentleman named who had in fact been a fellow undergraduate of his lordship at Keble College and who, he alleged, was now in poverty and bad health, so that a contribution towards buying him a small business would be of assistance The bishop accordingly directed his private secretary to send £5 The story was a plausible one, but at the same time it was one not difficult to sift. The impostor described himself as "Dr Charles McCann" and wrote from an address in Bloomsbury Inspection of the Medical Directory would have shown that Mr Charles McCann, therein described with his qualifications, had retired from practice and neither the Medical Directory nor the Medical Register would have lent any colour to the suggestion that he was practising in Bloomsbury If, however, no such work of reference was at hand the ordinary Post-office Directory would have afforded presumptive evidence that Dr McCann did *not* live at the address given, which was that of a hairdresser who took in Kohnfeldt's letters. The name of the person for whom assistance was asked is to be found in the Oxford University Calendar as a contemporary of Bishop Ingram, and that is presumably where Kohnfeldt obtained it, having access to one of the free libraries that are now common in the metropolis. The latest edition of the calendar however, shows that the name of the gentleman in question is still borne on the books of his college and that he is a doctor of medicine. Again the Medical Directory or Medical Register might have been referred to, and would have shown him apparently carrying on a practice not far from London, where direct communication might have been opened with him. As an alternative a letter to Keble College would have presumably elicited information, as members of a college who have taken doctors' degrees are not usually altogether lost sight of by their *alma mater* In another case upon which Kohnfeldt was convicted the person duped was a clergyman and so was he on whose behalf aid was solicited, his name appearing as such in the Oxford Calendar, while his address is given in the Clergy List. Books of reference of this kind may not be in every house, but they are usually to be found in club libraries and other places accessible to those whose pecuniary position enables them to be liberal as well as kind hearted, as well as in the free libraries, where they are at the service of any knave who chooses to make use of them. Indiscriminate charity does more harm than good even where no direct fraud, such as that described, is attempted, while inquiry may enable the generous to give substantial assistance in cases where help is needed and likely to be effective

Looking Back.

FROM

THE LANCET, *SATURDAY*, FEB 26, 1825.

ST THOMAS'S HOSPITAL.

To the Editor of THE LANCET

SIR,—If I should begin my letter as most persons do, who wish to procure an early insertion, I should say that I have derived much pleasure from the perusal of your *extensively circulated* Journal, but this would be telling you a sort of truism, for although some of your remarks are severe and searching and some prudishly hint that *The Lancet* is a little too sharp, yet all the physicians, surgeons, midwifers, and apothecaries, within the scope of my acquaintance, read it with avidity, and, I suppose, do so for the same reason that I have lately done, because they reap from it information and amusement. Now I have always heard you described as a *hic et ubique*—a here, there, and everywhere sort of gentleman,—assuming such a questionable shape, that I have seen four individuals, unless "mine eyes are made the fools o' the other senses," as different in their figures and physiognomies as the four *Prices* of city notoriety, represented each as the Editor of the Lancet. Pray be good enough to inform me, Sir, if you have the wonderful faculty of splitting yourself into quarters, and sprouting up entire "*Dramatis Personæ*," in as many distant places at the same time? Or is your presence, "the terror of evil doers," imaginary only, the mere false creation of perturbed minds and misgiving consciences? Indeed I am inclined to think that the latter conjecture is correct, for, as M Ragniot and I were walking quietly through the wards of St. Thomas's Hospital one afternoon, we came unnoticed behind a gentleman who was soliloquizing by a window, his mood was pensive, and his eyes directed to the floor, as we came nearer, we heard him repeating what we deemed a parody on the words of Macbeth He proceeded thus—

> "Is this a *Lancet* which I see before me ,—
> Or art thou but a dagger of the mind,—a—?
> I have thee not, but—let me clutch thee once—and—"

then he stamped on the floor, which roused him from his reverie, and observed us, and made a sudden retreat, looking very dejected. Our appearance unfortunately interrupted him, or we should certainly have been favoured with some further disclosure of this "mind diseased." Had we heard a man muttering thus in another part of the building, we should have set him down a "*Hospital idiot*," but how were we surprised to find from the nurse that the unfortunate gentleman, who had just left the ward, belonged to a society of men called in this country "*pure* surgeons" This was a strange sort of adventure, and neither M R nor myself could make it out for some time, but my companion at last suggested that he had either bled some poor mortal to death, or that he intended to commit an act of *felo de se* with the same little instrument.

I was not satisfied however, with this, and determined to extend my ramble in hope of gaining further information, and fortunately met with an old pupil, to whom I communicated what I had seen. He laughed heartily, and then began to unravel the mystery "Oh! said he, since you have been on the Continent, there has been quite a revolution in the professional discipline of the hospitals, you know what used to be called going round the wards with the surgeons, the most you could ever extract from them were monosyllabic answers to questions, however interesting or important. Mum was the order of the day, as if their air passages were hermetically sealed, or as if they laboured under *cynanche laryngitis*, so that every attempt at articulation produced pain. As to anything in the shape of a 'practical observation,' that was quite out of the question,

THE FOUNDER OF THE LANCET

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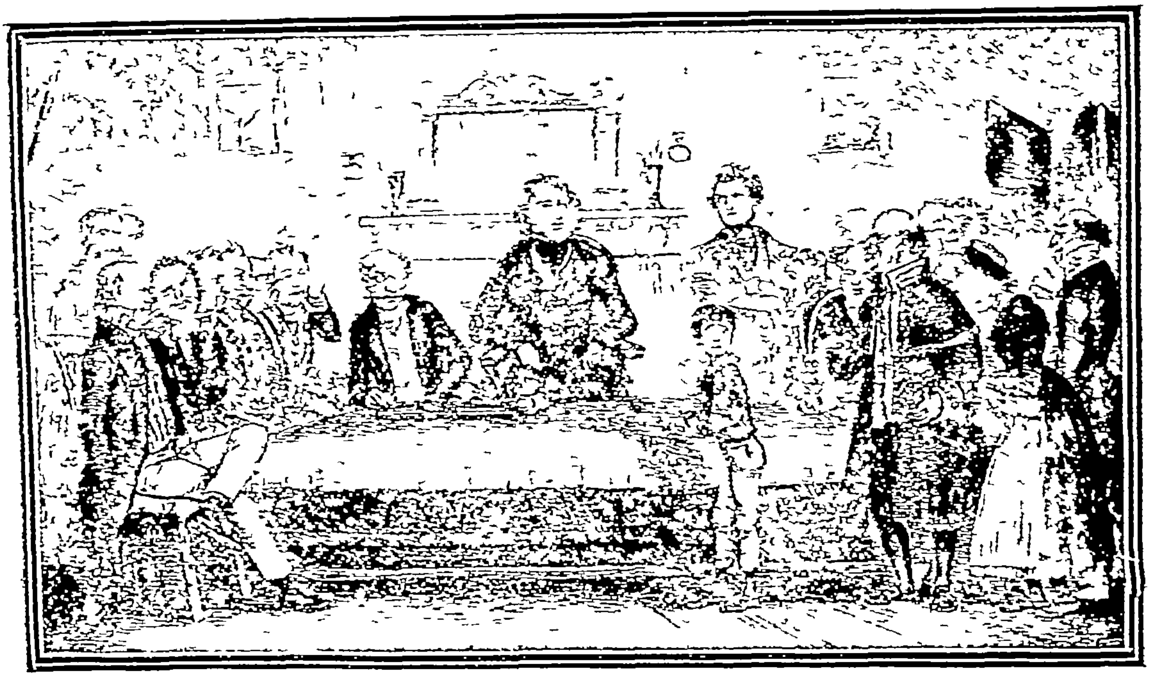

A Parish Inquest before Thomas Wakley M.P., Coroner for West Middlesex.

Correspondence.

"Audi alteram partem."

ASEPTIC AND ANTISEPTIC SURGERY

To the Editors of THE LANCET.

SIRS,—Mr. Cuthbert S Wallace's letter in THE LANCET of Feb 14th, p. 475, shows that the views put forward by Mr Watson Cheyne in your issue of Feb. 7th may give rise to differences of opinion. I should therefore like to express my firm belief in Mr Cheyne's statement that "aseptic surgery as at present defined—that is to say, surgery without the use of antiseptics—is impossible." I have not attempted to work by the aseptic method but I have had the opportunity of watching others doing so The results are uncertain and failure to avoid septic infection by this method does not depend on the magnitude of the operation or on the gravity of the complications to be dealt with. Failure is as likely to occur in a simple as in a difficult case.

Aseptic surgery may be described as theoretically perfect surgery But thorough disinfection of the skin without antiseptics is not possible and if the aseptic system teaches, as Mr. Wallace states, that "hands should be kept out of wounds or covered with boiled rubber gloves," the conditions must hamper the operator in abdominal surgery to a degree which, from this one stipulation alone, renders the system impossible. Aseptic surgery requires more care and more skilled assistance than antiseptic surgery does and it is difficult enough to get antiseptic precautions carried out, especially in private houses. Recently I had my attention directed to an error which Mr Cheyne has also noted. A patient pointed out that her nurse applied a compress so dry that it must have been useless This was a fault of teaching or of comprehension. I have more than once found on going to operate in a private house that although the nurse had done her best she had quite failed to obtain any water which had not an obvious sediment. Antiseptic surgery is difficult and dangerous in such circumstances and it is quite impossible to give effect to the more minute precautions necessary for aseptic surgery

I am convinced that Mr. Cheyne is right when he states that the elaborate arrangements with which the aseptic surgeon surrounds himself in his hospital practice in order to prevent all contamination of his wounds are apt to take away the attention of nurses from essential details, and it is certain, as Mr Wallace points out, that this should not be attributed to the system, but when Mr. Wallace declares that 'a student or nurse trained in the antiseptic school is prone to place too much reliance on a wash in chemicals and too little in hot water and soap" the same objection holds good that this is not attributable to the system. The antiseptic system teaches that everything connected with a wound—hands, instruments patient's skin, &c —should be made as clean as possible by all ordinary methods and by the use of antiseptics. In recent years after everything has been made thoroughly clean, I have had all instruments boiled that do not spoil by boiling and I use antiseptic solutions as I did before I resorted to the practice of boiling for disinfecting purposes. I have formed a very firm opinion that many nurses who ought to know better have a tendency to consider the cleaning of instruments less important when they are to be boiled and, I think some surgeons act on this principle also. I do not suppose this is the result of any teaching but in my opinion the idea that the most careful cleansing of instruments is not essential to the best results is very strongly to be deprecated. Perfect cleansing is not essential to an individual success or even to a series of successes, but it is essential to the attainment of the best and most constantly successful results.

the preceding week. Four inquest cases and three deaths from violence were registered, and 54, or more than a third, of the deaths occurred in public institutions. The causes of six, or 4 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES

Royal Navy Medical Service.

THE following appointments are notified:—Staff Surgeon J. H. Stenhouse to the *Boscawen*. Surgeons R. R. Fasson to the *Vivid*, for Keyham Yard; P. K. Nix to Plymouth Hospital; G. Gibson to R.M. Depôt, Deal; E. S. Reid to R.M. Artillery; and H. Spicer to the *Royal Oak*.

The undermentioned Surgeons have been advanced to the rank of Staff Surgeon in His Majesty's Fleet:—Thomas Christopher Meikle, Joseph Cudlip Wood, Horace Bruce Marriott, Norman Lloyd Richards, Ernest Alfred Penfold, Ernest James Finch, John Kirkup Robinson, and Hugh Clift.

Royal Army Medical Corps.

The date of retirement of Lieutenant-Colonel T. B. A. Tuckey is Jan. 6th, 1903.

Lieutenant-Colonel F. W. Trevor to be Colonel, vice J. L. Notter, retired. Dated Jan. 14th, 1903.

The undermentioned Majors to be Lieutenant-Colonels (dated Feb. 3rd, 1903):—W. G. Macpherson, C.M.G., R. J. S. Simpson, C.M.G., E. V. A. Phipps, A. Baird, T. W. O'H. Hamilton, C.M.G., D. Semple, J. R. Stuart, and R. P. Bond.

Army Medical Reserve of Officers.

Surgeon Major G. F. England to be Surgeon Lieutenant-Colonel (dated Feb. 1st, 1903); Surgeon Lieutenant W. O. Evans to be Surgeon Captain (dated Feb. 21st, 1903).

Volunteer Corps.

Royal Garrison Artillery (Volunteers): 1st Lanarkshire: Surgeon Lieutenant-Colonel J. S. Cumming resigns his commission, with permission to retain his rank and to wear the uniform of the corps on retirement. Dated Feb. 21st, 1903.

Rifle: 3rd Volunteer Battalion the Lincolnshire Regiment: Surgeon-Major F. J. Walker to be Surgeon Lieutenant-Colonel. Dated Feb. 21st, 1903. 4th (Cambridge University) Volunteer Battalion the Suffolk Regiment: Supernumerary Surgeon Lieutenant R. W. Mitchell to be Surgeon Captain. Dated Feb. 21st, 1903. 1st Lanarkshire: Surgeon Captain R. C. Lees to be Surgeon Major. Dated Feb. 21st, 1903. 1st Cadet Battalion the King's Royal Rifle Corps: St. John Frank Blake Campbell to be Surgeon Lieutenant. Dated Feb. 10th, 1903.

Volunteer Infantry Brigade Bearer Company.

2nd London: The transfer of the undermentioned officers from the 5th Middlesex (West) Volunteer Rifle Corps bears date April 16th, 1902, viz.:—Captain J. N. Brown and Lieutenant E. C. Montgomery Smith.

Royal Army Medical Corps.

The following is a list of appointments as Lieutenants in the Royal Army Medical Corps:—

*A. R. Smallman
†W. F. Tyndale, C.M.G.
P. Davidson, D.S.O.
‡J. McKenzie.
§W. B. Taylor.
N. D. Walker.
A. H. Hayes.
H. J. Crossley.
R. B. Ainsworth.
C. A. J. A. Balck.
R. Storrs.
R. L. V. Foster.
F. A. H. Clarke.
G. A. K. H. Reed.
G. W. Smith.
J. W. S. Sucombe.
J. M. H. Conway.
S. M. W. Meadows.
H. V. Bagshawe.
D. S. Skelton.
C. V. B. Stanley.
H. G. S. Webb.
W. W. Browne.
R. Rutherford.
W. D. C. Kelly.
N. E. J. Harding.
W. C. Rivers.
R. J. Franklin.

* Gained the Herbert Prize and the Parkes Memorial Bronze Medal.
† Gained the prize in Pathology.
‡ Gained the Marshall Webb Prize.
§ Gained the De Chaumont Prize and the prize given for Aldershot [illegible]

Tuberculosis in the French Army.

In the exordium of his new work "La Tuberculose dans l'Armée"[1] Inspector General A. Kelsch makes the discouraging avowal that in spite of all the prophylactic measures which have been enforced for upwards of ten years tuberculosis is still progressing in the French army. The percentage of cases is greater than it used to be but the cause of the increase is solely due to the prevalence of the disease amongst young soldiers. The veterans suffer to a much less extent than they did formerly—a reassuring fact which is taken as proof of the practical efficacy of preventive medicine. Recruits on joining are either already contaminated with the germs of the complaint or else, owing to their imperfect constitutional defences, they are unable to resist the infection to which in their new mode of life they necessarily become exposed. Inspector General Kelsch lays stress upon the extreme importance of the secondary causes in the genesis of tuberculosis. Doubtless the bacillus is the immediate agent in the production of the disease, but not even the most virulent of microbes can prevail where the fortifications are effective. The most solid foundation upon which to erect the rampart of prophylaxis is the development of physical vigour, together with the amelioration of hygienic and social conditions.

New Regulations for Probationers of the Indian Medical Service.

The Secretary of State has sanctioned the following changes in conditions in order to place probationers of the Indian Medical Service on the same footing as those of the Royal Army Medical Corps:—(1) Their title to be changed from surgeon on probation to lieutenant on probation; (2) their pay (exclusive of allowances) to be raised to 14s. a day; (3) their commissions as lieutenants to bear the date on which their course of instruction begins, their appointments not, however, being gazetted until they have passed the final examination; and (4) a lieutenant on probation who at the time of passing the examination for admission to the service may hold, or be about to hold, a resident appointment in a recognised civil hospital to be seconded, if fully approved, for one year; while seconded, such officer shall receive no pay from Indian funds, but his service in the civil capacity may be allowed to reckon towards promotion and increase of pay and pension.

The Alexander Memorial Prize.

The prize of £50 and the gold medal of the Alexander Memorial Fund for 1902 have been awarded to Major F. Smith, D.S.O., R.A.M.C. The subject for the next competition is "Syphilis in the Army and its Influence on Military Service, its Causes, Treatment, and the Means which it is Advisable to Adopt for its Prevention." Essays must reach the president of the committee on or before Dec. 31st, 1905, must bear a brief motto, and must be accompanied by a sealed envelope similarly superscribed, containing the name and address of the author. No essays should exceed about 20,000 words exclusive of tables which may be added in the form of appendices. The competition is limited to executive officers of the Army Medical Staff on full pay, and professors and assistant professors at Netley are not eligible while so employed.

Deaths in the Services.

Surgeon-Lieutenant Colonel Edward Eustace, A.M.D. (retired), at his residence, Underwood, Cheltenham, on Feb. 16th, in his sixty-second year. He entered the army as assistant surgeon in 1864, became surgeon in 1873, and surgeon major in 1876, retiring in 1885 with the rank of surgeon lieutenant-colonel.

Staff Surgeon Narcissus Collins Hatherly, R.N. (retired), at South Molton, Devon, on Feb. 10th, in his eightieth year. He entered the service in 1845 and became staff surgeon on his retirement in 1862. He was senior medical officer of the expedition in the boats of the *Alarm* and *Vixen* up the San Juan de Nicaragua and was present at the storming of Fort Serapique, 1848 (mentioned in despatches).

The Indian Medical Service Examination.

A competitive examination for appointments to His Majesty's Indian Medical Service will be held at the Examination Hall, Victoria Embankment, London, about Midsummer next. The number of vacancies for competition and the date of commencement of the examination will be notified hereafter. Application for the regulations for admission to the Indian Medical Service should be addressed to the Under Secretary of State for India, India Office, Whitehall, London, S.W.

The Commander in Chief has had conveyed to Lieutenant-Colonel B. M. Skinner, R.A.M.C., Secretary of the Army Medical Service Advisory Board and of Queen Alexandra's Imperial Military Nursing Service, his appreciation of that officer's good service in South Africa, where he was principal medical officer of a division.

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[1] Published by Octave Doin, Paris.

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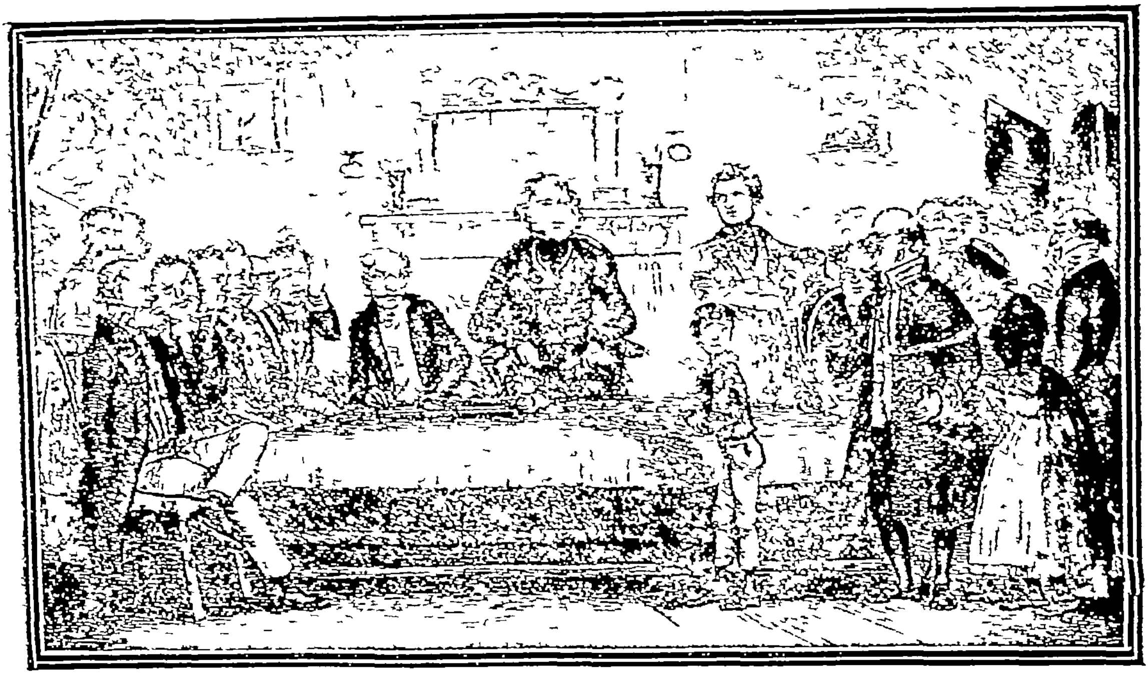

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Another question raised by Mr Cheyne and Mr Wallace is the burying of sutures and I am surprised to find that both consider the burying of silkworm gut permissible. Of course it is possible to bury silkworm gut without inducing sepsis, but I have seen an abdominal scar with the ends of buried silkworm gut sutures like so many pinpoints easily felt under the skin. There could be no peace for the patient until they were removed and it seems to me obvious that a material so stiff should not be used in this way The question of suturing abdominal wounds in layers is too large to enter upon here but I am well content with the results, so far as I know them in my own practice, in which I very seldom sew up a wound in layers I have an objection to buried sutures which is not connected with sepsis. In several cases I have found silk sutures within the abdominal cavity which were apparently in process of absorption but which gave rise to tenderness , on removing them there was no evidence of any septic irritation and certainly no abscess had formed. I therefore always use the silk as thin as possible, often risking a break in tying rather than use a coarser thread. By gradual pressure a very fine ligature may be made to serve where a stronger one is necessary if extreme rapidity in tying it is desired For this reason, which is not connected with septic mischief, I am induced to use silk more sparingly than I have done in the past, although I do not care to risk the tying of an ovarian pedicle or uterine tissues for the arrest of hæmorrhage with catgut I am Sirs, yours faithfully,

Portman street, W Feb 23rd 1903 JOHN D MALCOLM.

To the Editors of THE LANCET

SIRS,—I have read with interest and not without astonishment Mr W Watson Cheyne's criticism of aseptic surgery at the annual meeting of the Harveian Society of London and published in THE LANCET of Feb 7th, p 347 It is perfectly evident that Mr Watson Cheyne is no friend of aseptic methods but is so wedded to the use of antiseptics that he will not take the trouble (that is the word) to give the newer method a fair trial. If he would only do so I am quite sure he would be struck by the improvement in the treatment and condition of the wounds under his care. There seems to be some misconception, to use a mild phrase, as to what aseptic means Mr Watson Cheyne's description of aseptic methods is not very full nor is it very convincing There are far too many omissions in it. It is quite true that the term "aseptic" was defined by Mr Watson Cheyne in his work on antiseptics published in 1882 , but with advancing time and knowledge the same condition can be brought about more thoroughly by means of heat, as regards dressings and instruments, than it can by chemicals Aseptic surgery is described by Mr Watson Cheyne's colleagues, Mr W Rose and Mr A. Carless, as the attempt "to eliminate the irritating properties of chemical antiseptics."

To my mind the great principle which underlies the teaching of aseptic surgery is overlooked by those who largely employ antiseptics. In the latter the student has it thoroughly impressed upon him that he must use carbolic or perchloride lotion, iodoform and boric powder to cover the wound and over all medicated gauze. Having used all or any of the above he has discharged his whole duty to his patient. "He used antiseptics " What we want to get him to understand is that a condition of perfect cleanliness (bacteriological) should be arrived at of his hands and the parts to be operated upon and all materials used for the operation. He is not to trust altogether to his chemicals—something else is wanted and I think that *something* is more enforced under modern aseptic than antiseptic methods It is certainly true that more personal supervision of detail is required in aseptic than in antiseptic surgery, but it is in detail that it tells—in details it counts Both schools use antiseptics or chemicals for the production of asepsis of hands and parts to be operated upon, but in the antiseptic school the preparations are not so complete nor so thorough as in the aseptic.

It should be impressed on the student that the attention to minute details preceding an operation is of more importance than the use of preventives during an operation where the preliminary details have been omitted This to my mind, is the great gulf that separates the methods under dispute and makes the great difference in the results of different surgeons. Mr Watson Cheyne must have seen many cases with surgeons where this principle was omitted, to the patient's detriment, but where antiseptics were used. As I conceive it and as I practise it the preparation of the patient is of the utmost importance. First, the patient has a bath and the part to be operated upon and the surrounding area are prepared in the following manner washed with warm water and soap—not for a few minutes only but thoroughly well washed—using for the purpose a large piece of sterilised gauze No nail brush is required unless it has been well boiled in order to soften its fibres and so prevent abrasion of the skin. At this time the part is shaved, then rubbed thoroughly with turpentine, dried, and finally rubbed freely with methylated spirit. Thereafter gauze wrung out of 1 in 40 lot. ac. carbol. covering a wide area, covered with gutta percha tissue and left on until the morning On the operating table the same proceeding is gone through again Hands washed in running water before and after this second cleaning soaked in 1 in 3000 hyd. biniodide solution. Dry sterile towels surround the area to be operated upon and no further antiseptic is required. The rest of the operation is carried out without the use of any chemical , only sterile saline solution is used for the wound and perfect hæmostasis is aimed at , the wound is closed with or without drainage, as the condition warrants this, but mostly without. A basin of 1 in 3000 or 1 in 4000 hydr biniodide is placed near the operator and one for the chief assistant for dipping the hands into during the operation and frequently changed. In many case of hernia and abdominal explorations drainage is the exception, the parts being dried and sealed at the end of the operation by collodion and gauze. Large pads of plain sterile gauze are placed upon the wound, and over all a pad made of Hartmann's wood wool wadding, inclosed in gauze, is firmly placed. Sterilised gauze bandages cover all and primary union is the rule. Since adopting this routine I find house surgeon and nurses to be much more careful and less liable simply to dip their hands in antiseptics only Surely no surgeon would permit the use of an instrument that had fallen on the floor Nurses become enthusiasts. Mr Watson Cheyne's description of the nurse cutting up medicated cotton in squares and placing them in unsterilised towels is no part of a well planned aseptic operation. Gauze cut in definite sizes *before* sterilisation, all frayed edges being infolded and doubled so that no free threads are admissible and then sterilised, is what is done in a well planned system , of these first, a size for ordinary mops , secondly a larger for other purposes , and thirdly, a still larger size for abdominal use I have seen what Mr Watson Cheyne describes in an antiseptic theatre, not an aseptic one. But this was on Mr Watson Cheyne's side of the border In the same hospital, which is conducted on purely antiseptic lines, I saw a case being brought in for operation for abdominal tumour The abdomen had never been prepared at all and the house surgeon started with his nail brush and strong perchloride and scrubbed the abdomen most vigorously If that house surgeon had had a few lessons in aseptic methods I venture to say that he would have taken more pains to prepare his case the evening before and have shown a little consideration for the life that was undoubtedly placed in danger But this is where the blind faith in antiseptics comes in. Probably the case did well, and the same procedure may again be adopted, with disastrous results "But antiseptics were used "

Again, in a London hospital where antiseptics are the rule, I saw the assistant surgeon inspect his cases with the dressers The young gentlemen never removed their outdoor coats, never pulled up their cuffs or removed their rings but simply dipped their hands in carbolic lotion and gave them a rinse. Will such a so-called washing remove the gross dirt of London smoke? The surgeon only removed his coat when about to do the first dressing of the patient. What was his procedure? He drew up his cuffs, washed his hands casually in the ward basin with soap, rinsed them in carbolic lotion, and, with a "Pardon me," tapped a student who was in his way on the shoulder and straightway proceeded to dress his wound Instruments should always be boiled in strong soda solution for an hour and all towels used to surround the area to be operated upon should be boiled and thereafter dried and sterilised. In using them dry instead of wet I think it an advantage The wet towel, if applied hot at first, soon becomes cold and unpleasant and in a measure contributes to increase shock. In view of the fact that "organisms floating in the air are essentially non pathogenic," I have gradually given up the immersion of instruments during operation. They are removed from the steriliser and placed in the instrument tray, which has a sterilised towel placed in it and one over it, and then only raised when about to begin All soiled instruments are placed in a basin of boiled water and cleaned and replaced in the towel after use

General precautions —Here it is the duty of the surgeon to devote "extreme attention to the avoidance of any possible contamination," and I do not think antiseptics should be encouraged in this part of the work if it will encourage surgeons to devote less attention. Sponges I have not seen used for some years as the great difficulty is undoubtedly in completely sterilising them. Gauze, as I have described, cut in definite sizes and infolded and sterilised, is infinitely safer I have had difficulty with imperfectly sterilised catgut but not for some time. It is now prepared by Lockwood's method. Gut for ligature and silkworm gut for suture, and silk and celluloid thread, all well boiled before use, for pedicles and buried sutures have proved satisfactory, but undoubtedly gut is difficult to make aseptic. Gauze will never replace drainage tubes, but it is better to have a gauze packing in an abscess cavity than simply to open and to put in a tube. Such a case should be well opened and dried out with gauze, all débris removed, and then packed with gauze. This is better surgery than simply opening and putting in a tube. Better still is to open freely every recess of the abscess, to wash with saline, or saline and peroxide of hydrogen 5 per cent, and to dry, and then to touch up the interior with pure carbolic acid and to fill the whole wound with methylated spirit, dry now thoroughly with gauze and pack for 48 hours, remove, wash around with spirit, dry, and close. This is the most effective method I have yet come across for tuberculous abscess The advantage Mr Watson Cheyne claims for medicated dressings is a further argument in favour of strict asepsis and attention to detail. It ought to be taught that whenever a dressing shows the least suspicion of staining it should be immediately covered by a fresh pad or the dressing changed—knowing that, if this is neglected, the risk of sepsis is too great. On the other hand, surely Mr Watson Cheyne does not teach that if the dressing contain an antiseptic the dressing need not be changed, "nor does the sepsis spread back to the wound." That "pus means sepsis" should be accepted as a good working maxim. There are a few further details on aseptic methods which Mr Watson Cheyne has omitted. I would first mention the prominent part that methylated spirit plays in the subsequent dressing of a wound, and the use of rubber gloves, especially in dealing with septic cases, as a protection to the surgeon's hands and in abdominal operations. Finally, it is well known that sterile saline solution is largely used in aseptic surgery for its unirritating qualities. I experimented with baths of lot. ac. carbol. 1 in 100, lot. hyd. perchlor 1 in 2000, and lot. boric and saline in normal solution, immersing crushed hands and ulcers in them. The saline I found to cause the most rapid granulation and cicatrisation of the wound. Aprons and gowns are essential and need not be discussed. The nurse's position at an operation should be perfectly defined and her duties detailed. There should be one whose duty it is to sterilise the instruments and dressings—the instrument sister—who occupies this place only, another to hold the *basin* containing the sterile mops for the surgeon—*not to hand them to him*, another to attend to the receiver for soiled mops, dressing &c., and, lastly, one to look after irrigation all to have their sleeves rolled up beyond the elbows and to have their hands and arms well washed and clean. That nurses will take all the trouble required I have found from experience, but they must be taught it and have the example of consistency set them the surgeon not going into his bag and doing a lot of thoughtless things after having sterilised his hands

That the aseptic method can be successfully carried out in private practice I have no doubt as all that is wanted is a kettle of boiled and one of boiling water and plenty of freshly laundried towels. The rest is easy and all a matter of routine, detail and constant watchfulness. The work that Lord Lister began in Glasgow cannot stand still, and it seems to me that the great benefits that were commenced by him then are finding their logical conclusion and perfection in the very attention to detail and "trouble" he then advocated and practised and are more certainly likely to be accomplished by the steam sterilisation of dressings and instruments and the strict attention to aseptic detail instead of taking one's chance of the medicated dressings being sufficient to kill every organism that may come their way

I am, Sirs, yours faithfully

JAMES LAURIE, M.B., C M Glasg

Greenock, Feb. 13th 1903.

POLYMASTISM AND POLYPARITY

To the Editors of THE LANCET

SIRS,—As the subject of multiple pregnancies is under discussion in your columns, it occurs to me that it may interest your readers to have their attention called to certain relations between polyparity and polymastism which have not hitherto been noticed. Both these anomalies may, I think, be ascribed to reversion. As I G St Hilaire has remarked "Un individu remarquable par des formes anomales, tombe presque toujours par cela même dans les formes normales d'un autre âge, d'un autre sexe, ou d'une autre espèce." It is under the last of these headings that the anomalies I am considering may be classed.

Among mammalia numerous mammæ in two parallel series are the rule, and for only a single pair to be found—as in mankind—is most exceptional. Now there is a certain relation between the number of mammæ met with in the mature female and the number of young brought forth at a birth, the former being, as a rule, twice as numerous as the latter It accords with this, that polyparity is the rule among mammalia and that the human uniparity is exceptional It is a curious fact that in early embryonic life even human beings have multiple mammary rudiments—arranged just like the mammæ of most adult mammals—although all but a single pair of them, as a rule, subsequently abort As the individual development is generally regarded by biologists as a kind of epitome of that of the race, it may be concluded from this and from other considerations, that human polymastism is a reversion to a primitive condition in which many glands were developed and many young were brought forth at a birth, as is now the case with most mammalia. The transition from polymastism to bimastism may be seen going on in lemurs, whose inguinal and abdominal mammæ are disappearing, so that only one or two pairs of pectoral mammæ are now well developed, and this change has been correlated with diminution in the number of young brought forth at a birth.

Thus it seems certain that the reduction of the primitively multiple human mammæ to a single pair has been brought about in consequence of the change from polyparity to uniparity Other changes consequent on this diminished fertility have been the evolution of the single (unilocular) human uterus from a primitively double form. Some biologists believe that the origin of menstruation may also be traced to this diminished fertility—at any rate, non menstruating mammals are far more prolific than menstruating ones In this connexion it may be mentioned, as Ballantyne and others have pointed out, that the ovaries of very prolific polyparous women, in whom twins are common, are generally of the fœtal type, especially in respect to the immense number of ovisacs they contain.

The question has often been asked whether polymastic women are more liable than others to beget more than a single child at a birth? To this it may be answered that of 70 polymastic women in Leichtenstern's list three had given birth to twins, or 4·3 per cent., whereas the average proportion of twins among British women is only about 1 per cent. In a remarkable case of hereditary polymastism recorded by Marie this anomaly was concomitant with frequent twin-births and excessive prolificacy for several generations. Viewing the matter in this light, let us seek an answer to the question, What is the greatest number of children a woman may bring forth at a single birth? As I have pointed out in my monograph on "Diseases of the Breast," there are good reasons for believing that the human *atavus* had at least seven pairs or mammæ on the ventral aspect of the trunk, of which the present normal pair alone survive. If, therefore, we may answer our query by an appeal to this indication, it would appear that as many as 14 children might possibly be brought forth at a birth. I should not care to deny offhand the absolute impossibility of such an occurrence. Among the ancients Pliny says that as many as 12 at a birth had been noted, and others even 15, but Aristotle would not admit the possibility of more than five. In comparatively modern times, however, apparently well authenticated instances of eight at a birth, seven at a birth, and six at a birth, have been reported. Altogether, it seems desirable to keep an open mind as to the maximum possibility

I am, Sirs, yours faithfully,

Clifton, Bristol Feb 10th, 1903. W ROGER WILLIAMS.

THE RISE OF BLOOD PRESSURE IN LATER LIFE

To the Editors of THE LANCET

SIRS,—If the meeting at which Professor T Clifford Allbutt read his interesting paper on the Rise of Blood Pressure in Later Life was not very numerously attended nor his views then very fully discussed, it cannot be said that the rostrum of your columns has not since then been sufficiently and efficiently occupied by those taking an interest in the subject. The peripheral factors in the production and maintenance of increased blood pressure as life advances have been fully dealt with, although the situation and mechanism of the process have been the subject of divergent or different views for the opinions expressed differ rather than diverge While Sir William H Broadbent and Sir R Douglas Powell have stood stoutly by the theory of capillary resistance Dr Harry Campbell, sustained by the important dead house pathology of Dr William Russell, sees in a bespasmed arteriole the efficient cause of the ultimately persistent process—in the hypertonus of Dr Russell the cause of the arterio-sclerosis of later life We must all feel grateful to Professor Allbutt for having mooted a subject in the felicitous manner so peculiarly his own which has elicited so much fact and so much hypothesis It is not because I can add much of moment to what has already been said that I venture to crave your permission to occupy the momentarily vacated tribune of your journal, but because one or two points which my own study has impressed upon me have not so far been fully brought out in the discussion These are not contrary, I think, to the spirit of Professor Allbutt's argument. In discussing the subject of the rise of blood pressure in later life, it appears to me that the cardio vascular changes secondary to renal disease should be excluded from consideration, except in so far as cardiac failure may induce circulatory renal disturbance, and the diagnosis of these distinct states is not a difficult matter Excluding, then, cardio-vascular change secondary to kidney disease, we find as life advances a hyperplasia of the intima of the vessels and of the interstitial tissue of the heart, with some hypertrophy of the muscular elements in both these situations, a hypertrophy which in the case of the heart ultimately yields to the persistent peripheral obstruction, where the vessel, less active and less organised than the central organ, usually maintains its more sluggish muscular hypertrophy longer The change may or may not as we know, be associated with calcareous deposition. When this occurs, however, the more or less rigid vessels may have an abnormal patency and then the muscular coat, far from being hypertrophied, may, indeed, be atrophied, for it is then not over-exercised but under exercised Such a vessel, when the deposited lime salt is scattered, as it usually is, may, as Sir William Broadbent remarks, be associated with a comparatively soft and compressible pulse, even in old age. The question then is, Does cardio-vascular hypertrophy precede or follow the connective tissue hyperplasia? It is unfortunate that the point cannot be determined during life, and after death both states are found in association unless atrophic muscular degeneration has supervened That both are present in later life, when hypertonus has become persistent—when spasm, if antecedent, has passed into arterio-sclerosis—will not, I suppose, be disputed. It is only, I would suggest, by a more systematic dead house research, with histological examination of the structures involved at all ages and in cases uncomplicated by gross organic disease, that the point can be settled Such an investigation, so far as I am aware, has not yet been made and our argument must of needs, therefore, at present be largely hypothetical So far as I *may with diffidence express an opinion, I am inclined to* believe that if muscular hypertrophy be primarily due to active and sustained hypertonus it is soon increased by having to deal with the more persistent inelasticity of connective tissue hyperplasia and that such connective tissue increase is, therefore, an active cause in heart and vessels of difficulty in propelling and conducting the circulation as life advances and provocative of the compensatory changes necessary to deal with it This, then is one point which I desired to emphasise. The other is, that, in my belief, the study of the peripheral physiology and pathology of the vessels has distracted attention in a measure from senile changes in the heart capable of being generated by its own activity, apart from the abnormal labour thrown upon it by peripheral ob
that is, that the nervous, muscular, and hæmic factors
together go to produce the functional unit of cardiac
cause changes in the organ itself, dealing as it does
the emptying of its chambers (the blood weight) and
the stress of the emotions, aggravated or not, as the
by imprudences in diet and exertion. I
may be, ndy in the living of these questions is
as the st in his reply to Sir Douglas Powell
fessor Allbut ar, in no wise desires to minimise the
shown that he search, which has still much to
of anatomical re dation of this subject The p
towards the eluc ese questions, as Faust, also
cannot yet answer t his last letter, solved an
Professor Allbutt in the
psychological problem — ask, why in thy breast

> "Still dost tho use lutters ill at rest?
> The sick heart for the of suffering
> Why a dull sense is clos ent at its spring?
> Deadens life's curr his, but thou hast fled
> From living Nature nts of the dead."
> To dwell mong fragm

We are still doomed, I fear, to dwell ... of the dead before we shall be able ad ... progressive pathology of the living pr ... of blood pressure in later life.

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ALEXAN

Upper Berkeley street, W , Feb 13th, 1903

To the Editors of THE LANCET

SIRS,—I have read the correspondence on Mr Blood Pressure in Later Life which has already a di THE LANCET with much interest, and venture to ed permission to make a few remarks with special re e the relationship of general arterial hypertonus to t g pressure. This relationship is undoubtedly a very e one, and personally I am quite satisfied that when t , of the radial artery are tightly contracted the within may be either considerably increased or lowered

There is no doubt that the arteries respond very pre to the action of toxic substances circulating in the and in such circumstances their calibre is diminis This may be called *toxic* arterial *contraction or* hyperto and the condition is present in all cases of auto-intoxicat whether arising from poisons which are absorbed from alimentary canal or due to certain chemical chan occurring in the tissues as a result of abnormal metaboli Anyone may suffer from this kind of hypertonus and dur the time that the arteriole contraction is present I beli that the blood pressure is almost invariably raised in larger arteries. Marked diuresis for several hours is ofte striking feature of this transient toxæmia, and when toxins are eliminated the calibre of the radial artery is fou to be enlarged. Dr Harry Campbell's explanation of t greatly increased secretion of urine in such cases—that wh the systemic arterioles are contracted those of the renal fi are dilated—may be correct but it does not always appl Thus in the grave auto-intoxications of pregnancy sometimes culminate in eclampsia hypertonus is an and persistent feature and is accompanied by a marked ri in the blood pressure. When such symptoms are the secretion of urine is notably diminished and as tonus and increased pressure become more pronounced urine may be suppressed altogether In myxœdema an cretinism, which are typical auto intoxications, hypert is always present, and the increased blood pressure in diseases is associated with a lessened urinary secretion

The point which I wish to emphasise, however, is *toxic hypertonus is seldom present* for any length of tim without some augmentation of the blood pressure, and believe that the explanation of this is to be found in the fac that in these cases the obstruction to the flow of blood not only in the arterioles but also in the capillaries *Arteriole contraction alone* as it is observed in cases *non toxic* hypertonus, is certainly very often by any increase in the blood pressure, and the imp of the capillaries in the area of peripheral resistance m be regarded as a factor of primary importance when th pressure is considerably raised. It is well recognised that the capillaries are much more sensitive to the action of toxins than the arterioles

Non toxic hypertonus is a prominent feature in certain diseases of the nervous system and may also be induced by severe abdominal pain, tympanites, or any form of profound shock. The tonic contraction of the arteries is often very striking and this kind of hypertonus is typically present in some cases of tuberculous meningitis during the irritative stage. Sometimes even in young children, the radial artery feels like a piece of whipcord and I have always found the blood pressure extremely low When as a result of peritonitis or shock, hypertonus is present (the "wiry" pulse), the pressure is also frequently abnormally low, and remedies which produce a relaxation of the vessels lead to a raising of the blood pressure In such cases there is a general arteriole contraction, due either to direct irritation of the vaso-motor centre (meningitis cerebral tumour, &c), or indirectly produced by some disturbance of the abdominal sympathetic system. There is no unusual obstruction in the capillaries. In some cases of marked arterio-sclerosis in old people, where the lumen of the radial artery was greatly diminished, I have found the blood pressure exceedingly low, but there was no reason to suppose that the capillary area was unduly obstructed. Similarly in old syphilitic vessels with nearly obliterated lumina, the pressure registered was sometimes very low

In conclusion the following points may be stated (1) in cases of *toxic* hypertonus the arterial pressure is, as a rule, considerably raised, and this is mainly brought about by contraction of the capillaries, which, like the arterioles, participate in the area of increased peripheral resistance, (2) in *non-toxic* hypertonus the blood pressure as registered in the radial artery commonly remains unaltered or may be greatly diminished. The obstruction to the flow of blood is then chiefly due to arteriole contraction, the capillary field is not implicated. I am, Sirs, yours faithfully,

Edinburgh Feb 16th, 1903. H. OLIPHANT NICHOLSON

THE VALUE OF CHLORETONE IN SEA-SICKNESS

To the Editors of THE LANCET.

SIRS,—When travelling as surgeon of one of the Union Castle steamers I was much struck with the value of chloretone' (a product of chloroform and acetone prepared by Parke, Davis, and Co) in some cases of aggravated sea sickness. Beginning with a dose of ten grains, I administered five grains at intervals of three hours until the stomach nausea and head congestion were relieved, and the patient sank into a natural and gentle sleep. In every case on waking there was a natural appetite for food and fruit, biscuit, soup, beef tea, and stimulants were readily retained. By the continued use of the drug in five grain doses at four hour intervals, the symptoms in the worst affected were controlled for several days of very rough weather and the less affected cases were rendered quite good travellers. The most noticeable clinical feature of its action was the rapid effect produced on the pulse, converting the quick, tense beat of sea sickness into the fuller and more regular one of health a quarter of an hour after being swallowed. The relief of headache without any heart depression whatever is a very strong point in favour of its use in persons with any organic disease of the heart or kidneys, and as a pure stimulating hypnotic without any bad after effects it deserves a foremost place.—I am, Sirs, yours faithfully,

L WHEELER, M B., B Ch. R U I

Junior Conservative Club, London, Feb. 22nd, 1903.

A CASE OF HERNIA INTO THE FOSSA DUODENO-JEJUNALIS

To the Editors of THE LANCET

SIRS,—Mr B G A Moynihan in THE LANCET of Feb 7th, p 393, has thought it necessary to take notice of my record of a Case of Hernia into the Fossa Duodeno-jejunalis which appeared in THE LANCET of Jan. 24th, p 236 This case was carefully dissected and I made drawings of the relations of the parts round. The free margin of the orifice was *formed* by a thick fibrous mass in which was found the left colic artery besides this the inferior mesenteric artery, where it came off the aorta, could be said to form the lower *cornu* of the opening The inferior mesenteric vein was distant to the left from this margin about half an inch It did *not* as Mr Moynihan presumes, occupy the "neck" of the sac, but ran almost vertically at the above-mentioned distance For this reason is it not probable that the case was properly named? Mr Moynihan says that the condition of the fossa to be properly appreciated must be studied in the fœtus or young child I have it on the authority of a most careful observer and competent embryologist (possibly the most competent in the country), whose observations will probably soon appear, that out of a series of 47 fœtuses in only one was there the slightest suspicion of a fossa of any kind in the neighbourhood of the duodenum so that the nine fossæ so exactly described by Mr Moynihan are probably formed later in life.

I am, Sirs, yours faithfully,

Aberdeen, Feb 16th 1903. C T ANDREW

ANEURYSM OF THE ASCENDING AORTA.

To the Editors of THE LANCET.

SIRS,—I have read Dr A C Jordan's paper in THE LANCET of Feb 21st, p 515, on aneurysm of the ascending aorta in a small boy with great interest One cannot help regretting, however, that the chest was not examined during life with the x rays True, there were no physical signs calling special attention to the chest, but I venture to think that had the chest been so examined much light might have been thrown on the case The aneurysm, judging from Figs. 1 and 2, was quite large enough to have been so detected. The only element of doubt in the diagnosis would have been between an aneurysm and enlarged bronchial glands, the latter condition being, of course, much more likely in a child six years of age, but the continuity of the shadow with that of the heart and aorta, and more especially the pulsation of the sac, would, I think, have left no doubt about the diagnosis. I venture to think that the day will come when a patient will be examined with the x ray screen as a matter of routine in the same way as he is now examined with the stethoscope, and I think the sooner that day comes the better I, for my part, can only say that I have found x-ray examination of the chest in my out-patient room and in private practice of very great value. I am, Sirs, yours faithfully,

Harley-street W Feb 21st 1903 HUGH WALSHAM.

THE CULTIVATION OF ANAEROBIC BACTERIA

To the Editors of THE LANCET

SIRS,—Mr H S Fremlin draws attention in a note on p. 518 of THE LANCET of Feb. 21st to a method of cultivating anaerobic bacteria in plate, of which a detailed account is promised in the forthcoming report of the medical officer of the Local Government Board. Will you allow me to draw Mr Fremlin s attention to the fact that a method based on identical principles and manipulations has already been described by myself in the report of the medical officer of the Local Government Board for 1897–98 on p. 219

I am, Sirs, yours faithfully,

St Bartholomew's Hospital, Feb. 21st 1903. E KLEIN

APPENDICITIS IN ITS ACUTEST FORMS A CORRECTION

To the Editors of THE LANCET.

SIRS,—Will you kindly grant me space to correct an error and one omission in my paper upon appendicitis? The error appears in connexion with the numbers and the mortality of the cases of typhlitis and peritonitis occurring in St. Bartholomew's Hospital in the years 1882 to 1884 In all 79 cases were registered with a mortality of 23—not 41, as stated on p. 503 of THE LANCET of Feb 21st

The omission is the want of any reference to a note in the *British Medical Journal* of April 5th, 1892, p 54 to which I am indebted for valuable information and through which my attention was first drawn to the work of Battey regarding the occurrence of pelvic peritonitis in the male sex.

I am, Sir, yours faithfully

Cannes, Feb. 23rd, 1903. J A. MACDOUGALL.

A QUESTION IN INEBRIETY

To the Editors of THE LANCET

SIRS,—In THE LANCET of Feb 21st, p 552, Mr. C. E Macnamara states his opinion that the inebriate is possessed of a strong will and asks the opinions of your readers. If

Mr Macnamara opens "The Present Evolution of Man," p 347, or "Alcoholism A Study in Heredity," p 83, he will find that if his opinion is heterodox it is certainly not new

Mr Macnamara seems to class "will" as an independent faculty of the mind Is this so? Buckle, in his "History of Civilisation," vol. i., chap i., gives good reasons for believing that it is not and for believing that the actions of men are governed by fixed laws Herbert Spencer, as quoted by Dr Archdall Reid, states that "the will of man is trammelled by his desires," and Dr Reid puts the case clearly and accurately when he says "It is a simple truth that the will of man, as of all animate creatures, is exercised, *as a rule*, to gratify, not to cross, his desires"

I am, Sirs, yours faithfully,
C R. NIVEN

Everton, Liverpool Feb 21st 1902

THE
ORGANISATION OF THE PROFESSION

(FROM OUR SPECIAL COMMISSIONER.)

(Concluded from p 555)

Threat of the Swansea Friendly Societies to create a Medical Institute of their own —Statistics as to Medical Remuneration.—Success of the Swansea Practitioners

AT Swansea, as at Chesterfield and in many other places, the one great threat of the friendly societies is that they will amalgamate and form a medical institute or dispensary, employing exclusively for their own purposes one medical officer or more. This proposal is all the more menacing because its practicability has been demonstrated. Such institutions have already been created and exist in several towns What little advantage can be derived from club or contract work by the local practitioners is lost when such an institution is established, on the other hand, the attendant evils are accentuated A local practitioner who besides attending private patients is also medical officer to a friendly society can, if he is bold enough, protest against any case of flagrant abuse and he may also hope to acquire popularity and thus to increase the number of his private patients But the managers of a medical institute import a practitioner who is a stranger to the town they lodge him in their own house, and the agreement contains not only a clause that he must have no private patients but it is sometimes also stipulated that on leaving the institute he must not establish himself in practice in the neighbourhood. These are rules devised to make the medical officer an absolute servant and to deprive him of the slightest shred of independence. He is likely to lose the respect of the members of his profession and whatever name and standing he may have possessed. All this makes him still more dependent upon his employers and he will probably be careful to give every satisfaction to the members of the managing committee of the institute to whom he has sold his freedom and his services. But it does not follow that all the members of the friendly societies by thus enslaving their medical officer insure for themselves really efficient medical attendance. A slave may be whipped till he carries a certain load and accomplishes a certain amount of physical work. But this is not the way to develop qualities which are essential for a sound medical practitioner The efficaciousness of medical treatment depends on the sympathy and interest which the medical attendant feels in his patient, or else the medical attendant should have a motive to spur him on in his efforts—an interest in his science if not in his patient and some possibility of progress and reward to look forward to But these medical institutes nip all such aspirations in the bud. There is nothing to work for, there is only the dead level of a modest salary, little or no prospect of an increase, no chance whatever of distinction, no possibility of professional advancement, no hope of fortune or fame, in a word, there is no future at all Yet it is by offering such conditions as these that the members of these friendly societies ingenuously believe that they are going to secure for themselves better medical attendance.

The friendly societies of Swansea have issued an appeal and in the lengthy circular which they have published they not only denounce the club medical officers for their neglect but they propose to form an association for the purpose of establishing a dispensary This institution, they say, would be "entirely controlled by the friendly societies" and worked for their own benefit. There is no question here of any benefit for the medical profession, on the contrary, the only people who are to derive any advantage are the members of the friendly societies The members, their wives, and children are all to be insured "efficient medical attendance and the best of medicines," and the duly qualified practitioners who are to do all this "will not be allowed to take on any private practice, but will devote their whole time to the service of the association" The members will buy their own drugs and establish a dispensary under the direction of their medical officer The members are to live within three miles of this centre and to pay 8*s* a year for themselves and their whole families. They publish a good array of statistics to prove that the results obtained by 42 similar institutions indicate that 8*s* per member will suffice. For instance, we are told that there are 15 associations with from 1000 to 2000 adult members each, or in all a total membership of 33 700, and that they employ 22 medical officers and five dispensers. The average annual cost per member works out at 7*s* 1 73*d*, which is subdivided at 4*s* 6 13*d* for the medical officers and dispensers, 3 28*d* for conveyances, 9 91*d*. for drugs and appliances, 7 99*d* for house bills, 3 07*d* for offices and committees, and 7 35*d* for sundries. But these and other similar figures do not explain what is meant by adult membership It is the children who give the greatest trouble. These fifteen societies, or amalgamations of societies, give the largest average sum to their medical officers Next on the list are eight associations with from 2000 3000 members each that give but 3*s* 8 84*d*, 12 assc tions of from 3000 to 4000 members each that 3*s*. 2 44*d*, four associations of from 4000 to 5000 m each that give 3*s* 3 92*d*, three associations of from 5000 to 6000 members each that give 2*s* 06*d*, and association of from 6000 to 7000 members which 2*s* 5 78*d* per member per annum to their med officers and dispensers Deducting the salary of dispenser we find here medical men receiving less than per member If we make an average of the various allotted to the medical officers and dispensers by these different categories of associations, the result is a under 3*s* 3*d* per member per annum. Dr T D has reckoned that at 4*s* 4*d* per annum the medical received about 2*s* 6*d* for every week's actual attendance patients, but the above figures make it only 1*s* 10¼*d* week, or 3¼*d* per day So here we have a total of 122, members of friendly societies who, according to the fi they themselves publish, are actually receiving the services medical officers and dispensers for the munificent remuneration of 3¼*d* per day's attendance The officer has to see the patient and to prescribe for him the dispenser has to mix the drugs, and then, the dispenser and the medical done this, the dispenser and the medical have 3¼*d* to share between them as the reward their work. This is the sort of institution which it was pro posed to establish in Swansea so as to render it quite that in future the members of the friendly societies be properly attended when ill. They actually that this arrangement would be an improvement on present state of affairs. They did not seem to stand that a medical practitioner may see a patient for 3¼*d* or less, or for nothing if by so doing he is acquiring ence and raising himself in his profession, but proposed, on the contrary, conditions that would their medical officers and probably cause them to be cised by their fellow members of the profession. What of practitioner could the members of the friendly expect to get under such conditions? Not men who for the honour of their profession, but men who for reason or other have abandoned all hope and are content accept a fixed sum that will guarantee them against want.

The argument raised at Swansea was that the club officers sometimes neglected their patients, therefore friendly societies must amalgamate and start a dispensary medical institute of their own To this the members of medical profession replied that if the patients were c ally neglected it was because a good deal of abuse vailed and the payments made were absurdly inadequate Thereupon some of the most active leaders of friendly societies rejoined that in these circumstance best thing to do was to create a federation of societies so as to pay their medical officers even less than they had been in the habit of paying The application to economics of the old maxim that "like cures like" did not, however, find favour so readily as was expected Besides, though there was every prospect of paying the medical officers of the proposed dispensary less than is actually given for medical attendance, the members themselves would have to pay well nigh the same sum The Swansea and District Medical Practitioners' Association promptly agreed that it would try to meet the members by limiting itself to a very moderate demand. There is a sort of tacit agreement or feeling that the minimum pay for contract or club work shall be 1*d*. per week for adults and ½*d* per week for children. There is also a very strong feeling that for the better class of artisans, who to a large extent belong to the friendly societies, the families should not be allowed to join such organisations. However, Swansea was so much behind other centres in these matters that the question of excluding families had to be set aside for the moment. It is not practicable to pass at once from the worst to the best conditions, it was therefore felt that the progress must be gradual The average payment was said to be 6*s* 6*d* per annum per family but a strong point was made of the fact that those members who had no families paid the same amount. The value of this consideration naturally depends upon the proportion of unmarried members and it was maintained that only two-thirds of the members were married. The Medical Practitioners' Association on the strength of this statement replied that its members would consent to attend the members of the friendly societies and their families for an all round payment of 8*s* 8*d* per annum. This means that the married members would pay for themselves and their wives only at the rate of 1*d* each per week It also means that the unmarried members would pay 1*d* per week for themselves and 1*d* per week for the children of their married co members. In this respect the bachelors of Swansea occupy a unique position and considering their generosity towards their married friends it is not surprising if the medical profession followed this example and also showed some indulgence towards large families. At a halfpenny per week each bachelor pays for two children and as there are twice as many married couples as there are bachelors each couple has one of their children paid for by the bachelors All the children over and above the average of one child per couple are not paid for at all. Such are the conditions which the members of the profession declared that they were willing to accept The Medical Practitioners Association summarised the matter in the following terse manner —

> Two alternatives present themselves to you—either to accept the services of the medical men now in Swansea who are prepared to attend you for 8*s* 8*d*. or throw in your lot with the proposed medical aid association who *say* they will ask 8*s* but can give no guarantee. Are you prepared to cut yourselves off from the services and goodwill of every medical man now practising in Swansea for the sake of a possible saving of eight pennies a year?

After some hesitation the answer was recently given. The friendly societies have abandoned their scheme of creating a medical institution for providing their members with medical aid and drugs and have accepted the terms set forth by the Swansea and District Medical Practitioners Association. Though these conditions do not amount to the minimum of a penny per week per adult and a halfpenny per child still they are a great improvement on the old annual average of 6*s*. 6*d* per member, which sum included his family if he were married. But the medical practitioners have obtained another and more solid advantage From the very beginning higher subscriptions have been claimed by the surgeons attached to particular works It is argued that the surgery must be close to the works or factory and that such districts are not suitable for private practice. Then if the works are stopped in consequence of a strike or any other cause the medical officer has to continue to attend his patients though he gets no pay at all Again, though he has to have *his* surgery near the works the workmen themselves often live at considerable distances and not all in the same direction. This causes much loss of time when they have to be seen in their own homes. Therefore the Medical Practitioners Association declares that though it would accept 8*s* 8*d* from the members of the friendly societies it would require 13*s*. per annum per member from the medical aid organisations connected with the copper tin steel tubing, and other works. The majority have now consented to these terms, though at three large works these new conditions have not yet been conceded

Such, then, is the present state of affairs and it will be seen that some solid advantages have been gained in a very short time Thus once more has the use of organisation been demonstrated The situation is still unsatisfactory in many respects and there yet remains a good deal of abuse. Tradesmen and comparatively rich men belong to the friendly societies and the need of a wage limit is felt keenly at Swansea as well as elsewhere. As at Lincoln so at Swansea, one of the principal men in the town was a member of a friendly society and paid only 4*s*. 6*d* a year for his medical attendance. The society to which he belonged had 733 members and paid its medical officers £170 for attending them and their families. It has been calculated that at such rates of payment if the whole population of Swansea was thus enrolled the medical practice for the town would not yield more than £120 per annum to each of the practitioners established in the town, and with this £120 he would not only have to keep himself and his family but he would have to dispense and to supply drugs to all his patients, to pay rates and taxes and to keep open a surgery for the use of his patients

It will be seen, therefore, that a wage limit is absolutely necessary, indeed, this is more important than the question of the amount paid in subscriptions. It would be far better to attend the poor for nothing so long as those who can pay do not avoid doing so As it is all these discussions have had another good effect Several persons have given up subscribing to clubs and the tendency is in the case of many persons again to seek private medical advice. One local practitioner had found it to pay better to charge poor people 5*s* a week when they were ill and nothing when well. With this system he had not had 4 per cent. of bad debts This, again, raises the question of what should be the minimum fee in private practice, a problem which will soon have to be solved by the young society which the medical practitioners of Swansea have recently created. It is to be hoped that its future endeavours will continue to meet with the success that has rewarded its first efforts.

MANCHESTER

(FROM OUR OWN CORRESPONDENT.)

The Spread of Small-pox

DURING the week ending Feb 7th 36 cases, and during that which ended on Feb 14th 19 cases, of small-pox were removed to the Clayton Hospital. In the first week a case was overlooked that occurred in a common lodging house. Dr J Niven believes that from this one 17 cases were infected, nine at the lodging house, three at private houses four at the workshop which the man continued to attend while ill, and also that of a publican in the neighbourhood. It is, of course, difficult to trace all those who may have been infected by patients, but this has been done as much as possible and many 'contacts' have been revaccinated In some cases, however, difficulties have arisen. The head of a private household from which three people were removed to hospital refused to allow his family to be revaccinated These anti vaccinationists are not merely harmless cranks or nuisances but are a serious danger to the community and it becomes a matter for consideration how best to guard against it. The principle of liberty for the subject to endanger his friends and neighbours is too sacred a fetish to be mentioned irreverently but a little compulsion in favour of vaccination is better than small pox. Then, too, through the shifting habits of a large section of the population many children remain unvaccinated. And it must be confessed that the medical profession is not free from responsibility for a part at all events, of the unpopularity of vaccination. While small pox was out of sight and therefore out of mind mothers appealed to the medical attendant to cause their infants as little suffering as possible. The medical attendant, in the tenderness of his heart and feeling perhaps some scepticism as to small pox ever again becoming an appreciable danger, too often yielded so far as to make vaccination a very feeble protection. The statistics of the small pox hospital showed this long ago It may be that the suffering caused by this most loathsome disease both to patients and friends, that the loss of many lives, some of them valuable and all human, and that the expenditure of tens of thousands or hundreds of thousands of pounds in battling with a foe which ought not to, and could not, have obtained a footing in our midst if we had been properly prepared, may lead to wiser views and more common-sense action. Against this hope, however, it must be remembered that a wise man said, "Though thou shouldest bray a fool in a mortar yet will not his foolishness depart from him." Two more cases were reported to the Manchester authorities on Feb 22nd and one on the 23rd, and two more were discovered on the 23rd in Salford. There are about 90 patients in the Clayton Hospital at present.

Bury District Small-pox Hospital

The small pox hospital at Ainsworth, erected by the Radcliffe, Ramsbottom, Whitefield, and Bury hospital committee, was opened yesterday It is to accommodate 16 or 20 patients if necessary The nurses will occupy two cottages, which have been thoroughly renovated. But what a pity it is that these hospitals have been rendered necessary by our own weakness.

Oldham War Fund

The balance of the Oldham war fund was on Feb 23rd at a public meeting of the subscribers disposed of as follows £10 to the honorary secretary as a recognition of his services, £350 to the Soldiers' and Sailors' Society for the provision of a home for an aged soldier or sailor in Oldham, and £1009 8*s* 11*d* to the Queen's Memorial Fund for the extension of the Oldham Infirmary

The Triple Disruption

In accordance with general expectation Liverpool and Manchester are to have their separate and distinct universities. This decision of the committee of the Privy Council falls in with the known desires of the two cities but is opposed to the wishes of the Yorkshire College. Indeed, it is questionable if Manchester would have moved in the matter but for the irrestrainable, not perhaps unjustifiable, ambition of Liverpool. Yorkshire for the present seems to be rather left out in the cold, but if Lancashire can support two universities there is no doubt that Yorkshire is quite able to support one. But whether Yorkshire's university shall consist of the Leeds College only or shall embrace the Sheffield University College and possibly others as yet non existent remains to be seen There is disappointment, not unnatural in Sheffield that the Privy Council has not associated it with Leeds now that one of the strongest objections to the admission of the Sheffield College to the Victoria University in 1897—i.e., the inadequacy of the buildings—is in a fair way of being remedied It seems that for the completion of the scheme for new buildings the sum of £20,000 only is required and it is hoped that this sum may be raised within the city in a very short time. Possibly in the draft charter for the incorporation of a university in Yorkshire which the authorities of the Yorkshire College are to have the opportunity of submitting the claims of Sheffield may be set forth These changes and developments will in the future have an important bearing on medical as well as on general education in the north of England Some fear that interests may be too much localised, that wide views may become narrowed, and that three provincial universities may be in danger of setting up three varieties of provincialism It is to be hoped that it will not be so, but having cast off its limbs, after the fashion of some other invertebrates, it will be of interest to see what becomes of the fragmentary remains of the Victoria University

The Owens College

Dr Judson S Bury has been appointed clinical lecturer on neurology The council of the College has received a bust, presented by Dr D Lloyd Roberts, of Charles White F R S (1728–1813), one of the founders of the Manchester Royal Infirmary and for nearly 40 years one of its surgeons. Dr H. A G Brooke has presented to the council a bust of Lazzaro Spallanzani (1729–1799), who was professor of logic, mathematics, and Greek at Reggio, of natural history in Modena, and then in Pavia. It is a replica of one placed in honour of Spallanzani in the School of Physiology in the University of Modena. A valuable collection of calculi has been presented to the medical museum by Mr Andrew Boutflower senior surgeon to the Salford Royal Hospital. Mr C F Myers Ward, formerly demonstrator in physiology in the Owens College has accepted the post of lecturer in physiology in Charing Cross Hospital, London Dr G N Stewart, F R.S., another former demonstrator in the same department, has been appointed to the chair of physiology in the University of Chicago

Feb. 24th

WALES AND WESTERN COUNTIES NOTES

(FROM OUR OWN CORRESPONDENTS.)

Swansea Isolation Hospital

FOR more than 20 years the members of the Swansea corporation have been discussing the desirability of erecting an isolation hospital for the town and time after time it has appeared to be certain that such an institution would be speedily provided. During the past year plans have been prepared, a site has been secured, and a committee has reported favourably upon completing the purchase but at the meeting of the corporation on Feb 18th a resolution was passed by the casting vote of the mayor in favour of abandoning the proposed site The responsibility of finding a fresh site and that without delay, now rests with the mayor and with those who voted with him, for it is little short of a scandal that a county borough having a population approaching 100,000 should be without this most important and necessary line of defence against outbreaks of infectious disease. When small pox was prevalent in the town last year the Swansea tradesmen were very indignant at the publicity which was given to the bare facts concerning the outbreak and were partially successful in suppressing information of the epidemic, if they really desire to attract visitors to the district they will insist upon a suitable hospital being established forthwith

New Asylum for Breconshire and Radnorshire

The new asylum which has been erected at Talgarth for the counties of Brecon and Radnor was formally opened on Feb 18th by Lord Glanusk, chairman of the Breconshire county council, and the first patients will be removed from Abergavenny early in March It is of interest to recall the history of the Monmouthshire asylum which was built at Abergavenny in 1847 for the joint use of the counties of Monmouth, Hereford, Brecon, and Radnor where there was at that time a total population of 360,000 persons. The accommodation then deemed ample was for 210 patients, about equal to one in 1500 of the population. The cost of the building was at the rate of £190 per bed Although additions were from time to time made to the original structure the added accommodation did not keep pace with the increasing population of Monmouthshire, the population of the other counties remaining nearly stationary In 1870, when there was a total population in the four counties of 405,000, the county of Hereford seceded from the combination and erected an asylum near the city of Hereford which with recent additions can accommodate 500 patients, a number equal to one in 240 of the population of the county In 1890 when the three remaining counties had a population of 330,000 persons, Monmouthshire decided to dissolve the partnership with Breconshire and Radnorshire and from the present date the Abergavenny institution, where 1098 patients can be treated will serve only the needs of Monmouthshire until a further reduction is made in the area from which patients are brought upon the completion of the asylum which the Newport corporation contemplates erecting The Talgarth asylum buildings cover about seven acres within an estate of 255 acres An existing house has been converted into a residence for the medical superintendent and the new buildings include six two-storey blocks surrounding an administrative block, a chapel a laundry block, and an isolation hospital The stone used in the construction of the buildings was quarried from the estate and bricks were made on the spot from local clay Of the six blocks, two are for epileptics, two are for recent and acute cases, and two will be used as infirmaries The central dining and recreation hall, which is fitted with a stage, will seat 500 persons The present accommodation is for 350 patients, but the administrative portion is for an additional 150 The buildings are lighted with electric light and the laundry machinery is worked by electromotors Water is obtained from the Enig brook and is conveyed to a storage reservoir with a capacity of 114,000 gallons The roof water is conveyed into an underground tank. The sewage is disposed of on the land The total cost of the asylum will be about £150,000, a sum equal to nearly £430 per bed on the basis of 350 beds, but the amount per bed would be very much reduced in the event of any enlargement being required The combined population of the two counties of Brecon and Radnor at the last census was 83,000, an increase of only

4300 over the previous census and of only 2000 in the last 50 years It is hardly likely, therefore, that any additional accommodation will be necessary for many years. Mr W Ernest Jones has been appointed medical superintendent and Mr A J Hassard assistant superintendent of the asylum.

Bristol Medical Dramatic Club

The twenty sixth annual performances of the Bristol Medical Dramatic Club took place at All Saints Hall, Clifton, on the evenings of Feb 17th, 18th, 19th, 20th, and 21st, when the comedy of *Our Boys* was very successfully presented. The attendance was large and it is hoped that the medical charities in aid of which the performances were given will benefit considerably

Torbay Hospital

The fifty ninth annual meeting of the subscribers to the Torbay Hospital was held on Feb 19th. The medical report stated that 413 in patients had been treated during 1902, an increase of 12 compared with the previous year 869 minor accidents were treated in the out-patient department and 675 persons were treated as out-patients in the ophthalmic department. The financial statement showed that the year closed with an adverse balance of £400 The president (Mr W Kitson) in drawing attention to the need of more financial support for the hospital, alluded to the satisfactory settlement of the difference in connexion with the medical staff of the hospital, and added that the hospital was now doing more work than ever

Feb. 24th.

IRELAND

(FROM OUR OWN CORRESPONDENTS.)

Irish Medical Association.

A MEETING of the council of this association was held in the Royal College of Surgeons on Feb 18th with the primary object of considering the advisability of holding conferences of representatives from the county branches connected with the association for the purpose of formulating a scheme for reform in the Poor law Medical Service affecting salaries, superannuation, vacation, &c., which would be acceptable to the medical officers throughout Ireland.

The Richmond (Dublin District) Lunatic Asylum.

At a special meeting of the corporation of Dublin the Lord Mayor, in a financial statement, called attention to the enormous increase in the rate in respect of the management and maintenance of lunatic asylums. He said that in 1893 the demand upon the rates for the Richmond Lunatic Asylum after deducting the Government grant was £14 096 For the current year the demand was £47,036, making a difference of £32 940 in the municipal rates of the city He said that it was a very serious charge but that it was due to a large and very costly but essential increase in the buildings for lunatic asylum purposes and to the fact that there had recently been an increase in the number of lunatic patients to be provided for

Medical Students Guide

The Royal College of Surgeons in Ireland has just issued a medical students guide, giving full particulars of how to become a medical man , it commences with the preliminary entrance examinations, giving specimens of previous questions set, and the fees payable for each term. The extrance examinations will be held this year on March 23rd and Sept. 21st. The guide will be forwarded post free on written application to the Registrar Royal College of Surgeons, Dublin.

Belfast Maternity Hospital.

At the 109th annual meeting of the supporters of this charity, which was held on Feb 17th, it was reported that there had been during the year 312 intern patients with only one death, while 251 women had been treated at their own homes. In the extern gynæcological department 538 patients had attended The total ordinary income was £543 0*s* 2*d* , while the expenditure was £701 6*s* 2*d* , but the proceeds of a special bazaar together with donations, brought the institution into a proper financial state at the end of the year The chairman announced that they were on the look-out for a suitable site for their new hospital which they hoped would be in every respect an up to-date one. To the vacancy caused by the resignation of Dr Brice Smyth, Professor J W Byers of Queen's College has been appointed.

Ulster Medical Society

The fifth general meeting of this society was held in the Medical Institute, Belfast, on Feb 19th, Dr S. Agnew (Vice President) being in the chair Dr H. L McKisack showed a patient with Spastic Paraplegia (primary lateral sclerosis) Dr Thomas Houston showed a beautifully mounted specimen of the Head of Tænia Solium and the Body of Tænia Mediocanellata (21 feet 6 inches long) kindly lent by Sir W Whitla. He also showed some Bronchial Casts from a case of Bronchitis under the care of Dr J R. Davison. Dr J McCaw read a paper on a case of Paroxysmal Hæmoglobinuria in a child and showed a patient. Dr Agnew, Mr D Stead, and Dr Houston took part in the discussion Dr J Singleton Darling and Dr McKisack communicated notes of a case of Pericardial Effusion and Dr Robert Boyd, Dr McCaw, and Dr A. Dempsey took part in the discussion Dr A. L Bell (Holywood) was elected a fellow of the society

Queen's College, Belfast

The students' representative council of Queen's College Belfast, has decided to hold a dinner in 'Ye Olde Castle ' restaurant, Belfast, on St Patrick's Day (March 17th) limited to present and past students of the College. Serjeant Dodd, K.C , has kindly consented to preside. It has also been arranged to hold a small fancy fair to raise money needed for the students' union. It is to be held in the McMordie Hall on March 12th, 13th and 14th.

Feb 26th

PARIS

(FROM OUR OWN CORRESPONDENT)

Compulsory Vaccination and Revaccination

IN February, 1902, the French Parliament passed a Bill dealing with public health and one clause of this Bill was concerned with compulsory vaccination and revaccination. It was necessary that an official notice should be issued concerning the application of the provisions of this paragraph and the notice was drawn up after consultation with the Academy of Medicine and the Consultative Committee of Hygiene One year's grace was given before the law came into operation and the Consultative Committee was invited to draw up a scheme of regulations concerning vaccination and revaccination. This scheme was submitted to the Minister of the Interior and he in his turn referred it to the Academy of Medicine on Oct. 20th 1902. The Academy appointed a committee of seven members to examine into the question and on Feb 3rd, 1893 M. Kelsch submitted to the Academy the conclusions of its committee which were agreed to The scheme of the Consultative Committee of Hygiene was eminently bureaucratic , it created a superior vaccine institute charged with the duty of certifying the purity of the vaccine employed in every authorised vaccination centre, whether such centre was official or in private hands The Academy of Medicine, which had already organised a department of its own for gratuitous vaccination, to which it gave a great deal of trouble and care, did not appear to relish the idea of the newly created department which put it (the Academy) on the same plane as any other vaccine establishment. The Academy therefore declared that the superior vaccine institute should be the Academy itself and that the director should be a member of the Academy Further, the Academy gave it to be understood that it would sooner close its vaccine department than accept the control of any other authority It is by no means certain that the ideas of the Academy will prevail against the scheme of the Consultative Committee of Hygiene. The Academy leaves heads of families free to choose their own vaccinator All the same, there are to be official vaccinators appointed who will organise gratuitous vaccination throughout the country at the expense of the local authorities (*conseils généraux*) The annual expenses are estimated at something considerable, but, as M Kelsch pointed out, small pox costs France from ,9,000,000 to 10,000,000 francs per annum. After all, the need for these new regulations does not seem very great. Already proof of vaccination is exacted from all French persons of both sexes at every step in their career There are vaccination centres in plenty and the Academy of Medicine is fully organised to keep up both the supply of lymph and the supply of medical men. Vaccination is obligatory in all schools and gratuitous vaccination is well organised The scheme of the Academy of Medicine concerning vaccination makes it obligatory within the first year of life and revaccination obligatory at the age of 11 years and again at the age of 23 years Calf lymph alone may be used

The Effect of Rays from Radium

At the meeting of the Academy of Sciences held on Feb 16th M Roux, for M Danys, read a paper on the Physiological Effects of the Rays given off by Radium On the skin of a rabbit the rays produced some superficial eschars and these were followed by a marked increase in the growth of the hair A fragment of the metal placed in the peritoneal cavity remained there for four months without causing any trouble M Danys also placed tubes containing radium against the spinal column in mice of varying ages Acute nervous disturbances were at once set up and young animals died in three days Older mice lived for eight days The emanations from radium will not pass through adult bone, but a tube containing radium placed over a trephine hole in the skull of a dog set up hemiplegia after a few hours The rays kill the larvæ of certain butterflies and meal worms, while they retard the development of most microbes.

Feb 24th

BERLIN

(FROM OUR OWN CORRESPONDENT)

Is Tuberculosis conveyed by Food ?

Professor von Hansemann, formerly an assistant to the late Professor Virchow and now prosector to the Friedrichshain Hospital, recently read a paper before the Berlin Medical Society on the question of the transmission of tuberculosis by food and especially by milk. The announcement of a paper on this subject, which has received so much attention since the famous speech delivered by Professor Koch before the British Congress on Tuberculosis in London, attracted a large audience Professor von Hansemann stated that according to Professor Koch's opinion expressed at London *perlsucht* (bovine tuberculosis) was not communicable to the human subject, neither was human tuberculosis communicable to cattle. In his address read before the recent conference on tuberculosis at Berlin Professor Koch had dealt only with the question of the transmission of *perlsucht* to the human subject, not making any reference to the transmission of human tuberculosis to cattle Alluding to Professor Wolff, Professor von Hansemann said that some trustworthy observers had succeeded in making cattle tuberculous by the inoculation of the virus of human tuberculosis, the obvious inference being that the patient had either suffered from *perlsucht* or that both diseases were identical One of the principal arguments used by Professor Koch was that a collective investigation of cases, or alleged cases, of intestinal tuberculosis produced by food gave an absolutely negative result. It must, however, be remembered that Professor Koch only took cognisance of cases in which every other mode of infection could be excluded, a condition very difficult to satisfy Another of his arguments was that if the virus of tuberculosis were conveyable by milk or meat there would necessarily be epidemics of intestinal tuberculosis just as there were epidemics of enteric fever It was, however, unreasonable to compare an acute infection like enteric fever with a chronic disease which depended on so many casual circumstances The frequency of primary intestinal tuberculosis varied considerably in the estimates published by different authors. According to Dr Heller cases of primary intestinal tuberculosis were in the proportion of 3 78 per cent of all cases, while according to Professor Baginsky they were in the proportion of 4 1 per cent. The late Professor Virchow had stated that he had observed only three or four cases annually Professor von Hansemann's figures were practically identical with this for he had seen 25 cases in seven years. He said that the cases must be classified in four different groups (1) those in which only intestinal tuberculosis was present, neither the glands nor any other organ being affected , (2) those in which not only the intestine but also the mesenteric glands and the peritoneum were affected with tuberculosis , (3) those in which organs were affected which were never the seat of primary tuberculosis—such, for instance, as the pericardium and the meninges of the central nervous system , and (4) those in which tuberculosis was present in the lungs and the glands also but the lesions of these organs were obviously of a more recent date than those of the intestines where the ulcers had even partially healed In no instance had tuberculosis of the lungs appeared as a sequel of intestinal tuberculosis Tuberculosis of the peritoneum was sometimes observed in cases where the intestinal canal was healthy and it was therefore probable that tubercle bacilli were capable of passing through the intact mucosa of the intestine Professor von Hansemann then called attention to the fact that intestinal tuberculosis might be produced in other ways than through the medium of the food, as for instance, by the swallowing of the sputum by tuberculous patients. This was especially apt to happen with children, but, nevertheless, 40 children suffering from pulmonary consumption who were examined tuberculous ulcers of the intestines were found in only 10 It had been said by Professor Koch that butchers who dress the carcasses of tuberculous cattle are not liable to contract cutaneous tuberculosis on their hands or fingers, and this fact has been used as an argument against the possibility of *perlsucht* being communicated to the human subject, but it must at the same time be remembered that pathologists and those who work in dissecting rooms in various capacities very seldom suffer from tuberculosis of the skin, although examples of human tuberculosis are frequently passing through their hands. An investigation made by Professor von Hansemann showed that among 250 such persons who were examined, there were only four sufferers from tuberculosis of the skin and in no instance did general tuberculosis ensue The skin was, therefore, not very liable to become infected with tuberculosis Professor von Hansemann concluded his remarks by saying that tuberculosis might possibly be conveyed by food, but that such an event was extremely rare and that pulmonary tuberculosis was never a sequel of primary intestinal tuberculosis

Incomes of the Medical Profession.

The treasurer of the Berlin medical chamber has recently published a statement relative to the incomes of the profession in the district over which the chamber has authority As already mentioned in THE LANCET of Jan. 5th, 1901, p 70, medical men are required by law to pay a certain sum to the medical chamber of their district for the support of distressed medical men and their families The Berlin chamber decided two years ago that every medical man should pay a uniform sum of 10 marks (*10s*) and that those earning more than 5000 marks per annum should pay an additional amount equivalent to 5 per cent. of their income tax. In order that a fair assessment may be arrived at the Government tax office supplies the treasurer of the medical chamber with information relative to the incomes of the medical men concerned The statement now published shows that while the number of medical men in Berlin and the province of Brandenburg has risen from 3458 in 1901 to 3609 in 1902 an increase of 4 3 per cent. their income tax has increased in the same period from 774,470 marks to 832,393 marks, an increase of 7 4 per cent The aggregate income of the profession in this district has therefore risen, although not to any considerable extent. A small proportion —namely, 4 per cent.—of the profession had no taxable income at all , 26 9 per cent. had incomes between 900 and 3000 marks , 17 3 per cent had incomes between 3000 and 5000 marks , 27 8 per cent had incomes between 5000 and 10,500 marks , 17 8 per cent. had incomes between 10 500 and 50 000 marks , and 1 4 per cent had incomes from 50,000 to 220,000 marks In the remaining cases which made up the balance of 4 8 per cent. some points were still held under consideration by the tax office authorities. The statement then compares the incomes of the medical profession with those of the barristers who are in like manner taxed by their chamber The numerical results of the comparison are as follows 10 per cent. of the barristers and 30 8 per cent. of the medical men have incomes under 3000 marks , 12 per cent. of the barristers and 17 3 per cent. of the medical men have incomes from 3000 to 5000 marks , 50 per cent. of the barristers and 27 8 per cent. of the medical men have incomes from 5000 to 10,000 marks , 12 per cent. of the barristers and 7 5 per cent. of the medical men have incomes from 10,000 to 15 000 marks , 8 per cent. of the barristers and 4 7 per cent of the medical men have incomes from 15 000 to 20 000 marks , while 8 per cent. of the barristers and 7 per cent. of the medical men have incomes exceeding 20,000 marks. The average income is therefore higher in the legal than in the medical profession, and it must, moreover, be remembered that the medical chamber taxes a medical man's total income, both his professional earnings and his receipts from other sources, such as property yielding an annual return whereas members of the legal profession pay dues to their chamber on their professional earnings exclusively Dr Langerhans, a Berlin medical man and a member of the Prussian Diet, has united with other members in proposing that the Diet should alter the law so that (1) the medical chamber shall tax only the professional earnings of medical men and not their total income, and (2) that the tax shall be uniform This proposal, however, does not meet with general approval. It is said, for instance, that the Berlin medical chamber is now able to spend 50,000 marks annually out of its fund for the support of distressed members and it is obvious that if professional incomes only were taxed the only alternatives would be either a great reduction in the fund or a great increase in the rate of assessment. Moreover, it would be inequitable to tax the income of a hard working practitioner whilst another medical man who was in comfortable circumstances and did not practise was not required to pay anything

Feb 23rd

EGYPT

(FROM OUR OWN CORRESPONDENT)

Report on Malaria at Ismailia

LAST September Major Ronald Ross, I M S (retired), was invited by the President of the Suez Canal Committee to visit Ismailia and to advise on what steps should be taken to rid the town of malaria and readers of THE LANCET already know that in this mission he was voluntarily accompanied by Sir William MacGregor On arrival they found that Dr Dampeirou and Dr Pressat, the medical officers of the company, had already discovered many anopheletes in houses infected by malaria The population of the town amounts to only 7000 people, of whom at least 1000 are employed by the canal company The anopheletes found at Ismailia belonged chiefly to the two varieties, anopheles Pharoensis and anopheles Chandoyei. With the exception of one fountain in the middle of the European part of the town the ordinary irrigation supply of Ismailia was found to be free from anopheles, also the cesspools contained no anopheletes, though they swarmed with innumerable larvæ of the culex variety Several large marshes to the east of the town were filled up years ago in an effort to fight malaria, patients who had suffered from fever were regularly treated with quinine and all the employés of the company were well provided with mosquito nets, but Major Ross points out that the chief reason why these measures alone have not been successful is that the small ponds and pools have been neglected in times past. In these he found large quantities of anopheletes and he advised the authorities to fill up all those pools that exist and to put fish in the larger ones which cannot yet be filled in He thinks that this is a better method than dosing everyone indiscriminately with quinine, or than leaving the natives callously to their fate, and specially than by attempting to protect Europeans by mosquito-proof houses He advises that as far as possible the public should be educated on the mosquito question by public meetings pamphlets &c., and that not only the anopheles but also the culex should be summarily destroyed and he reminded the company that the culex pipiens and the stegomyia fasciata, both found in large numbers in cesspools, are capable of propagating elephantiasis and yellow fever He advises that special men should be told off to pour petroleum oil into every cesspool once a week, and judging from past experience, he promises that Ismailia, with an insignificant rainfall, can be rid of mosquitoes more easily than many other towns He ends his report by recommending at the desire of several of the inhabitants, that the town should be supplied with filtered water It is satisfactory to know that the work of destroying the mosquito is now being energetically pursued at Port Said, Ismailia, and Suez but so far the Government cannot be persuaded to do anything in this direction in Cairo

The Medical Congress at Cairo Malaria in Egypt

I think it will be well, although the medical congress is now a thing of the past, to say a few words about the discussions which took place upon malaria. Major Ross sent a paper on Malaria to the medical section, as he was unfortunately unable to attend in person. He pointed out the very great advance in the hygiene of warm countries which has taken place since the last medical congress held in the tropics, which was that of Calcutta in 1895. He believes the most important question now is to decide whether the gnats which do not belong to the genus anopheles are or are not concerned in the propagation of malaria and why certain individuals of one species of gnat are more dangerous than others. For instance, the researches of Stephens and Christophers demonstrate that the anopheles Rossii may be almost exculpated as an agent of malaria. His own personal experience of three years' constant attention to the subject in countries so different as water logged Assam and Lagos on the one hand and and Ismailia on the other has led him to believe that the best personal prophylaxis is the ordinary mosquito net during sleep and to this he adds the prophylactic administration of quinine when the danger is specially great. As mosquitoes seldom bite in the open air it seems an unnecessary policy to attempt to avoid them there, but he praises very highly the use of the punkah or the electric fan, together with the wholesale removal of breeding places of all kinds of mosquitoes. He ended his paper by desiring the medical profession constantly to urge, and if necessary to force, the public towards more general efforts against malaria. Dr Montaldo (Spanish Royal navy) also sent a paper based on his experience of malaria in the island of Fernando Po He is not at all converted to the mosquito theory but advises the use of the mosquito net to avoid the discomfort of insect bites He believes chiefly in general hygiene and in the prophylactic use of valerianate or hydrochlorate of quinine, which he recommends in doses of from four to eight grains taken fasting or before bedtime As a prophylactic he finds that a wafer of four grains taken every second morning is sufficient. Professor Mariani (Genoa) devoted a long speech to the praise of the Italians who have done so much in the elucidation of the malaria problem and he complained that Professor Koch and others had not given them sufficient acknowledgment. He cited a case where during Professor Koch's visit to Rome two years ago Professor Baccelli saved the life of a man moribund from pernicious fever by an intravenous injection of quinine. Professor G Gaglio recommended very highly the hypodermic injection of quinine which he gives with urethane in the proportion of 2 of hydrochlorate of quinine to 1 of the latter Yellow fever is not a disease which attacks Egypt and the only mention of it in history is by Baron Larrey during the French occupation 100 years ago, whose cases were almost certainly either relapsing fever or Griesinger's bilious typhoid fever Major Gorgas (United States Army Medical Corps) contributed an interesting paper on the Sanitation of Yellow Fever in Cuba He pointed out that in times past there have been several instances of large bodies of men being almost entirely destroyed by this disease, the French expedition in 1802 to Haiti lost 22,000 out of 25,000 men from yellow fever in one season. Again, quarantine in the last generation has caused great financial loss, for instance, it is estimated that the loss to the Mississippi valley by the last great epidemic of 1878 was not less than £20 000 000 In 1898 when the Americans took possession of Havana they found that the death rate was 91 per 1000 but in consequence of improved sanitary conditions the mortality fell in 1899 to 33, in 1900 to 24 and in 1901 to 22 11 but to their great disappointment all their sanitary efforts had no effect on yellow fever which, on the contrary grew worse and worse, the year 1900 being one of the severest epidemic seasons even for Havana, which had been recorded for the past 140 years. A special board was appointed to study the disease, and this board discovered the truth of Dr Finlay's (Havana) contention that a certain species of mosquito was the means of transmitting the disease from person to person After many experiments it was found that a stegomyia which was allowed to bite a yellow fever patient within the first three days of the disease, kept for from 12 to 20 days, and then allowed to bite a non immune individual, almost invariably transmitted the fever The period of incubation was proved to be from three to six days, the shortest time being two days and 22 hours and the longest six days and two hours When once it was proved that the stegomyia was the real cause of the disease the following arrangements were carried out —1. The quarters of the patient were screened with wire netting within two hours after the case was reported and a guard was placed over the quarters to see that the one wire door was kept closed, immune persons only being allowed freely to pass 2 Arrangements were made to kill all mosquitoes which might have become infected before the screening of the patient, both in his own house and in all the neighbouring houses For this pyrethrum was burned in the room at the rate of 1 pound to 1000 cubic feet of space, after which the mosquitoes were carefully swept up and destroyed. 3 Five days' quarantine was maintained to keep out of the town people who might be suffering from yellow fever or incubating for it. 4 Brigades were organised for the destruction of mosquito larvæ in all parts of the city and suburbs. In January, 1901, just before the mosquito brigades were organised, an inspection of the whole city showed that mosquito larvæ existed in 26,000 different places in the city A year later a similar inspection showed less than 300 deposits of larvæ in the same area The destruction of the mosquito also reduced the malaria mortality in 1900 from 344 to 151 in 1901 The fight against yellow fever was begun in February, 1901, and on Sept. 28th of the same year the last case of yellow fever occurred in Havana. Since that time, now more than a year ago, not a single case had originated in the city, this being the first time that the disease had been absent from Havana for all the years that statistics have been taken. The Medical Congress passed a vote of condolence with the family of the late Major Walter Reed who, as readers of THE LANCET are aware, died quite lately in Washington after an operation for appendicitis He was one of the foremost bacteriologists and pathologists of the United States and he acted as president of the board of army medical officers in Havana who taught the world how to eradicate yellow fever Dr Terni (Messina) also contributed a paper on Yellow Fever which he had studied in Brazil and expressed the belief that the "*bacille icteroide*" is the specific cause of that disease

Cairo Feb 17th

NEW YORK

(FROM OUR OWN CORRESPONDENT)

Hospital for the Treatment of Tuberculosis in New York City

IT is computed that there are in New York 19,000 persons suffering from tuberculosis The facilities for taking care of consumptives are very inadequate, in fact, it has been shown that New York is far behind London and most of the other large cities in regard to provision for the care of sufferers from pulmonary tuberculosis The matter has been taken up recently by the lay and medical journals and by the medical profession. The *New York Herald* has advocated editorially the establishment of hospitals and sanatoriums for indigent consumptives. On the evening of Jan. 3rd Dr Henry P Loomis spoke in favour of this course He drew attention to the fact that New York city was actually worse off now than it was ten years ago in the matter of taking care of consumptives for since tuberculosis has been regarded as a communicable disease its victims have been barred from the general wards of the city hospitals. The majority of the cases are in the tenement districts where the danger of infecting healthy people is very great on account of the overcrowding and the ignorance of this class Dr Loomis therefore thinks that now is the time for the city government to take practical steps, as has already been done in most of the large cities abroad, to establish a large and thoroughly equipped consumption hospital, he is further of opinion that such a building should be erected on Blackwell's Island where there is plenty of room and where the patients can have the maximum amount of sunlight and air In connexion with this main consumption hospital an annexe should be built in the country near New York. This annexe should be constructed on the pavilion plan and should be intended for those hopeful cases where the sufferers are in the early stages of the disease. Great interest is being taken in the question of tuberculosis by rich men in this country Mr Phipps the other day gave more than £200 000 to Philadelphia for the purpose of studying and treating the malady, while Mr Rockefeller has given to the University of Chicago a much larger sum to be devoted to research work especially in tuberculosis It thus seems probable that New York will soon have the necessary institutions for its consumptive poor

Adulteration of Drugs in New York City

The practice of substituting inferior or impure drugs for those ordered has been exercising the minds of New York physicians for some time So common has this practice on the part of druggists become that recently many physicians, as well as local medical societies and associations, submitted a large number of samples of different drugs and chemical agents to the department of public health with the request that they should be analysed Phenacetine is the particular drug which at present is looked upon with suspicion, and out of a total of 373 specimens purchased from druggists in Greater New York no less than 365 have been found to be adulterated. Many other drugs have been discovered to be not up to the standard of the requirements of the United States Pharmacopœia and the health board intends to pursue its investigations on a large scale

Charges against Bellevue Hospital

Once again grave charges, reflecting seriously upon the management of Bellevue Hospital, the large city hospital of New York, have been made Some two or three years ago the scandals originated by accounts of cruelty which occurred in Bellevue Hospital became so notorious that public opinion was much agitated and finally a board of trustees investigated the matter and made a report. The report stated that many evils existed in the system of management, and that the nursing especially was faulty The board of trustees presented a scheme for reorganisation and among other suggestions the recommendation was made that all the old buildings known as the Bellevue Hospital should be pulled down and that a thoroughly equipped modern hospital should be erected on their site Similar recommendations were made with regard to the other city hospitals Despite these recommendations it would appear that few measures of reform have been introduced, for the charges which have been recently brought against the management are in the main identical with those preferred many times previously A searching investigation is now being undertaken by the district attorney's office The *Medical Record* and other New York medical journals insist strongly that the present system of management should be altered and that hospitals in keeping with the size and wealth of New York should be provided by the city

Feb 16th

AUSTRALIA

(FROM OUR OWN CORRESPONDENT)

Tuberculosis in Victoria

A DEPUTATION from the Victoria Association for the Prevention and Cure of Tuberculosis recently waited on the Minister of Health and appealed for a Government grant for the care of practically incurable cases of tuberculosis. The Austin Hospital was prepared to make provision for the cure and treatment of 60 additional consumptives if the Government would bear half the cost. Dr J Jamieson, health officer of the city of Melbourne, stated that between 1800 and 1900 persons died in Victoria every year from tuberculous disease and that there were at least from 5000 to 6000 sufferers from tuberculosis in the State. Of these probably 1500 might be regarded as being in a tolerably curable stage The only accommodation provided was at the Macedon and Echuca sanatoriums for 50 cases. The only provision for the remaining incurable cases was at the Austin Hospital, to the extent of 80 cases a year, and the Melbourne Hospital where 150 cases a year were treated The Minister of Health admitted that a very good case had been made out by the deputation and said that he would place its views sympathetically before the Cabinet but in the present state of the finances he could not promise that the Government would do anything He suggested that the money should be raised by public subscription

The Financial Position of the Medical Charities in Victoria

The Government of Victoria in pursuit of its retrenchment policy has reduced the charities grant by £20,000 Owing to the drought the prices of provisions, and, in fact, of everything, are exceptionally high Consequently the managers of the various hospitals are in a very serious financial difficulty Their expenditure is increased and their income is diminished. A deputation of representatives of the various hospitals recently met the Treasurer to the Government to discuss the position. The deputation asked that effect might be given to the recommendations of the Charities Commission If some assistance was not forthcoming the various institutions must close some of the wards The Minister, in reply said that the old age pensions must have relieved the demands on organised charities or private individuals by more than £20 000 He thought also that the charities were abused, by want of closer discipline the benefits of charity had been given to many who personally or through relatives might have paid. The inspector of charities in his last report said "The number of really destitute cases was comparatively small, the hospitals are used by persons not able to pay the ordinary medical fee yet able to make a small contribution to the institution." Taking the Melbourne Hospital as an illustration only £60 were contributed in sums under £1. The people who could give small amounts were those who received the benefits of the charity The charitable institutions altogether obtained from private subscriptions, entertainments, and collections £65,000, from municipal grants £11,000, as interest on investments £11 000, from patients' contributions, £16,000, from out-patients' fees, £5000, from legacies, £15 000, and from the Government, £110,000 He regretted that he could not see his way to give more aid from the Government. Speaking as an individual and not as the Treasurer of the State, he would like the charities to have an endowment by a tax on sports and the totalisator It has been pointed out, however that the managers of the charitable institutions can do nothing more, the suggestions of the Treasurer could only be carried out by Parliament. Economy has been carried to its extreme limits The debit balance at the Melbourne Hospital for the year is now £6793. The Queen Victoria Jubilee Fever Hospital is no nearer a solution of its difficulties. A conference of municipalities in the metropolitan area has been held. A basis for discussion was presented, providing (1) that half of the cost of maintenance should be provided by the metropolitan municipal councils and half by the Government, and (2) that all the metropolitan municipalities should contribute in proportion to municipal property assessment. Unfortunately the Premier stated that the Government would not provide half the money required and so far only eight out of 24 municipalities concerned have approved of the scheme, while seven actively disapprove.

New Out-patient Department at the Sydney Hospital for Sick Children.

A new out-patient department has just been opened in connexion with the Sydney Hospital for Sick Children It is situated at the corner of Quay street and Valentine lane It is close to the new central railway station and the George street trams. The site has been obtained on a 50 years' lease and the estimated cost of the buildings is £3000 There are a large waiting hall to seat 200 persons, with provision for future extension, an examination room at the entrance with a special room for suspect cases, and four consulting rooms, an adequately fitted operating theatre, a large dispensary and attached waiting hall, and house surgeons and nurses quarters Special arrangements are made for a constant circuit of patients.

Prince Alfred Hospital Sydney

The enlargement of the Prince Alfred Hospital, Sydney, from 161 to 236 beds has necessitated changes in the staff. To relieve the medical superintendent of much of the work of directing the non medical staff it has been decided to extend the functions of the secretary by making him the chief non medical officer under the medical superintendent Revision of the rules was also necessitated by the creation of the new positions of resident pathologist, registrar, and anæsthetist, clinical assistants to the out-patient department, and honorary pathologist. The matron will in future be known as the matron and superintendent of nursing, the trained staff will consist of sisters, charge nurses and staff nurses and the pupil nurses will be graded as first, second and third year pupil nurses. Two new senior positions have been created in the matron s assistant and the housekeeper, both of which will be generally filled by sisters the sister acting as housekeeper being changed every six months so that all may receive adequate instruction in this branch of hospital management. The directors have also had under consideration the question of lightening the nurses' duties particularly during their first year of service. It is held that a certain amount of manual labour, such as scrubbing woodwork, &c, is essential as a test of the physical capacity of candidates for the nursing profession to stand the strain which they must undoubtedly undergo But it has been decided that, except during a short probationary trial, they may be relieved of much of this work and to permit of this being done wardmaids are for the future to be employed. These will do the rough works of wards, thus leaving the nurses free to carry out their more distinctive duties As the work of the nurses will thus be lightened to a great extent it is anticipated that the demand for positions upon the nursing staff will be even greater than at present. To meet this condition of things it is proposed to raise the status of the nurses by making the position more of an honorary one than at present and by giving an honorarium instead of a salary, which will rise by annual increments over a term of three years.

University Dental Hospital, Sydney

The Senate of the University of Sydney has received a report from Mr R. Fairfax Reading, chairman of the University Dental School committee, upon the work of the University Dental Hospital for the year 1902. The hospital was opened to the public on Jan. 7th and even without making allowances for delays and interruptions, due to vacations and the University jubilee celebrations, the record of the work was the report states, highly satisfactory The total number of patients who had attended at the hospital for treatment in all departments was 3964—a convincing proof of the wisdom of the action of the Senate in establishing the hospital The committee had taken every precaution to prevent the hospital being abused by those who could well afford to go to a dentist and thereby to assure to the deserving poor the full enjoyment of its benefits The committee considered that the amount of clinical work done by the second year students, who only number nine, reflected great credit upon the students. In March next 11 students at present in their first year would be ready to undertake clinical work and it would then be necessary to provide at least six more dental chairs in addition to the 11 with which the hospital is now supplied. "The increasing amount and variety of conservative dental work which the students are called upon to undertake," the report concludes, "renders the hospital an important addition to the dental school and will in future be a guarantee that the dental graduates of the University of Sydney will be thoroughly competent to successfully undertake any operation incidental to modern conservative dental surgery"

Preservatives in Food

The Board of Health of New South Wales has published amended regulations under the provisions of the Public Health Act, one of the most important of which is as follows —

> (a) Any one antiseptic or any one antiseptic preparation may be mixed with any food in proportions not exceeding one one-thousandth of one grain per pint in the case of liquid foods and of one one-thousandth of one grain per pound in the case of solid foods provided that the label required by section 56 subsection 2, of the Act to be affixed to the vessel or parcel containing food mixed with antiseptics or with antiseptic preparations in accordance with this regulation be in the form given in Schedule L and be printed on a white ground in black capital letters of the size known as two-line brevier sans serif and contains no other matter (b) The following substances shall be deemed to be antiseptics and antiseptic preparations for the purposes of this regulation Formaldehyde and its preparations boric acid and its preparations hydrofluoric acid and its preparations sulphurous acid and its preparations benzoic acid and its preparations salicylic acid and its preparations and derivatives of coal tar whether direct or indirect

The regulation will come into force on Feb 2nd.

Jan 14th

Obituary.

EDWARD EUSTACE, M D DURH, L.R.C P EDIN L.R.C S. IREL.,

SURGEON LIEUTENANT-COLONEL A.M D

DR. EDWARD EUSTACE died at his residence, Underwood, Cheltenham, on Feb 16th, in his sixty second year The deceased obtained the qualifications of L.R.C S Irel and L R.C.P Edin in 1863 and 1864 respectively and graduated M.D of Durham University in 1886. Shortly after qualifying he entered the Army Medical Department and whilst in the service was in charge of the Women and Children s Hospital at Netley in 1873–74 the European and Native Female Hospitals at Agra in 1881, and the Women's

Hospital, Landour, in 1882, and he was also medical superintendent of the Military Hospital, Devonport, in 1884 Shortly after receiving his promotion to surgeon major he retired from the service with the honorary rank of surgeon-lieutenant-colonel He then commenced practice at Weston super Mare and married the daughter of General Rawlins of that town. After remaining for several years in Weston super Mare Dr Eustace removed to Cheltenham and practised there. The deceased was extremely popular in Weston super-Mare and in Cheltenham and much sympathy is felt for his widow and her young children.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON —At examinations held in February the following candidates passed in the subjects indicated —

Surgery —E F Beaumont (Section I.) Middlesex Hospital E M Beverly (Sections I and II) Royal Free Hospital C A Campbell, (Sections I and II) Trinity University Toronto, O Gutermann Berlin and Rostock J P Nettell (Section II) London Hospital S Riley (Section I) Manchester and H. P Shanks St Bartholomew s Hospital

Medicine.—E M Beverly (Sections I and II) Royal Free Hospital A. E Bird (Section II) Manchester C A. Campbell (Sections I and II) Trinity University Toronto G M Crockett(Section II) Royal Free Hospital G J Humphreys (Sections I and II) St Bartholomew s Hospital P J Pagonis Athens and L S Shoosmith (Sections I and II) St Mary's Hospital

Forensic Medicine —E M Beverly Royal Free Hospital C A. Campbell Trinity University Toronto G A. Crowe London and Westminster Hospitals T S Davies St George s Hospital and G J Humphreys St Bartholomew's Hospital

Midwifery —K. M Betts and E M Beverly Royal Free Hospital W H Bush Guy s Hospital C A. Campbell Trinity University Toronto A D Edwards Cardiff and London Hospital N S Finzi University College Hospital A. B Gosse Royal Free Hospital and J M Wall, St. Thomas s Hospital

The diploma of the Society was granted to the following candidates entitling them to practise medicine surgery and midwifery —E M Beverly C A Campbell, G M Crockett T S Davies O Gutermann G J Humphreys and J P Nettell.

ROYAL COLLEGE OF SURGEONS IN IRELAND FELLOWSHIP EXAMINATION —The following candidates, having passed the necessary examination, have been admitted Fellows of the College —

C R Boyce Enniscorthy J M M Crawford Royal Army Medical Corps A Harris Assam India J M Keegan Cape Colony R McCombe Cambridge and Miss A. M Thornett London.

The following candidates passed the primary part of the examination —

E Sheridan and R F C Talbott

TRINITY COLLEGE, DUBLIN —At examinations held recently the following candidates were successful —

Final Examination in Medicine.—Seaton S Pringle John M Holmes Thomas L Sands Thompson F Wilson James M Cutcheon Alexander H Marks and William P Ringland

Section B —Henry R. Nelson, William M. Wade Alexander L Otway John F W Leech Harry O H H. May Winslow S S Berry Reginald W T Clampett, Richard C Hallowes Robert Bailey Rev Richard B Bryan and Samuel H Vickery

Final Examination in Midwifery —Robert J Fleming William G Harvey William R P M Neight Charles E Moore, Joseph Wallace and Douglas B Thomson

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, MARYLEBONE ROAD, N W —The annual meeting of subscribers of Queen Charlotte's Hospital was held at the hospital on the afternoon of Feb 23rd, the Earl of Hardwicke presiding The report stated that 1271 women had been treated in the hospital during the past year and 1204 had been attended at their own homes. The expenditure had amounted to £5183 King Edward's Hospital Fund had made a grant of £1000 to the hospital and £50 to the convalescent home In moving the adoption of the report Lord Hardwicke referred to the continued increase in the work of the charity and its importance as a training school in midwifery and monthly nursing The new regulations extending the period of training for midwives and nurses had been in force for a year and had proved very successful He also referred to the passing of the Midwives Act and to the leading part that the hospital had always taken in the training of midwives To maintain the hospital in efficiency upwards of £5000 was needed yearly, but the assured income amounted to only about £2000 He made an earnest appeal for further funds—especially new annual subscriptions—to provide the deficiency

FREEMASONRY —*The Middlesex Hospital Lodge, No 2843* —A meeting of this Lodge was held at the Freemasons' Hall on Thursday, Feb 19th, Bro William Duncan, W M , in the chair Bro Percy Noble was admitted to the third degree. Messrs J Elsdale Molson, Sidney Herbert Lee, and Walter James Susmann were initiated into Freemasonry Bro F J Wethered was elected W M. for the ensuing year and Bro Henry Morris was re-elected treasurer The brethren and visitors subsequently dined together

OBSTETRICAL SOCIETY OF LONDON —The following is a list of officers of this society for 1903 —President Dr Edward Malins. Vice Presidents Dr William Japp Sinclair, Dr A. H Freeland Barbour, Dr John Phillips, and Dr Herbert R Spencer Treasurer Dr George Ernest Herman Chairman of the Board for the Examination of Midwives Dr W R Dakin Honorary secretaries Dr Amand Routh and Dr Montagu Handfield-Jones Honorary librarian Dr Robert Boxall.

THE JOHNSTON LABORATORY, UNIVERSITY COLLEGE, LIVERPOOL —Mr Long, President of the Local Government Board, will open the Johnston Laboratory at University College, Liverpool, on May 9th This laboratory, which has been built and equipped by Mr William Johnston of Bromborough, will include accommodation for the following departments of the college bio-chemistry, under the direction of Professor Benjamin Moore, D Sc., tropical medicine, under Major Ronald Ross, C B., F R.S., experimental medicine and comparative pathology, together with cancer research, under Dr A S F Grünbaum Mr Johnston has endowed the professorship of bio-chemistry and three fellowships in various branches of medical research, while, as we have already mentioned, the scheme for the investigation of cancer has been recently provided for by Mr T Sutton Timmis with a gift of £10,000

UNIVERSITY COLLEGE HOSPITAL —In January, 1882, Mr Newton H Nixon, the secretary, published a history of University College Hospital from its foundation to the year 1881 and he has now supplemented that volume by a pamphlet containing a "Record of Events from 1882 to 1901 inclusive." This is not a continuous narrative but consists of detached paragraphs alphabetically arranged. For instance, under letter B the entries are "Balls, Bazaars, Beck Memorial, Beds named Beds closed, Beds, re-opening of," and so on through the alphabet, concluding with "Students' distinctions, University College Hospital Ladies' Association, Wakley Convalescent Home, Wards named." The most important event in the recent history of the institution is chronicled under the heading "Rebuilding of Hospital" the prime mover in which work is Sir J Blundell Maple, Bart., M P The new buildings were commenced in September, 1897, the foundation stone was laid by the then Prince and Princess of Wales in June, 1898 and various departments were opened at different times in 1900 and 1901 As the "Record" is only brought up to the end of 1901 the great progress made during 1902 is not referred to. The account of the Wakley Convalescent Home mentions the bequest of a freehold residence and land at Longcross, near Chertsey, by Dr James G Wakley, Editor of THE LANCET, in 1886 and the subsequent negotiations by which, with the consent of the Charity Commissioners, the property was sold and the Wakley Convalescent Fund was created.

DONATIONS AND BEQUESTS —Under the will of the late Sir Joseph Sebag Montefiore the London Hospital, the Ramsgate Seamen's Infirmary and General Hospital, the Beth Holim Hospital, Mile End road, and the Jews' Hospital and Orphan Asylum, Lower Norwood, receive £100 each.—One-eighth of the estate of the late Mrs. A. M Travers which has been valued at £1916, has been left in trust for the Royal Hospital for Incurables at Donnybrook, Dublin.—A legacy of £500 has been bequeathed to Addenbrooke's Hospital under the will of the late Mr Mr E J Mortlock.—Under the will of the late Mr Albert Bousfield provision is made for legacies of £200 each to the London Hospital, the Middlesex Hospital, St Mary's Hospital, the Great Northern Central Hospital, the Fulham Cancer Hospital, the City of London Lying in Hospital, the Royal Eye Hospital, the Alexandra Hospital for Hip Disease, the Samaritan Free Hospital in Marylebone road, and the Sussex County Hospital.—Miss Barbara Matthew Ross has by her will bequeathed to the National Industrial Home for Crippled Boys at Kensington, £400, to the Society for the Prevention of Cruelty to

Animals, £400 , to the Royal Sea Bathing Infirmary at Margate, £200 , to the Metropolitan Convalescent Institution, £200 , to St. Mary's Hospital, £200 , to the Samaritan Free Hospital for Women and Children in Marylebone-road £200 , and to the New Hospital for Women in Euston road, £200 — Under the will of Mr Jacob Uttley £100 are bequeathed to the Rotherham Hospital and the Royal Hospital and the Royal Infirmary and the School for the Blind Sheffield, receive £100 each

WALTON CONVALESCENT HOME—The annual report of the Walton convalescent home near Clevedon states that 538 patients were admitted during 1902, being 60 more than the maximum of previous years The financial statement showed that the income amounted to £983 and that a favourable balance of £8 remained.

SUCCESSFUL VACCINATION GRANT—A notable record has been established by Mr J B G Gidley Moore, M.R C P Edin , L.R C P Lond., of Ongar Essex, who has been public vaccinator for the No 1 District of the Ongar Union for 28 years and who during that period has always obtained the award under the provisions of Section 5 of the Vaccination Act 1867

HEALTH OF DEVIZES —The annual report of the medical officer of health of Devizes states that the population numbered 6532 and that the birth rate for the year 1902 was 22 6 per 1000 The death rate for the same period was 11 7 per 1000 More than half of the deaths were of persons over 66 years of age and one of those deceased was over 100 years of age

FALMOUTH SEWAGE—At the meeting of the Falmouth town council held on Feb 12th the mayor (Dr W Bunks) moved

> That immediate steps be taken to carry out the undertaking of a sewage scheme as set forth in a resolution passed in April 1902, or failing this, to repay the loan of £1000 sanctioned on the understanding that the council would submit to the Local Government Board revised plans and estimates of a drainage scheme for the borough.

Eventually the motion was carried by 9 votes to 3.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS

Earlier Closing of Shops

IN the House of Lords a Bill has been introduced by Lord RIBBLESDALE to enable local authorities to fix an hour for the closing of shops

Sir Michael Foster's Position

Intimation has been conveyed to the party whips that for the future Sir Michael Foster Member for the University of London will sit on the Opposition side of the House.

The Disciplinary Powers of the General Medical Council.

The Bill framed by the General Medical Council for strengthening its hands in dealing with penal cases is once more before the House of Commons. It was introduced on Feb 23rd by Sir John Batty Tuke who has a double interest in the measure in respect of being a member of the Council and the Parliamentary representative of the Universities of Edinburgh and St Andrews. The Bill has three main provisions In the first place it gives the Council power to remove from the Medical Register for a limited period of time practitioners who have been convicted of crime or who have been adjudged by the Council to have been guilty of infamous conduct in a professional respect. In the present state of the law the Council can simply remove from the Register and restoration is obtained by process of application. The second main provision of the Bill enables all medical licensing bodies summarily to deprive of his diploma or diplomas the practitioner who has been removed from the Register by the Council in respect of misconduct. Some of the bodies but not all possess this power already The third main provision enacts that fines and penalties recovered under the Medical Acts shall be paid to the Council and applied in aid of the expenses of the Council in administering these Acts The Bill is backed by Sir John Batty Tuke Sir Richard Jebb r J A. Campbell Sir Michael Foster Mr Talbot and Sir John Gorst. It has been read a first time and its second reading has been put down for April 24th when there is little or no chance of its being reached in time for discussion. It is matter for regret that a measure of this kind affecting as it does the efficient administration of important Acts of Parliament should not have been taken charge of by the Government instead of being left in the hands of a private Member

HOUSE OF COMMONS

WEDNESDAY FEB 18TH.

Housing of the Working Classes

During the debate on the Address this subject was discussed at considerable length on an amendment proposed by Dr MACNAMARA in which it was declared that the greatest hardships are inflicted upon many of the working-class population by reason of the lack of proper housing accommodation and that immediate parliamentary attention to this evil is one of the most pressing of the necessities of domestic policy Complaint was made against the Local Government Board for remissness in connexion with the administration both of the Public Health Acts and the Housing Acts —Mr WALTER LONG in reply defended his department and said that too often when he attempted to bring pressure to bear on local authorities to induce them to discharge their duties more effectively and to appoint properly qualified officers it was the local Member of Parliament who came to him and protested that he was unduly severe He frankly admitted that there was great need for effective administration in regard to sanitary matters and he appealed to Members of Parliament to support the Local Government Board in its efforts in this direction Mr Long intimated that he proposed during the present session to introduce a Bill dealing with certain minor matters connected with the housing of the working classes including the extension of the period for the repayment of loans

THURSDAY FEB 19TH

Boards of Guardians and their Officers

Mr MORRELL asked the President of the Local Government Board whether his attention had been called to the position in which boards of guardians were placed through want of control over the officers whose salaries and pensions the ratepayers were called upon to provide and whether he would cause inquiry to be made into the matter with a view to the provision of a remedy —Mr LONG replied I have received a resolution on this subject from the Woodstock board of guardians Boards of guardians possess considerable powers of control over their officers and except in the case of their principal officers have the power of dismissal. As regards the principal officers the consent of the Local Government Board is required to dismissal, but where there is cause for dissatisfaction it is competent to the guardians to make representations to the board.

FRIDAY FEB 20TH.

Private Members Bills Introduced

A number of Bills were introduced by private Members and formally read a first time, amongst them being a Bill to amend the law relating to the qualification and tenure of medical officers of health and inspectors and to make further provision relating to superannuation allowances for such officers and inspectors a Bill to provide for the registration of plumbers and a Bill to provide that no prosecution under the Vaccination Acts shall be commenced without the authority of the guardians No one of these three Bills has obtained a favourable place in the order paper for second reading

MONDAY FEB 23RD

General Laurie and the Medical Acts

At this sitting General LAURIE introduced his two Bills to amend the Medical Acts so as to facilitate the registration in this country of colonial practitioners Unfortunately for the progress of the measures neither of them has obtained a favourable place in the orders for second reading

Lead Poisoning in the Pottery Trade.

Sir CHARLES DILKE asked the Home Secretary whether he could give the House any information as to the working of the compensation scheme instituted by the master potters for injuries caused by lead and alluded to in the arbitration on the Home Office rules and whether His Majesty's Government had been informed by the Potters' Association of the progress of the scheme and of the extent to which masters and men had coöperated to make its advantages general.—Mr AKERS-DOUGLAS replied I am informed that 72 firms have joined the Potters Assurance Association and that three others are insured on the same lines in other ways Most of these firms are of importance in the trade and as far as my information goes the scheme appears to be working satisfactorily with the exception that in eight factories as I understand the men have refused to submit to the medical examination which is an essential part of the scheme

The Board of Education and Physical Training

Dr MACNAMARA asked the Secretary to the Board of Education whether he would consider the desirableness of replacing the recently issued model course of physical drill for children by a course more suited to the needs of young children than the present compilation which was prepared from the Soldiers Drill Book.—Sir WILLIAM ANSON replied The Board of Education has no present intention of replacing the model course of physical training But it is considering the desirableness of issuing a kind of introduction to the model course showing the steps by which the series of exercises in it may be progressively acquired. This will greatly assist the managers of the smaller schools in introducing it I may remind the honourable Member that though the Board strongly advocates a uniformity of system, both in the interests of the teachers (on whom falls the burden of imparting the physical training) and in those of efficient instruction it is prepared to consider (and has in many cases approved) alternative schemes having the same scope and aim as the model course

TUESDAY FEB 24TH.

Ventilation of Cotton Factories

Mr SHACKLETON asked the Home Secretary whether he could state what number of employers were reported during the year 1902 by the inspector under the Cotton Cloths Factories Act as having exceeded the nine volumes of carbonic acid (carbon dioxide) in every 10 000 volumes of air (Factory and Workshop Act 1901 Clause 94 section 3) and whether he could state the number of prosecutions which had been instituted by the Home Department in consequence of these reports.—Mr AKERS DOUGLAS replied : There were 63 cases in 1902 in which the inspector reported that an employer had exceeded the standard referred to but in many cases the excess was found only in one part of the shed while in other parts the proportion of carbonic acid was found to be below the prescribed limit. No proceedings were instituted on these reports I do not think the inspectors are called upon to prosecute unless a contravention of the Act in this matter is continued or repeated after notice from the inspector

Alcohol and Lunacy in Ireland

Mr James O Connor asked the Chief Secretary to the Lord Lieutenant of Ireland (1) if he had seen the report read by Dr Norman Conolly at the recent meeting of the Richmond Asylum in which reference was made to the increase in the number of cases of alcoholic lunacy committed to that institution (2) whether he was aware that the Richmond Asylum authorities had since the year 1900 made several representations to the Irish Government on this matter and (3) whether in view of the state of the law as regards the care of alcoholic lunatics and considering the revenue derived by the State from the sale of intoxicating liquor he would recommend the establishment of a State infirmary in Ireland for the treatment of persons who had become insane from excessive indulgence in intoxicating drinks — Mr Wyndham replied The reply to the first and second queries is in the affirmative. The concluding part of the question suggests an amendment and widening of the existing law which provides for the establishment of institutions for the reception of habitual drunkards under certain prescribed conditions I cannot give an undertaking such as is suggested

Sanitary Condition of the House.

Mr Wylie asked the Member for North Hunts, as representing the First Commissioner of the Board of Works when the report of the Select Committee appointed to inquire into the ventilation of the House of Commons building would be issued and what steps, if any had been taken during the recess to remove some of the insanitary conditions —Mr Ailwyn Fellowes said: The Select Committee found it impossible to conclude their inquiry last session and it is proposed to ask the House to re-appoint the committee at an early date During the recess the authorised improvements in the ventilation of the Commons committee-rooms have been completed and new fittings have been supplied to the sanitary offices on the ground floor terrace front and mechanical ventilation has been introduced into them with excellent results Other sanitary offices in the building will be dealt with in the same way as opportunities arise during recesses

WEDNESDAY, FEB 25TH.

Sewage Contamination of Shell fish.

Sir Joseph Dimsdale asked the President of the Local Government Board whether his attention had been called to a recent report of the medical officer of health for the City of London on shell fish and sewage; and whether he would take any and if so what action in the matter — Mr Walter Long replied: Yes sir my attention has been called to this report The Royal Commission on Sewage Disposal are taking evidence and making investigations on the subject of dangerous contamination of shell fish by sewage with a view to ascertaining the measures necessary for obviating risks to the public health from this cause I have caused to be sent to the commission a copy of the report referred to and other reports relating to this matter

BOOKS, ETC , RECEIVED

Baillière, Tindall, and Cox 8 Henrietta-street Covent Garden, W C

- Aids to Sanitary Science For the use of Candidates for Public Health Qualifications By Francis J Allan M D Edin D P H Camb &c Medical Officer of Health for the City of Westminster Second edition revised and edited by Reginald A Farrar M A, M D Oxon D P H Camb &c. Price cloth 4s 6d. paper 4s
- The Errors of Accommodation and Refraction of the Eye and their Treatment A Handbook for Students By Ernest Clarke F.R.C S Eng M D and B S Univ Lond Surgeon to the Central London Ophthalmic Hospital. Price 5s net.
- The Practical Details of Cataract Extraction By H Herbert F R C S Eng Major I.M S Professor of Ophthalmic Medicine and Surgery Grant Medical College Price 4s net.

Churchill J & A 7 Great Marlborough street W

- A System of Clinical Medicine dealing with the Diagnosis Prognosis and Treatment of Disease for Students and Practitioners By Thomas D Savill M D Lond Physician to the West End Hospital for Diseases of the Nervous System Physician to St. John s Hospital for Diseases of the Skin London Volume i Local Diseases and Microbic Disorders Price 12s 6d net.
- The Elements of Pathological Anatomy and Histology For Students By Walter Sydney Lazarus Barlow B A B C M D Camb F R.C P Lond Pathologist and Lecturer on Pathology at the Westminster Hospital Price 24s net

Fischer Gustav Jena.

- Das natürliche Schutzsystem der oberen Wege als Fremdkörpertheorie. Von Dr med W Lamann St Petersburg Price M 1 (Klinische Vorträge aus dem Gebiete der Otologie und Pharyngo-Rhinologie herausgegeben von Prof. Dr Haug München Ergänzungsheft)
- Die Neuronenlehre und ihre Anhänger Ein Betrag zur Lösung des Problems der Beziehungen zwischen Nervenzelle Faser und Grau Von Dr Franz Nissl A. O Professor in Heidelburg Price M. 12.

Hirschwald August Unter den Linden 68 Berlin, N W

- Lernen und Leisten Rede zur Feier des Geburtstages des Kaisers und Königs in der Aula der thierärztlichen Hochschule zu Berlin gehalten am 27 Januar, 1903. Von Hermann Munk Price Pf. 60

New Sydenham Society (Agent: H. K. Lewis 136, Gower-street W C)

- An Atlas of Illustrations of Clinical Medicine, Surgery and Pathology Compiled for the New Sydenham Society (A Continuation of the Atlas of Pathology ") Fasciculus xv (Double Number) or iii and iv of New Series. Xanthelasma and Xanthoma, with especial Reference to their Association with Functional and Organic Diseases of the Liver Price, to non members £1 1s

Rebman, Limited 129 Shaftesbury-avenue W C

- Surgical Anatomy Vol. iii Abdomen Pelvic Cavity Lymphatics of the Abdomen and Pelvis Thorax Lower Extremity By John B Deaver M D Surgeon in-chief to the German Hospital, Philadelphia. Price of the work complete in three volumes £6 6s net

Rudeval F R De 4 Rue Antoine Dubois Paris, VIe.

- Traitement de l Avortement Par le Dr Moïse Misrachi, Médecin du Consulat de France à Salonique Avec Préface de M. le Dr J A. Doléris Price 6 francs
- Le Dogme du Secret Medical (Essai de Réfutation). Par le Dr J Th Dupuy, de la Faculté de Médecine de Paris. Price 3 francs

Smith, Elder, and Co 15 Waterloo-place S W

- Gastric Ulcers Their Surgical Treatment. Two papers republished from The Lancet of June 8th 1901 March 29th, and April 5th 1902 By C B Keetley F R C S Senior Surgeon to the West London Hospital Price 2s 6d.
- Saint Bartholomew s Hospital Reports Edited by Norman Moore M D and D Arcy Power F R C S Vol xxxviii Price, to subscribers 6s to non subscribers, 8s 6d

White, F W 26 Browning road Manor Park E

- Briefhand, or Orthographic Shorthand An Abbreviated System of Writing Words as Spelt. By Frederick William White. *Price 6d*

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week, for publication in the next number*

Barton G A H. M D Brux, L R C P Lond M R.C.S L.S.A., has been appointed Anæsthetist to the Female Lock Hospital.

D Ewart John M.R C S L.R C P Lond has been appointed Third Resident Assistant Medical Officer to Crumpsall Workhouse Manchester

Dick George, M B B S Edin has been appointed Medical Officer of Health for the counties of Sutherland and Caithness.

Ellis F M. has been appointed Medical Officer for the Black Torrington Bradbury and Cookbury Districts by the Holsworthy (Devon) Board of Guardians

Emery W d Este M.D B Sc. Lond has been appointed Clinical Pathologist to King s College Hospital

Ferguson R Bruce M A M D B C Cantab M R C S L.R.C.P has been appointed Medical Officer and Public Vaccinator for the Seventh (New Southgate) District of the Barnet Union

Grayson F D M R C S has been appointed Medical Officer of Health for the Rural District of Rochford

Hutchinson Henry, L R C.P I L F.P S Glas L S A. Lond has been appointed Surgeon to the Metropolitan District Railway Provident Society for the Suburbs of East Ham Upton and Manor Park.

Irvine, R C M B Ch B Edin has been appointed Senior House Surgeon to the David Lewis Northern Hospital Liverpool

Johnson J A. M B Ch.B Vict. has been appointed House Physician to the David Lewis Northern Hospital Liverpool

Lindsay Creighton H M.B B Ch Edin. has been appointed Resident Surgeon at the Birmingham General Dispensary

Murray William M D C M. Edin, has been appointed Medical Officer of Health for the Warmley (Gloucestershire) Rural District Council

O Hara W E L.R.C S L.R C P Edin., L F.P & S Glasg has been appointed Junior House Surgeon to the David Lewis Northern Hospital Liverpool

Simpson M B C M Aberd has been re-appointed Medical Officer of Health to the Towcester Rural District Council

Spriggs Edmund Ivens M D Lond. has been appointed Physician to the Out patients Department in the City of London Hospital for Diseases of the Chest.

Tuke Thomas Seymour M B B Ch. Oxon M.R.C S Eng., has been appointed Lecturer on Insanity St. George s Hospital, Hyde Park-corner

Walker Tom M R C S L R C P Lond has been appointed Second Resident Assistant Medical Officer to Crumpsall Workhouse Manchester

Watson C Gordon F R C S Eng has been appointed Casualty Officer Registrar and Pathologist to the Metropolitan Hospital.

Wood C H. M.R C S Eng L.R C P Lond. has been appointed Second House Physician to the City of London Hospital for Diseases of the Chest

Wood C Rawdon M A M D B S Durh L.R C P M.R C.S has been appointed Surgeon to the South Western District of the National Fire Brigades Union

Williams Patrick Watson M D Lond. M R C S has been appointed Lecturer on Practical Medicine at University College, Belfast.

Young Edward Herbert M.D Durh L R C P M R C S., L.S.A D P H Lond. has been appointed Medical Officer of Health for Okehampton Devon

Vacancies

For further information regarding each vacancy reference should be made to the advertisement (see Index)

Aberdeen City Lunatic Asylum, Kingseat —Medical Superintendent Salary £400 per annum, rising to £600

Bournemouth, Royal Boscombe and Wests Hants Hospital.—House Surgeon. Salary £80 per annum, with board lodging and washing

Chesterfield and North Derbyshire Hospital and Dispensary —House Physician and Surgeon Salary £120 per year with board apartments, and laundress.

Cumberland Infirmary Carlisle.—Resident Medical Officer Salary £80 rising to £100

Durham County Asylum.—Assistant Medical Officer Salary £180 per annum rising to £220 with rooms board and attendance.

Evelina Hospital for Sick Children Southwark, S.E.—Two Physicians to Out patients

Hospital for Sick Children Great Ormond-street London. W C —House Physician unmarried, for six months. Salary £20 with board and residence

Leeds Public Dispensary —Honorary Physician.

London Fever Hospital, Liverpool road N —Assistant Resident Medical Officer Salary £120 per annum with board and lodging

London Temperance Hospital.—Assistant Resident Medical Officer *for six months* Honorarium at rate of 50 guineas per annum, with board and residence.

Manchester Children's Hospital.—Junior Resident Medical Officer unmarried for six months, *eligible for election* as Senior for another six months. Salary at rate of £80 and £100 a year respectively with board and lodging

Manchester Royal Infirmary Convalescent Hospital, Cheadle —Assistant Medical Officer unmarried for six months Salary at rate of £80 per annum with board and residence

North Eastern Hospital for Children Hackney road, Bethnal Green, N E —Assistant Physician. Also Casualty Officer for six months. Salary £80 with lunch.

Poplar and Stepney Sick Asylum Bromley E.—Second Assistant Medical Officer Salary £100 per annum, with rations apartments and washing

Royal Albert Hospital, Devonport —Assistant House Surgeon for six *months* Salary at rate of £50 per annum with board, lodging and washing

Royal College of Surgeons of England —Two Hunterian Professors.

Royal Hospital for Diseases of the Chest City road, E.C —House Physician for six months Salary at rate of £60 per annum, with board, lodging and washing

Royal Hospital for Sick Children Glasgow —Resident House Surgeon Salary at rate of £50 per annum, with board and laundry Also Assistant at Dispensary (non resident) *for* six months Salary at rate of £100 per annum.

St Mark's Hospital for Fistula and other Diseases of the Rectum City road London, E.C —House Surgeon. Salary £80 per annum, with board lodging and washing.

Salford Royal Hospital.—Junior House Surgeon for six months Salary at rate of £70 per annum, with board and residence

Seamen's Hospital ("Dreadnought") Greenwich, S.E —House Surgeon. Salary £65 per annum Also Junior Resident Medical Officer Salary £40 per annum. Both with board, residence and washing

West London Hospital, Hammersmith road, W —House Physician and House Surgeon for six months

Westminster General Dispensary —Resident Medical Officer Salary at rate of £120 per annum, with rooms coal, gas and attendance

Wolverhampton Eye Infirmary —House Surgeon. Salary £70 per annum, with rooms board, and washing

Births, Marriages, and Deaths.

BIRTH.

Warde.—On Feb. 21st, at Lonsdale-gardens, Tunbridge Wells the wife of Wilfrid Brougham Warde, M.D M.R.C.P Lond of a son.

MARRIAGES.

Dobson—Millington —Feb 24th at the parish church, Davenham, Cheshire by the Rev J J James M.A. Joseph Faulkner Dobson M.S. (Lond.) F R.C.S (Eng) eldest son of Joseph Dobson M.D (Lond) of Burley Leeds to Minnie, youngest daughter of the late Thomas Millington of Hope Flintshire.

Gordon Smith—Newbery —On Feb. 18th Harry Gordon Smith M.A. M.B Cantab. to Amy Eileen youngest daughter of Frederick Newbery of Milton Ernest, Bedford

Moore—Nolan —On Feb. 11th at Cairo Egypt Cecilia Eva Gladys de Radclyffe, eldest daughter of Beaufoi Moore, of the Middle Temple and Ashingdon, Essex barrister at law and of Mrs. Beaufoi Moore to Harold Nolan LL.B M.B Lond. F I C

DEATH.

Peregrine.—On Feb. 18th, at the Firs, Woking Thomas Peregrine M.D Edin in his 93rd year

N.B —A fee of 5s is charged for the insertion of Notices of Births, Marriages and Deaths

Notes, Short Comments, and Answers to Correspondents.

THE NATIONAL ANTI VIVISECTION HOSPITAL.

In The Lancet *of June 14th 1902, p 1705 we referred to a circular* concerning Hospital Sunday sent out by an association called the Church Anti Vivisection League. The association in question recommended subscribers to allocate their subscriptions to a hospital which was just about to be opened The hospital is now in working order and is called the National Anti-Vivisection Hospital. We referred in our former article to the staff of the hospital. It consisted of 26 members some of whom lived in Cornwall, Gloucester Oxford, and other places *distant from London.* From a *circular which* we have now received it appears that the staff is reduced to 11 members ten of whom live in London and one in Greenhithe. Of the ten two are homœopaths. The senior member Dr Alexander Bowie, is credited in the Medical Directory with being the editor of 'Harvey on the Circulation of the Blood" which seems to us to be inconsistent with being a pronounced anti vivisectionist But it is not the circular dealing with the hospital to which exception can be taken so much as an *inordinately silly reprint from the Verulam Review entitled* A Visit to the National Anti Vivisection Hospital." In this effusion we find platitudes such as the following The Laboratory (hateful name from its association with vivisectional experiments) is here called the Dispensary and is daily supplying its medical aids" We never heard of a hospital dispensary being called anything but a dispensary but after all a laboratory only means a place to work in The paper before us reiterates the charge that when the doctors of an hospital have allowed themselves habitually to perform painful experiments on animals the sick poor under their charge must always be in danger of similar experimentation at their hands" The paper implies that because the new hospital has no vivisector on its staff, no vivisection in its schools (so far as we know it has no school) and allows no experiments on patients therefore its treatment is far better than that at any other hospital. In the brief particulars of individual cases" we find the following one gravely set out —

> A charwoman, dependent on her own earnings and afflicted with a partially paralysed leg—think of this readers who have two good legs and nothing to do with them but to amuse yourselves with walks and rides and games—has been much helped not only with strengthening medicine, but with a valuable surgical instrument .. .. She blesses the hospital."

We cannot refrain from quoting a case in which the reasoning is somewhat similar —

> Thomas Burton, has a wooden leg used to wear second hand wooden legs and drink a glass of hot gin and water every night Found the second hand wooden legs split and rot very quickly is firmly persuaded that their constitution was undermined by the gin and water Buys new wooden legs now and drinks nothing but water and weak tea. The new legs last twice as long as the others used to do —(Jonas Mudge, quoted in Posthumous Papers of the Pickwick Club.")

But to be serious Do the board of management the medical staff and the medical patrons of this hospital think that its cause will be advanced among *thinking persons* by the publication of such twaddle as we have quoted? Also are they prepared to use no treatment or means of cure which has been found out by means of experiments on animals? Dr Bowie who was interviewed by the writer of the paper before us makes a great point of the successful treatment of wasting babies We should like to ask him how he will treat a case of cretinism or of myxœdema? Will he prescribe thyroid gland? Will the surgeons of the hospital ever tie an artery in its continuity for aneurysm? If they do they will be profiting by experiments made upon animals If they do not they will not be doing their best for their patients We leave Dr Bowie and the surgeons to get out of this dilemma in the best way that they can

A COURSE OF READING

To the Editors of The Lancet

Sirs,—Would you kindly suggest in the next issue of The Lancet what you consider the most suitable text books to read for the B.S (University of London) examination (including the examination for honours)? Thanking you in anticipation,

I am, Sirs yours faithfully

Feb 13th, 1903.

Bachelor.

*** The most suitable books for the B.S (University of London) are The International Text-book of Surgery" by Gould and Warren, and Treves's Operations of Surgery" The ordinary works on anatomy should be studied and in addition Treves's Surgical Anatomy" It is always well for a candidate for honours at the B.S examination to read special works such as Sheild's Diseases of the Breast," Treves's Intestinal Obstruction," Butlin's Diseases of the Tongue," Bland Sutton's Tumours" and so on. This advice is given with the limitations which our correspondent will find in our leading article on p. 593 while the advice of his lecturers might also be sought with advantage.—Ed. L.

EMPLASTRUM BELLADONNÆ.

To the Editors of THE LANCET

SIRS —Our attention has been drawn to a letter from one of your correspondents relative to emplastrum belladonæ We have made this plaster at our Warwick works for over 30 years and may safely say that such a complaint as blistering by this plaster has never reached us During the whole of our experience we have only had two or three complaints at the outside of our belladona plaster ' irritating It is ten years ago since we even had those

The component parts of the plaster should be so blended that even irritation should be next to impossible but on very highly sensitive skins slight irritation may occur, causing redness but certainly not blistering I am Sirs yours faithfully

For LESLIES LIMITED

J S CHRISTIE RENNECK Managing Director

London Feb 17th 1903

UNFOUNDED ACCUSATION AGAINST A MEDICAL MAN

ON Feb 17th and 18th Mr Justice Jelf and a special jury heard the case of Pride *v* Mellish in which George Frederick Pride a farmer of Tetbury sued John Stafford Mellish M R C S Eng L.R C.P Lond for assault The assault was not denied but was justified on the ground that the plaintiff was behaving in an unseemly manner The plaintiff went to the defendant's house as he was courting the parlourmaid. The defendant finding him in the house put him out into the road and horsewhipped him. The parlourmaid who was called for the plaintiff made an accusation against Mr Mellish in the course of her evidence, but she admitted that she had said nothing at the time of the alleged offence Mr Justice Jelf pointed out that no man had any right to take the law into his own hands There were however horsewhippings and horsewhippings The jury must do their duty according to law but after they had done this they were at liberty to show that the plaintiff had only received a richly deserved castigation The jury found a verdict for the plaintiff with one farthing damages The defendant paid 1s into court and was awarded judgment with costs The judge in conclusion said that an unfair aspersion had been needlessly made upon the defendant in the course of the trial Such an attack was especially likely to damage a medical man but it had utterly failed Mr Mellish's reputation was untouched It was quite right that there should have been a special jury and he certified accordingly We congratulate Mr Mellish upon the happy ending to this case. An accusation such as was made against him, though such accusation was not the point of the case is easy to make and hard to refute and it is well to have had the matter so thoroughly inquired into in a public court.

MEDICAL TESTIMONIALS TO QUACKERY

In *Pearson's Magazine* for February 1903 appears an advertisement of a quack preparation known as bile beans Its harmlessness and usefulness are guaranteed by two testimonials purporting to come from medical men One is dated from 65 Regent-street London, W and is signed J H Hart L R C P and L R C S We cannot find Mr J H Hart's name in the Medical Register, and although he alleges that he has examined samples of bile beans and certifies that they are composed of selected high-class preparations we do not think that his qualifications are those of a skilled analytical chemist and moreover 65 Regent-street is a confectioner's shop The other testimonial is dated from 9 Guildford street Russell square and is signed C H. Bennett L R C.P and L.R C S The name C H. Bennett with the qualifications of L R C.P L R C S Edin appears in the Medical Directory as that of a practitioner living in the provinces whose address is uncommunicated. No 9 Guildford street is according to the Post Office Directory a lodging house and as regards Mr Bennett's analysis we can only repeat what we have already said about that of Mr Hart We think that the attention of the General Medical Council might well be called to the act of these two members of the profession We would further intimate to the proprietors of popular magazines that they are taking dirty money by inserting the numerous advertisements which they do insert emanating from quacks

A WARNING

To the Editors of THE LANCET

SIRS —On Feb. 19th a German representing himself as a Dr Osten an M.D of Berlin and now a student at the London Hospital presented himself at the North West London Hospital professing to be interested in medical work In accordance with continental etiquette I gave him my card The same evening he called at my private residence and, after fully apologising for his untimely visit on so short acquaintance, wished to borrow some ready cash. I explained that I never lent money but was willing to make him a small gift which I did I have since heard that when this so-called Doctor left the hospital property belonging to the house surgeon left it too I feel it my duty to warn the profession against this individual as I fear he may make use of my card as an introduction

I am Sirs yours faithfully,

W KNOWSLEY SIBLEY M.D Cantab

Duke-street Mansions W Feb 23rd 1903.

*** The Warden of the London Hospital Medical College informs us that there is no such person as Dr Osten connected with the London Hospital or Medical College A person describing himself as Dr Osten has had some letters addressed to the London Hospital but the Warden having heard that Dr Osten was obtaining money under false pretences informed the police of the matter Since then nothing has been seen within the hospital of Dr Osten. —ED L

◆

Young Practitioner —To use a nurse as an unqualified assistant is a professional offence If such conduct can be proved against a practitioner the General Medical Council should certainly order him to desist or to run the risk of losing his place on the Register It would be a more difficult task to convict a medical man of having an agreement with a parish nurse and we are loth to believe in these irregular bonds between practitioners and nurses

Candid Jane —The eminent doctors who discuss or who are said to have discussed these topics with ill informed paragraph writers are not, as a rule people of any standing in the medical profession and are frequently not medical men at all The specific instances bear the trace of pure invention while the writer's own contribution to scientific knowledge shows complete ignorance of anatomy, physiology, and medical procedure

A S W —Many methods have been employed for the removal of tattoo marks but very few of them are of value. The three chief methods are 1 Cauterisation of the part or scarification leading to the formation of a scar 2. Excision, the edges of the wound being brought together, this is possible only for small areas and where the skin is loose 3. Excision followed by Thiersch grafting

X —We do not know any place where such forms are kept but any solicitor if the conditions are explained to him ought to be able to embody them in an agreement

Yorks —Our correspondent is advised to communicate with the secretary of the Pharmaceutical Society of Great Britain 17 Bloomsbury square London W C

F W L —We do not know the name of any insurance company making the provision mentioned Lloyds" are said to take these risks

Medical Diary for the ensuing Week.

OPERATIONS

METROPOLITAN HOSPITALS

MONDAY (2nd) —London (2 P M) St. Bartholomew's (1.30 P.M) St. Thomas's (3 30 P.M) St. George's (2 P.M) St. Mary's (2.30 P M), Middlesex (1.30 P.M) Westminster (2 P M), Chelsea (2 P.M.), Samaritan (Gynæcological by Physicians 2 P.M.) Soho-square (2 P M), Royal Orthopædic (2 P.M) City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P M) West London (2.30 P M.) London Throat (9.30 A M) Royal Free (2 P.M) Guy's (1.30 P.M)

TUESDAY (3rd) —London (2 P M) St Bartholomew's (1.30 P M), St. Thomas's (3 30 P M) Guy's (1.30 P M), Middlesex (1.30 P.M) Westminster (2 P M) West London (2.30 P.M) University College (2 P.M) St. George's (1 P M) St Mary's (1 P M.) St. Mark's (2.30 P.M) Cancer (2 P.M) Metropolitan (2.30 P M) London Throat (9.30 A.M) Royal Ear (3 P M) Samaritan (9.30 A M and 2.30 P.M), Throat Golden square (9 30 A M) Soho-square (2 P M.)

WEDNESDAY (4th) —St Bartholomew's (1.30 P M.) University College (2 P.M) Royal Free (2 P M) Middlesex (1 30 P M) Charing Cross (3 P.M) St. Thomas's (2 P M) London (2 P M) King's College (2 P M), St George's (Ophthalmic 1 P.M) St. Mary's (2 P.M), National Orthopædic (10 A M) St Peter's (2 P.M) Samaritan (9 30 A M. and 2 30 P M) Gt. Ormond street (9 30 A M) Gt. Northern Central (2.30 P M), Westminster (2 P M) Metropolitan (2.30 P.M.), London Throat (9.30 A M.), Cancer (2 P M) Throat, Golden-square (9 30 A M) Guy's (1.30 P.M)

THURSDAY (5th) —St. Bartholomew's (1.30 P M) St. Thomas's (3.30 P M) University College (2 P M) Charing Cross (3 P.M.) St. George's (1 P.M), London (2 P M) King's College (2 P M) Middlesex (1 30 P M) St Mary's (2.30 P M), Soho-square (2 P M) North-West London (2 P M) Chelsea (2 P.M) Gt. Northern Central (Gynæcological 2 30 P M) Metropolitan (2.30 P M) London Throat (9.30 A M) St. Mark's (2 P M) Samaritan (9 30 A.M and 2.30 P.M) Throat Golden square (9 30 A.M) Guy's (1.30 P M)

FRIDAY (6th) —London (2 P.M) St Bartholomew's (1 30 P.M.) St Thomas's (3.30 P.M) Guy's (1 30 P M.) Middlesex (1.30 P.M.) Charing Cross (3 P M), St George's (1 P.M) King's College (2 P.M), St. Mary's (2 P M) Ophthalmic (10 A.M) Cancer (2 P M) Chelsea (2 P M) Gt. Northern Central (2 30 P.M) West London (2.30 P.M) London Throat (9 30 A M) Samaritan (9 30 A.M and 2.30 P.M) Throat Golden-square (9.30 A.M), City Orthopædic (2.30 P M) Soho-square (2 P M)

SATURDAY (7th) —Royal Free (9 A.M) London (2 P.M), Middlesex (1 30 P M) St Thomas's (2 P M) University College (9 15 A.M) Charing Cross (2 P M) St. George's (1 P.M) St Mary's (10 P.M) Throat Golden square (9 30 A.M.), Guy's (1.30 P M)

At the Royal Eye Hospital (2 P.M) the Royal London Ophthalmic (10 A.M) the Royal Westminster Ophthalmic (1.30 P.M) and the Central London Ophthalmic Hospitals operations are performed daily

SOCIETIES

MONDAY (2nd) —MEDICAL SOCIETY OF LONDON (11 Chandos-street, Cavendish square W) —9 P M. Dr H. Radcliffe Crocker: The Conditions which Modify the Characters of Inflammations of the Skin, and their Influence on Treatment Lecture II —General Modifying Conditions (Lettsomian Lecture.)

TUESDAY (3rd) — PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square W) —Dr Herringham and Dr Hurtley: On the Excretion of Alkalies in Certain Conditions of Renal Disease —Mr H. W Armit On Ehrlich's Dimethyl (p) Amido benzaldehyde Reaction.—Dr O K. Williamson On the Relation existing between Uric Acid Excretion and the Breaking Down of White Blood Corpuscles.

WEDNESDAY (4th) —OBSTETRICAL SOCIETY OF LONDON (20 Hanover-square, W).—8 P.M. Specimens will be shown by Dr Blacker Dr H. Roberts, Dr Lewers Dr Tate Dr A. Routh Dr Handfield Jones and Mr Bland Sutton. Inaugural Address:—Dr Malins (President): Some Aspects of the Economic and of the Antenatal Waste of Life in Nature and Civilisation

THURSDAY (5th) —HARVEIAN SOCIETY OF LONDON (Stafford Rooms Titchborne-street, Edgware-road, W) —8.30 P.M. Papers:—Mr P L. Mummery: The Value of Arthrotomy in the Treatment of Certain Joint Lesions.—Dr Sidney Phillips.

NORTH EAST LONDON CLINICAL SOCIETY (Tottenham Hospital, N) —4 P.M. Paper:—Dr F J Tresilian Some of the Vagaries of Syphilis.

RÖNTGEN SOCIETY (20 Hanover-square, W) —8.30 P.M. Paper —Mr F H Glew Spark Phenomena.

FRIDAY (6th) —WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary Greenwich-road S.E.).—8.45 P.M. Cases will be shown by Dr M. Dockrell Mr C Ryall, Dr F S Toogood Mr C Williams and Dr R. E Scholfield.

SOCIETY OF ANÆSTHETISTS (20 Hanover-square W) —8.30 P.M. Papers —Mr A. V Harcourt New Chloroform Regulating Inhaler by which the Percentage of Chloroform in the Vapour Inhaled can be Positively Controlled. (The instrument will be shown.)

LARYNGOLOGICAL SOCIETY OF LONDON (20 Hanover-square, W) —5 P.M. Cases Specimens and Instruments will be shown by Mr F J Steward, Mr C Baber Dr Tilley Dr Kelson Dr Bronner and others

SATURDAY (7th).—MEDICAL SOCIETY OF LONDON (Whitehall Rooms Hôtel Metropole) —7.30 P.M 130th Anniversary Dinner

LECTURES ADDRESSES DEMONSTRATIONS &c

MONDAY (2nd) —ROYAL COLLEGE OF SURGEONS OF ENGLAND —5 P.M. Prof A. Keith: A Research into the manner in which the Abdominal Viscera are maintained in Position in Man and in Animals allied to Man with a view of elucidating the condition usually described as Glenard's Disease."

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street W C) —4 P.M. Dr C Fox: Clinique. (Skin.) 5 15 P.M. Dr P H Pye-Smith: Albuminuria.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road W) —5 P.M. Mr Lloyd: Anæsthetics in Cases of Empyema, &c.

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street W) —5 P.M General Monthly Meeting

TUESDAY (3rd) —MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W C) —4 P.M. Dr C O Hawthorne Clinique. (Medical.) 5.15 P.M. Mr E Clarke Defects of Refraction.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W) —5 P.M. Dr Moullin Posterior Displacement of the Uterus

UNIVERSITY OF LONDON (Physiological Laboratory) —5 P.M. Dr W D Halliburton: On the Chemistry of Muscle and Nerve. (Lecture on Advanced Physiology)

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen square, Bloomsbury) —3.30 P.M. Dr Buzzard On Cases in the Wards.

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street W) —5 P.M. Sir W Abney Recent Advances in Photographic Science.

WEDNESDAY (4th) —ROYAL COLLEGE OF SURGEONS OF ENGLAND —5 P.M. Prof A. Keith A Research into the manner in which the Abdominal Viscera are maintained in Position in Man and in Animals allied to man with a view of elucidating the condition usually described as Glenard's Disease."

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W C) —4 P.M. Mr J Smith: Clinique. (Surgical.) 5.15 P.M. Mr A. Carless The Systematic Examination of Joints in Disease and Injury

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W) —5 P.M. Dr S Taylor Diagnosis and Treatment of Valvular Disease of the Heart

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton) —4 P.M Dr Acland: Pneumothorax.

THURSDAY (5th) —ROYAL COLLEGE OF PHYSICIANS OF LONDON (Pall Mall East) —5 P M. Dr H. T Bulstrode: The Causes Prevalence, and Control of Tuberculosis (Milroy Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street W C) —4 P.M. Mr W H. A. Jacobson: Clinique. (Surgical.) 5 15 P.M. Dr G H Savage Insanity of Decay

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W) —5 P.M. Mr Edwards: Rectal Stenosis.

UNIVERSITY OF LONDON (Physiological Laboratory) —5 P.M Dr T G Brodie: On the Circulation. (Lecture on Advanced Physiology)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond street, W C) —4 P.M. Dr F E Batten: Deformities of the Chest in Children.

CHARING CROSS HOSPITAL.—4 P.M. Dr Galloway: Dermatological Demonstration. (Post-Graduate Course.)

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street, W) —5 P.M. Prof. L. C Miall Insect Contrivances.

FRIDAY (6th) —ROYAL COLLEGE OF SURGEONS OF ENGLAND —5 P.M. Prof. A. Keith: A Research into the manner in which the Abdominal Viscera are maintained in Position in Man and in Animals allied to Man with a view of elucidating the condition usually described as Glenard's Disease."

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street W C) —4 P.M. Dr W J Horne Clinique. (Throat.) 5.15 P.M Mr H. L. Barnard: Acute Appendicitis.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W) —5 P M Dr R Jones: General Paralysis of the Insane and the Legal Aspects of Insanity

UNIVERSITY OF LONDON (Physiological Laboratory) —5 P.M. Dr A. D Waller: On the Action of Anæsthetics and Narcotics. (Lecture on Advanced Physiology)

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle street, W) —9 P M Dr J G McKendrick: Studies in Experimental Phonetics.

SATURDAY (7th).—ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle street W) —3 P.M. Right Hon. Lord Rayleigh: Light, its Origin and Nature.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub Editor"

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager"*

We cannot undertake to return MSS not used

MANAGER'S NOTICES

THE INDEX TO THE LANCET

THE Index to Vol. II. of 1902, which was completed with the issue of Dec 27th, and the Title-page to the Volume, were given in THE LANCET of Jan 3rd.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1902 are now ready Bound in cloth, gilt lettered, price 18*s*, carriage extra.

Cases for binding the half-year's numbers are also ready Cloth, gilt lettered, price 2*s*, by post 2*s* 3*d*

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METEOROLOGICAL READINGS

(Taken daily at 8.30 a.m. by Steward's Instruments)

THE LANCET Office Feb 26th 1903.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Feb 20	30·34	W	...	89	60	44	50	52	Hazy
21	30 03	S W	...	63	58	52	52	54	Cloudy
22	30·10	S W	...	57	55	54	53	55	Overcast
23	29·69	S W	0·11	77	55	45	44	46	Overcast
24	29·95	S W	0·01	66	50	36	41	43	Fine
25	29·78	S W	0·09	89	54	43	43	46	Fine
26	29 63	S.W	0·09	82	45	44	42	45	Cloudy

During the week marked copies of the following newspapers have been received *Surrey Advertiser Reading Mercury Local Government Journal Daily Chronicle, The Register Surrey Comet Aberdeen Free Press (Weekly) Leisure Hour Literary Digest (New York) Scientific American Popular Science Monthly Sheffield Daily Independent Westminster Gazette, Plymouth Mercury Aldershot News Army and Navy Gazette, Echo Daily Mail Yorkshire Post, Dublin Express Local Government Chronicle, Sussex Daily News Morning Post Hertfordshire Mercury Birmingham Post, Sanitary Record Daily Graphic The People &c.*

Communications, Letters, &c., have been received from—

A.—After-care Association for Poor Persons Discharged Recovered from Asylums for the Insane, Lond, Secretary of Aberdeen City District Lunacy Board Clerk of Argus Printing and Publishing Co Lond; Mr A Arbenz Birmingham Messrs Armour and Co, Lond Messrs Arnold and Sons Lond, Messrs Ayrton and Saunders Liverpool, A Country Practitioner

B.—Mr W F Brook, Swansea Dr R. M. Buchanan Glasgow; J W Benson Ltd Lond Dr John Brownlee, Glasgow Mr A. H Buck Brighton Messrs Brown and Pank Lond; Mr J Paul Bush Clifton Dr Charles Buttar Lond, Sir O B Ball Dublin Messrs J Bright and Co Sheffield; Mr O L Bedford, Birmingham Mr O Bullmore, Falmouth

C—Mr F G H Cooke Lond Messrs E. Cook and Co, Lond; Cortland Wagon Co Lond Mr W Cross, Lond; Dr G Carpenter Lond

D—Dr E Divor Portsmouth Mr E Dodd Lond; Messrs G L Daube and Co Frankfort Dr A. W W Dale Liverpool Mr S M Dowling Lond

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I.—I M. J I B

J—Dr J Johnston Bolton J E. P *Journal de Physiothérapie*, Paris Editor of J A.

K.—Dr E Klein Lond. Major O R Kilkelly Caterham Captain F Kiddle R.A.M O Lond; Messrs. R A. Knight and Co, Lond, Dr Knott Dublin

L.—Mr F W Lawrence, Southport Messrs Lütgenau and Co Berlin London Press Exchange, Lond Dr D Lawson, Banchory Mr H Lorenz, Lond Lawes Chemical Manure Co, Lond

M.—Dr Norman Moore, Lond Mr Stephen Mayou Lond; Dr Albert M Martin Newcastle-on Tyne Middlesex Hospital Lond, Secretary Superintendent of Dr G T Mockett, Burslem Dr W J McCardie, Birmingham Dr M Mackintosh, Lond.; Mr J McMurtrie Glasgow Mr D F Miller Bellville U S.A. Manchester Royal Infirmary Secretary of; M D, Cantab Medical Society of Victoria Melbourne, Hon Treasurer of Mr O Mörike, Hamburg Manchester Children's Hospital, Secretary of Mrs Miller, Kingswood Dr Murrell, Lond Mr J Miller Ryde Edinburgh Mr F Clare Melhado, Lond Medical Society of London Hon Secretary of, Dr J J McCann, Cheam Major Marshall I M S

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P—Mr E Pocklington Lond Messrs O Pool and Co, Lond Dr T W Parry Lond, Lieutenant H G Pinches R A M.C Dover; Mr J Pond, Norwich; Dr Pegler Lond

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R.—Royal Albert Hospital Devonport Secretary of; Dr A. G Richardson Rhayader Mr H Roth Manchester

S—Mr G Steinheil Paris; Salford Royal Hospital Secretary of; Messrs Southall Bros and Barclay, Birmingham Sanitary Inspectors Examination Board Lond., Secretary of; Scholastic, Clerical &c, Association Lond St. Thomas's Hospital Medical School Lond; Swiss Milk Society Lond Dr Spezia Turin Mr L Dimock Saunders, Salisbury

T—Miss A Talbot Dartford 'Threecis" Plug Co Lond, Manager of Telma, Ltd Lond.

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Y—Yorks Yarrow Convalescent Home, Lond, Secretary of.

Z.—Dr Theodor Zangger Zurich

Letters, each with enclosure, are also acknowledged from—

A.—Dr J L Allen Chichester; Mr W H. Allen Hurst Hill; Messrs Allen and Hanburys, Lond.; A. J R O; A. D

B.—Dr E T Born Greenfield, Messrs Brown Gould and Co., Lond Dr G Byres Lond Dr J O S Burkitt Whitwick Birkenhead Children's Hospital Treasurer of Mr A B Batley Leyton Mr S H. Bvam Lond Mr T H Brocklehurst, Templecombe B M Hedenham Buntingford House Retreat, Medical Superintendent of Mr A. Boyd J P Glasgow; Dr R R P S Bowker Abertillery; Dr F T Bibby, Fisherton Ontario

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K.—Messrs T Kirby and Sons Lond; Mr S Karger Berlin Mr F A. Kaim Brighton.

L.—Mr H K. Lewis Lond. L. B Dr R Liveing Lond. L, Nottingham

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Y—Yorkshire College, Leeds, Secretary of

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The Hunterian Lectures
ON
THE NATURE AND ANATOMY OF ENTEROPTOSIS (GLÉNARD'S DISEASE)

Delivered before the Royal College of Surgeons of England on March 2nd, 4th, and 6th 1903

By ARTHUR KEITH, M D Aberd,
F R C S Eng,
HUNTERIAN PROFESSOR ROYAL COLLEGE OF SURGEONS OF ENGLAND ETC

LECTURE I

Delivered on March 2nd.

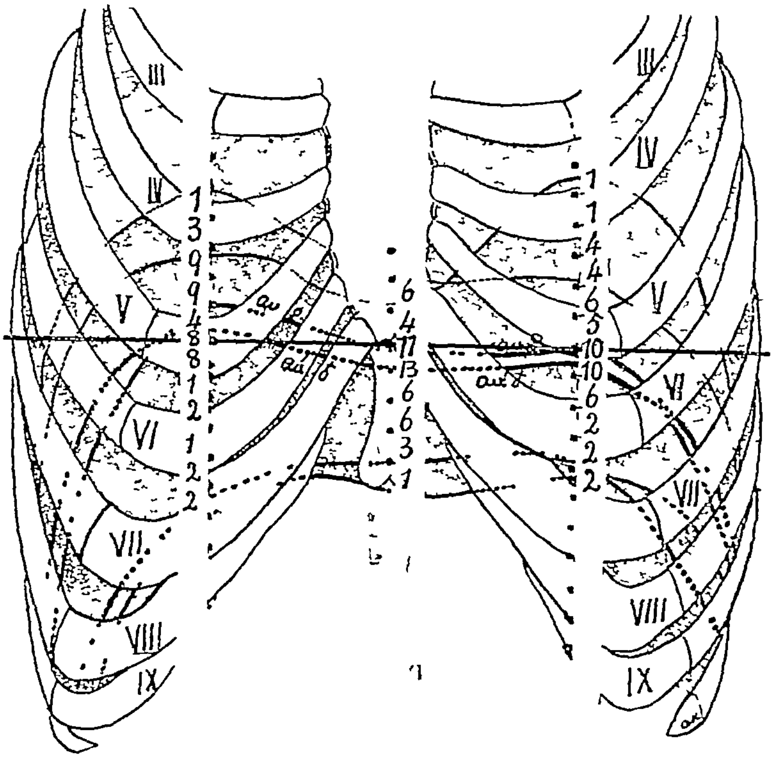
The Importance of the Respiratory Movements of the Abdominal and Thoracic Viscera.

Mr. President and Gentlemen,—Few medical men, as they follow the respiratory heave and fall in a patient's body, attempt to form an accurate conception of the movements of the viscera within the cavities of the thorax and abdomen They may know well that the heart, the liver, the stomach, the spleen, the kidneys, and the intestine go through a definite respiratory cycle with each breath, yet as these movements are but secondary to the expansion of the lung they are deemed of little importance within the field of practical medicine. My aim in the lectures which I have now the honour to deliver is to show (1) that a knowledge of the respiratory movements of the viscera gives the key to the manner in which they are fixed and placed within the body, and (2) that with any marked deviation in the action of the muscles of respiration there is a disturbance in the visceral movements, resulting in displacement and disorganisation of function

The nature of enteroptosis—The organs within the thoracic and abdominal cavities are poised between the muscles of inspiration and expiration, two contending sets which throughout the life of the individual, strive for the mastery There is in modern teaching a tendency to emphasise the respiratory importance of the walls of the thorax and to minimise the action of those of the abdomen Yet the structure of air breathing animals teaches very emphatically that the muscular wall of the entire trunk, from the upper aperture of the thorax to the floor of the perineum, is designed to increase and to diminish the ever fluctuating respiratory capacity of the body cavity The tendency to regard the thoracic as the chief respiratory part of the mammalian trunk is probably due to an erroneous conception of the action of the diaphragm The diaphragm, it is true separates the thoracic from the abdominal cavity, but its appearance within the mammalian body did not in any way relieve the muscles of the wall of the belly of their expiratory function Quite the reverse, the diaphragm is an ingenious addition to the inspiratory group of muscles and its evolution entailed an increased development of the muscles of the belly wall. Every organ within the body cavity swings with the respiratory tide. With each breath taken the ordinary muscles of inspiration—the external intercostals, the intercartilagines (intercostals between the costal cartilages), and the diaphragm—enlarge the body walls and displace the viscera, with each breath given the internal intercostals, the transversalis, the external and internal oblique muscles, and the rectus abdominis replace the viscera. In the majority of people the respiratory ebb and flow are so finely adjusted that at the end of life the viscera are poised much as they were in youth. Yet in the lifetime of a very considerable proportion of men and women circumstances over which they may, or may not, have control arise and upset the balance between the inspiratory and expiratory groups of muscles. In such cases it is, with the exception of emphysematous conditions, the muscles of inspiration that gain the upper hand and the muscles of expiration that yield When the respiratory balance is upset the viscera, not only of the abdomen, but also of the thorax, are displaced downwards and the condition of *enteroptosis* is produced Thus enteroptosis is the result of a vitiated method of respiration and should be assigned really to the respiratory diseases. It sometimes happens that the incidence of the disease falls particularly on one organ, very frequently the kidney, sometimes the stomach, liver, or spleen. In such cases, although one organ has suffered the chief attack of the inspiratory force, yet a full examination will show that all are displaced although to a less degree.

The variable position of the diaphragm.—Every body opened in the dissecting room shows, by the position of its viscera the result of a life long contest between the two opposing sets of respiratory muscles. The diaphragm, which forms the roof of the abdominal cavity, rests like a muscular hood on the abdominal viscera Three points in it—viz., the highest point of the right dome the highest point of the left dome, which usually occur in the right and left mammary lines, and the part of its central tendon on which the heart rests, may be taken as representing the upper level of the abdominal viscera. In *Fig* 1 are set forth diagrammatically the variations of the upper level of the abdominal viscera, observed in 50 subjects. On an

Fig 1.



A diagram showing the position of the diaphragm in 50 subjects (35 male and 15 female) Tracings of the two highest and the two lowest diaphragms are represented; the two intermediate tracings give the average position for the male (lower) and female (upper) The xiphisternal joint was taken as the level from which vertical measurements were made. Centimetre points are represented in the middle and each mammary line. The middle and lateral vertical rows of figures represent the number *of cases* occurring in each centimetre.

average the domes of the diaphragm and the abdominal viscera which fill them lie just behind the upper border of the fifth costal cartilage in the mammary line and the central tendon one third of an inch below the junction of the ensiform process and sternum. There is a wide and constant fluctuation from these average points. The domes may rise above the third costal cartilage or lie below the sixth, the central tendon may rest behind the sternum, an inch or more above the average point, or it may fall as low as the extremity of the ensiform process. Thus there is a range of over three and a half inches in the level of the domes and more than two inches in the central tendon of the diaphragm The extensive fluctuation in the position of the diaphragm shown in Fig 1 is due, to some extent at least, to the fact that the subjects on which it is founded varied widely in age The series of bodies on which this figure is constructed includes 40 which were examined and very accurately recorded in a memoir by a predecessor in this chair, Professor C Addison[1], his observations deal with 28 men and 12 women, varying in age from 13 to 71 years. The dissecting room subjects, including seven men and three women, which I have added to make up a series of 50, were aged individuals to whom nature had sternly debited to their old age the profligacy of their youth. Thus the fluctuation in the position of the diaphragm shown in Fig 1 must be regarded as an exaggeration of the condition to be found in an equal series of healthy subjects in the prime of life. Seven female subjects, included in the following tables, were examined after the diagram given in Fig 1 was prepared On an average the position of the female diaphragm is slightly higher than that of the male (see Fig 1) As may be seen from Table I the range of variation is rather greater in the male than in the female and on the right side than on the left[2]

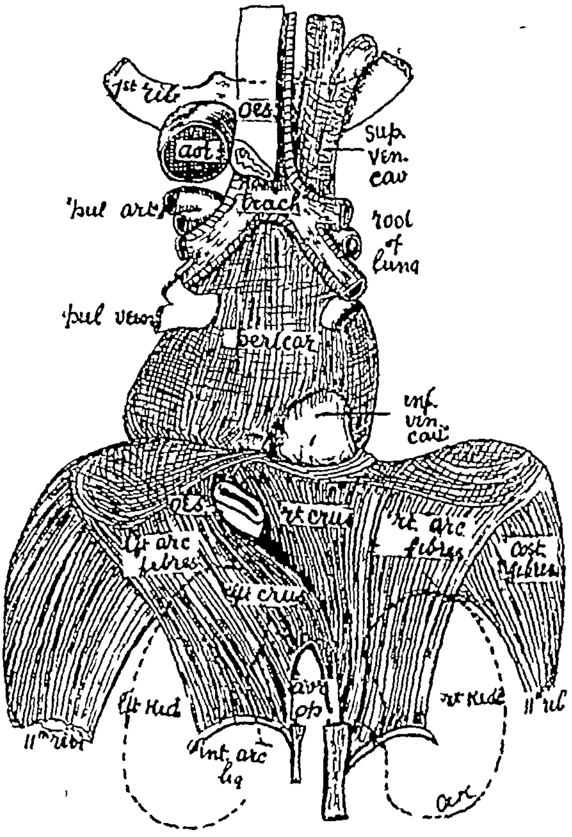
TABLE I —*Showing the Level at which the Right Dome, the Central Leaflet, and the Left Dome of the Diaphragm occurred in 35 Male Subjects and 22 Female Subjects respectively*

—	Males			Females		
	In the right mammary line	In the middle line	In the left mammary line	In the right mammary line.	In the middle line	In the left mammary line
	Cases	Cases	Cases	Cases	Cases	Cases
At the level of the third rib or third intercostal space	1	0	1	0	0	0
At the fourth rib or space	13	2	7	9	5	5
At the fifth rib or space	18	30	24	11	14	11
At the sixth rib or space	3	3	3	2	3	6

The variations in the level of the diaphragm represent the phases of its respiratory cycle —Those who have watched the movements of the diaphragm in the living body by the aid of the Roentgen rays will be struck by the resemblance of Fig 1 to a diagram representing the various phases through which the diaphragm passes in a complete respiratory movement of the abdominal type The diaphragm after death when rigor mortis is gone, represents a phase of complete expiration, the elasticity of the lungs insures the contraction of the pleural cavities to their utmost physiological extent It is evident, then, that of the subjects represented in Fig 1 the position of complete inspiration of those highest in the series corresponds in position to the phase in complete expiration in those the lowest in the series Yet all started off alike at birth In the full time child the central tendon of the diaphragm hardly varies in position, it lies at the level of a line drawn from the sternal end of the sixth costal cartilage to the disc between the eighth and the ninth dorsal vertebræ For some reason the supports of the diaphragm give way in certain individuals, but at what degree of displacement a marked impairment of its action and disorganisation of the function of the abdominal viscera take place it is difficult to define with exactitude, the physiological limits are so wide. There can be no doubt, however, that in the six cases (three males and three females) in which the domes of the diaphragm were situated below the level of the lowest part of the sixth costal cartilage and the central tendon on a level with the lower end of the ensiform process, were cases in which the action of the diaphragm was markedly impaired and the function of the viscera disorganised and that they were therefore true cases of enteroptosis The disease must be judged not by the extent of displacement but by the degree of distress

The supports of the diaphragm —Since the downward displacement of the diaphragm is an essential feature of all cases of ptosis of the viscera the manner in which it is supported and maintained in position is naturally the first point to be settled. Besides, the liver, spleen, stomach, and kidneys are firmly bound to its abdominal aspect The means of diaphragmatic support are three in number—viz. (1) abdominal, (2) thoracic, and (3) costal. The *abdominal* support is supplied by the muscles of expiration, mainly by those of the abdominal wall which keep the abdominal contents pressed within the concavities of the diaphragm The *thoracic* support is provided by the pericardium, the heart, and the great vessels and lungs which directly or indirectly attach the upper surface of the diaphragm to the structures at the root of the neck and to the whole extent of the thoracic wall The *costal* support is given by the abdominal ends of the lower six ribs, long moveable levers, maintained in position by their passive articulations with the spine and

FIG 2



The attachments of the crura and arcuate fibres of the diaphragm to the inferior vena cava and pericardium (From a dissection made after removal of the spinal column) the active contraction of the external intercostal sheet of muscles. Each of the three supports is necessary for the maintenance of the diaphragm in position, a partial collapse of one is followed by a corresponding failure of the other two Hence it is that in well marked cases of enteroptosis the chest is deformed, the thoracic viscera occupy abnormal positions, and the contents of the abdomen are displaced.

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[1] The Topographical Anatomy of the Abdominal Viscera in Man Journal of Anatomy and Physiology vols. xxxiii xxxiv and xxxv

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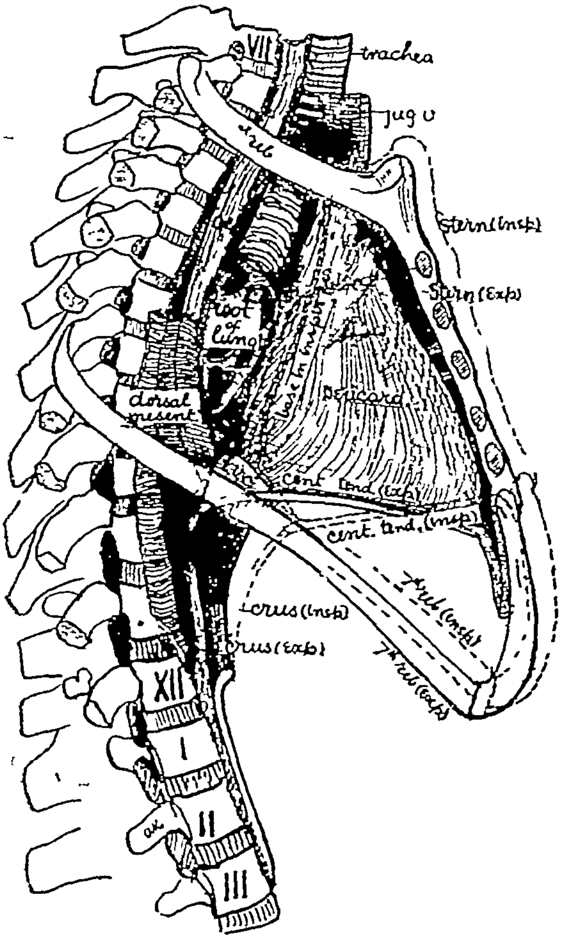
The mobility of the central or interpleural area of the diaphragm.—In the past I have followed the lead of the majority and taught that the part of the diaphragm between the pleuræ on which the heart rests and which the inferior vena cava, the œsophagus, and the aorta perforate was nearly immoveable and of little respiratory importance. Holding this conception, it was always a difficult matter to explain satisfactorily why the fibres of the two crura constituting rather more than a fifth of the total muscle, should ascend vertically to be attached to the cardiac area of the diaphragm (See Fig 2) The pericardium and the strongly ensheathed inferior vena cava, being intimately adherent to this area, prolong the insertion of the crural fibres to all the structures of the mediastinum but especially to three parts (1) to the heart itself, (2) to the roots of the lungs, and (3) to the great vessels and fibrous tissue in the upper aperture of the thorax. (See Fig 3.) Thus with each inspiration the crura, from a firm spinal origin, exert their strength in drawing downwards the structures of the mediastinum and thus drawing down the supports on which the central part of the diaphragm depends. The active contraction of the crura is the most important factor in the production of the condition of visceral ptosis

FIG 3



Contents of the thorax seen from the right lateral aspect to show the attachment of the crus to the inferior vena cava and pericardium and indirectly to the roots of the lung The parts are represented at the *end of expiration* The position of the crus central tendon, seventh rib, and sternum at the *end of inspiration* are represented by stippled lines.

The movements of the mediastinal structures—To appreciate fully the action of the crural fibres it is necessary to turn aside for a minute and to consider the normal respiratory movements of the central part of the diaphragm and mediastinal structures When the body is viewed in profile, the mediastinal structures are seen to occupy a well marked triangle. (See Fig 3) The base of this mediastinal triangle is formed by the greater part of the central leaflet of the diaphragm, the sternum forms its anterior boundary, and the superior vena cava, auricular base of the heart, and inferior vena cava form its posterior wall. In the posterior boundary are fixed the roots of the lungs The apex of the triangle is attached to the upper aperture of the thorax. When a breath is taken the mediastinal triangle and its contents swing forwards from the spine. Its posterior boundary, which slopes downward and backward at the commencement becomes nearly vertical at the end of the inspiratory swing while the anterior or sternal boundary, rising upwards and forwards, becomes more oblique.

To understand the pendulum like movement of the mediastinal contents the following anatomical points have to be noted 1 The upward and forward movement of the sternal boundary of the triangle is due to the contraction of two strong sheets of muscle—the external intercostals and inter-cartilagines, by elevating the ribs and costal cartilages they throw the sternum upwards and forwards 2 The base of the mediastinal triangle, being bound to the ensiform process and seventh costal cartilages must follow the forward and upward movements of the sternum. 3. The attachment of the crura to the posterior margin of the base drags that part of the base and the posterior contents of the triangle downwards during the forward movement 4 That the forward movement of the mediastinal triangle may take place the contents of the mediastinum—the œsophagus, trachea, and heart—are bound loosely to the dorsal region of the spine by a mesentery[3] formed by the posterior reflections of the mediastinal pleuræ (see Fig 3) Thus, the dorsal mesentery of the thorax, undergoes an extension forwards with each breath.

Estimation of the mediastinal movements—Thanks to the introduction of the Roentgen rays the mediastinal movements, at first inferred from a consideration of the anatomical arrangements in the dead, can be verified and studied in the living Turning a patient sideways to the tube, so that the rays enter in front of the lower angle of the left scapula and emerge behind that of the right the base of the heart, when a deep breath is taken, can be seen to move forwards and downwards from the spine, leaving the posterior mediastinum a gleaming window behind it The extent and direction of the movements vary with the type of respiration, but in a subject in whom the abdominal and thoracic respiratory movements are about equally developed the diagonal movement of the base of the heart, allowing for magnification of the image on the screen, varies from one and a half to two and a half inches in a complete inspiration In abdominal breathers not only is the range of movement greatest but the downward displacement of the diaphragm and viscera is also much more marked The inspiratory downward displacement, if once the diaphragmatic supports commence to yield, is one of the factors in the causation of visceral ptosis

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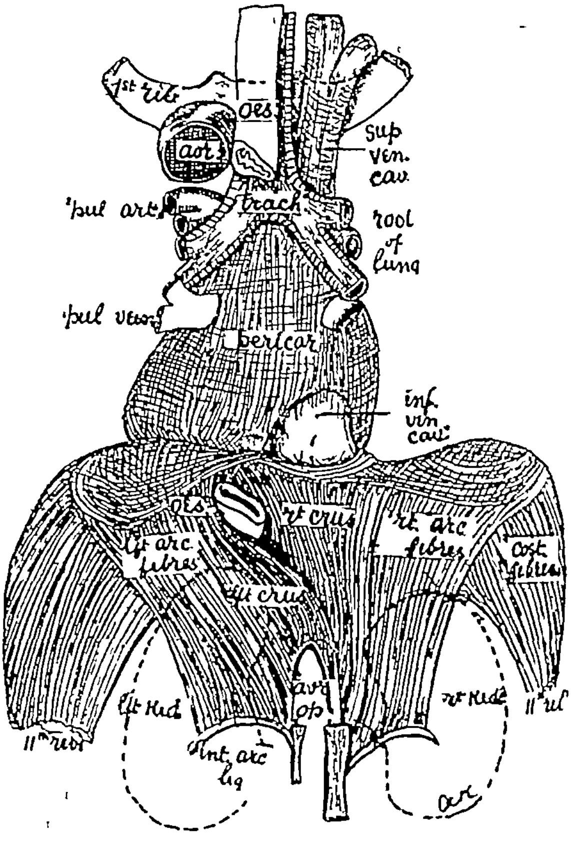

The attachments of the crura and arcuate fibres of the diaphragm to the inferior vena cava and pericardium (From a dissection made after removal of the spinal column.)

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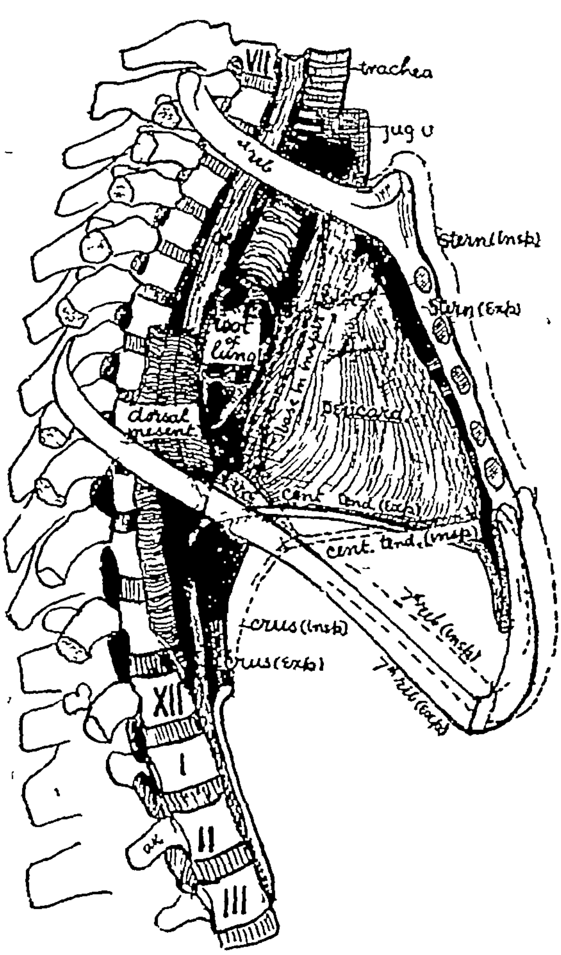

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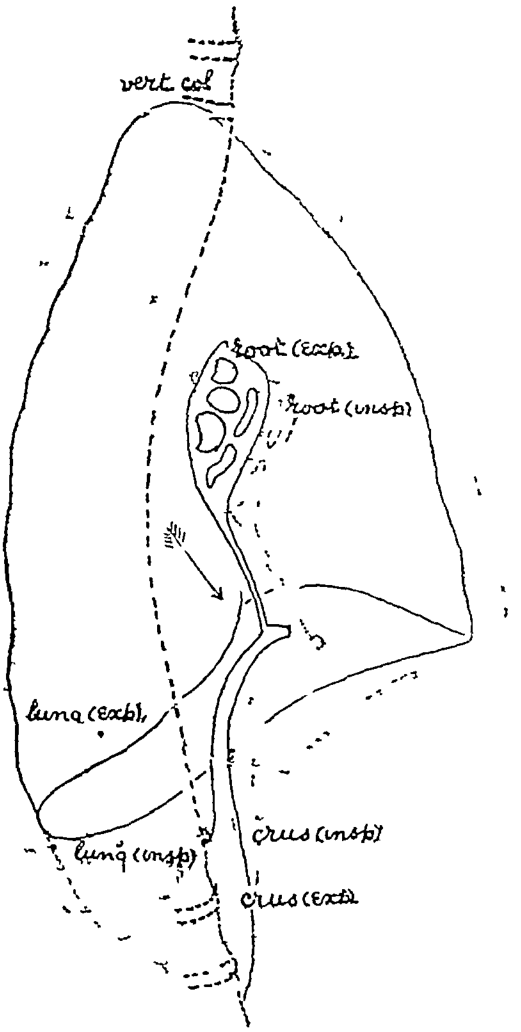
The attachment of the central part of the diaphragm to the roots of the lungs —The central part of the diaphragm being attached to the roots of the lungs through the pericardium it is evident that a contraction of the one must be accompanied by some degree of displacement in the other Why should the diaphragmatic crura be thus yoked to the roots of the lungs? The explanation is shown in Fig 4 When a breath is drawn the apex and posterior wall of the thorax take no part in the enlargement of the chest, the expansion takes place only in a downward, forward, and outward direction, necessitating a movement of the entire lung Were the roots of the lungs fixed such a movement would be greatly impeded. The centre of the lung, represented b the root, moves downwards and forwards with each brea to allow the lung to expand equally The crura of th diaphragm assist this movement the heart and lungs bein thus maintained in the same relative positions at all phase of the respiratory cycle The elasticity and extensibility c the trachea greatly facilitate the descent of the pulmonar roots

FIG 4



Showing the direction of the expansion of the lung It takes place only in a downward forward, and outward direction The root of the lung moves in a corresponding direction The stippled lines represent the anterior border of base, crus and root at the end of inspiration

Cervical curvature in visceral ptosis —In cases of viscera ptosis there is commonly a marked forward curvature in th cervical region of the spine—"ewe-neck," as Dr W Williams[5] names the condition An explanation of thi symptom will be found in the attachment of the structure of the mediastinum which support the central part of th diaphragm from the upper aperture of the thorax an structures in the root of the neck. The fibrous tissue whic ensheathes the pulmonary vessels and also the great venou and arterial trunks of the superior mediastinum and nec represents the strewn out remnants of the branchial arches it is really a direct upward continuation of the fibrou pericardium into the neck By this tissue the contents o the mediastinum are bound to the upper margin of th manubrium sterni, to the inner ends of the clavicles, t Sibson's fascia, to the first pair of ribs and anterior tubercle of the cervical transverse processes The first pair of ribs i cases of ptosis are not only oblique in position but are ofte bent downwards at the junction of the neck and body Th cervical curvature is probably due to a failure of the costal o abdominal supports of the diaphragm, whereby an increase strain is thrown on the mediastinal supports and by then transferred to the neck

The lungs as diaphragmatic supports —Collapse and dis placement of the domes of the diaphragm are the mos characteristic features of visceral ptosis and hence it i necessary to inquire into the structures which support them in the thorax. Rightly considered, the lungs themselves ar really conical elastic ligaments which bind the domes of the diaphragm to the whole extent of the costal wall Unless air or fluid is introduced into the pleural cavity the lung i bound by the pressure of an atmosphere to the diaphragm and thoracic parietes, hence to allow the domes to become permanently depressed either the lungs must become elongated or their elasticity lessened. A deformity of th chest which lessens the pulmonary space will lead to a downward displacement of the lungs and consequently o the domes of the diaphragm. The elasticity of the lung i greatly diminished in emphysema, but ptosis is prevente in such cases by the hypertrophy of the transversalis muscle of the abdomen

Summary of the thoracic supports of the diaphragm.—I will thus be seen that all the structures within the thorax the heart, the great vessels, the pericardium, the mediastina and cervical fasciæ the dorsal mesentery of the thorax, an the lungs, help to bind the diaphragm to the walls of th thorax and neck Each contraction of the diaphragm has to overcome the resistance offered by these structures to it contraction, the resistance it overcomes, which results in expansion of the lungs, may be termed the thoracic load o the diaphragm.

The structure and action of the diaphragm —Howev important the passive supports of the diaphragm may be i is the contraction of the muscle itself that is the activ factor in the production of displacement of viscera. Althoug one of the most important muscles of the body it i also one of the least understood. The traditional account of the diaphragm which has come down through th centuries to us as a muscle which takes its origin by series of fasciculi from the circumference of the body wal and converges to its central tendon like the spokes of wheel to the nave has done more to retard a true conceptio of the respiratory movements than any other circumstance. In structure, in development, in evolution, and in action th diaphragm is a true digastric muscle made up of tw segments, a spinal or dorsal and a costal or ventral. Th spinal segment consisting of crural and arcuate fibres (see Figs 2 and 5) takes a fixed origin from the last dorsal and upper three lumbar vertebræ and from the arcuate ligament thickenings of the sheaths of the psoas and quadratu lumborum muscles These spinal fibres, expanding as the ascend, terminate as fibrous strands in the central tendon from which most of the fibres of the costal segment directl

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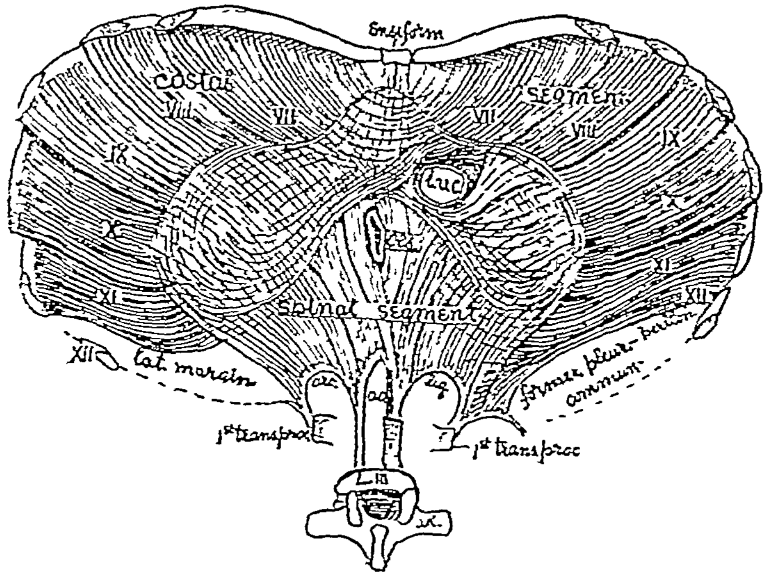
[4] Proceedings of the Anatomical Society of Great Britain and Ireland, November, 1902.

[5] Pathological Reports of the Royal Southern Hospital, Liverpool 1901

arise. (*See* Fig 5.) The costal fibres spread as they descend in front to their insertion on the abdominal or ventral ends of the lower six ribs but, as a rule, there is no insertion to the twelfth rib. The development of the arcuate fibres in man and in other orthograde primates has helped to obscure the true nature of the diaphragm. In "*four footed*" *or* pronograde primates only the crural fibres are present, but with the assumption of the orthograde posture the spinal segment of the muscle spreads outwards to the tip of the twelfth rib until the spinal origin and costal insertion of the muscle almost meet. At the same time, the insertion of the *quadratus lumborum*, a muscle which represents a backward continuation of the sheet from which the crural fibres of the diaphragm were developed also undergoes a corresponding extension outwards and thus binds the origin of the arcuate fibres to the ilium. In more than one half of the subjects which I have examined there was a fibrous interval between the origin and insertion of the diaphragm (See Figs 3 and 5) The interval marks the site of communication between the pleural and peritoneal cavities and the outer or lateral margin of the diaphragm With the evolution of the mammalia the outer edge of the diaphragm became fixed by fibrous tissue to the lateral costal wall and the pleural space separated from the peritoneal *Congenital diaphragmatic herniæ* occur between the lateral margin of the diaphragm and costal wall in such cases the free lateral margin of the diaphragm can be seen very distinctly

FIG 5.



The diaphragm spread out and viewed on its thoracic aspect. Fibres pass through the central tendon and unite the muscular fasciculi o the spinal segment to those of the costal segment.

LECTURE II.

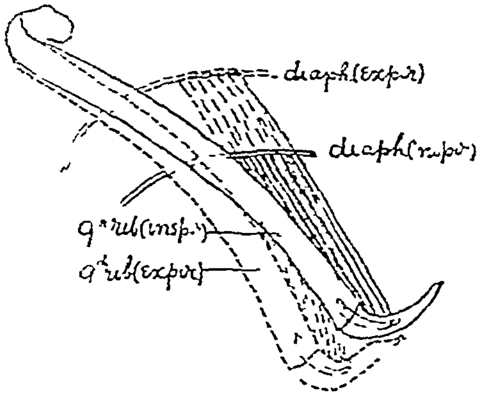
Delivered on March [illegible]th

The manner in which the diaphragm became a muscle of inspiration.—It is only in mammals that the diaphragm is inspiratory in action, the muscles which represent the spinal and costal segments in amphibians, reptiles, and birds assist in emptying the lungs. *In man, as in* mammals generally, were the contents of the abdominal cavity removed the diaphragm, by drawing the costal margin inwards in the direction of its origin from the lumbar spine, would diminish the body cavity and thus act as a muscle of expiration By the simple device of using the contents of the mammalian abdomen as a *respiratory* piston the diaphragm became one of the chief muscles of inspiration. This piston, pressed within the thorax by the muscles of the abdominal wall, carried in front of it the broad, fan shaped, double segmented diaphragm. It is this relationship to the abdominal viscera that gives the diaphragm its importance as a factor in the production of enteroptosis.

The movements of the abdominal contents in thoracic and abdominal types of respiration.—The effect which the diaphragm will exercise on the abdominal viscera on inspiration depends on two factors (1) the opposition offered by the muscles of the abdominal wall to the descent of the viscera, and (2) the mobility of the lower six ribs To the abdominal ends of these the costal fasciculi of the diaphragm are inserted If the muscles of the abdominal wall offer a strenuous opposition to the descent of the viscera then the abdominal contents are no longer a respiratory piston but a respiratory fulcrum over which the diaphragm is supported and from which it exerts its force on the points of insertion, the lower six ribs. By its contraction it tends to lift the whole thoracic cage off the abdominal fulcrum. The type of respiration is then said to be *thoracic*. If, on the other hand, the abdominal walls and viscera yield to the pressure of the diaphragm then the force of its contraction is spent, not in assisting the external intercostals in lifting up the thoracic cage, but in forcing down the abdominal viscera which become thus a respiratory piston. The type of respiration is then said to be *abdominal* Whether the type be thoracic or abdominal, in either case the effect of its contraction may lead to displacement of the abdominal viscera. If the visceral swing is greatest in the abdominal type the pressure to which the abdominal viscera are subjected is greatest in the thoracic type, but which of the two types is the more dangerous I cannot at the present tell.

The effect of displacements of the ribs on the action of the diaphragm.—In all circumstances, whether the type of respiration be abdominal or thoracic, or whether the ribs be normally *placed or not, the* action of the spinal segment of the diaphragm remains practically the same, it draws downwards the parts of the abdominal viscera attached to it. It is otherwise with the action of the costal segment. The direction in which the costal fibres act depends on the position of the ribs (Fig 6) If they are misplaced the action of the *fibres* are altered. The direction of a costal fasciculus of the diaphragm does not quite correspond to the axis of the rib on which it acts, although at the end of inspiration they are nearly identical In the expiratory phase the fasciculus to the ninth rib, for example, takes its origin from the central tendon on a level with the eighth rib or that for the tenth rib on a level with the ninth. But for all practical purposes the lower six ribs may be taken as

FIG 6.



Showing the relationship of the costal fibres to a rib at the end of inspiration and at the end of expiration (stippled).

indices of the axes in which the costal fibres of the diaphragm act. Hence when the ribs are at a small angle with the horizontal as they are in the child at birth (from 25° to 30°), the costal fibres, being arranged nearly in the axis of the rib, draw the viscera, which are within the concavity of the diaphragm, forwards against the anterior abdominal wall. In most mammals the horizontal (or in them vertical) position of the ribs is retained throughout life but in the course of growth the ribs of man become depressed from 10° to 20°, and come to occupy a position midway between the horizontal and vertical. The depression of the ribs is accompanied by a corresponding alteration in the direction of the costal fibres of the diaphragm. (Fig 6) These fibres then tend to push the viscera more downwards than forwards If the ribs be still further displaced, as they frequently are by the application of corsets or from disease, the action of the costal fibres of the diaphragm becomes still more vertical in the direction of their axis The more the fibres of the diaphragm tend to propel the viscera in a vertical direction the greater is the danger of visceral displacement.

The subcostal angle —At birth the subcostal angle, formed by the costal cartilages of the seventh and eighth ribs of one side with those of the other, measures about 90°, in the adult it becomes reduced to about 65° owing to the increased obliquity of the ribs In some cases of enteroptosis the subcostal angle measures 45° degrees or less, and in such cases the subject is usually female and under 45 years of age. On the other hand, enteroptosis in old people is accompanied by an opening out of the subcostal angle, in marked cases of displacement it measures from 90° to 95° It is very probable that the narrow angle of the younger cases becomes the wide angle in the older cases. The widening occurs and the displacement becomes more marked when, owing to the costal cartilages beginning to calcify, artificial supports of the body have to be undone or laid aside.

The development of the thoracic type of respiration.—The terms "thoracic" and "abdominal" certainly mislead many as to the true nature of the two types of respiration met with in human beings By "abdominal" is meant that type in which the pulmonary space is obtained mainly by an increase of the lower region of the thorax, by "thoracic" that in which it is gained mainly by an expansion of the upper region of the thorax. The abdominal is the mammalian type of respiration, and up to the seventh year, according to Dr Konrad Gregor[5] the human child retains this type. After the seventh year the muscles of the wall of the abdomen offer a greater resistance to an inspiratory descent of the viscera and the type of respiration becomes more thoracic. The alteration is more marked in girls than in boys, but in both sexes the types of respiration are mixed the thoracic preponderating in the female and the abdominal in the male.

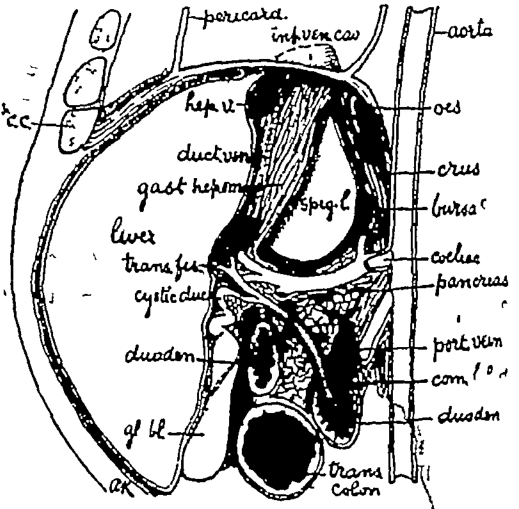
The visceral movements due to the action of the external intercostals and interchondrals —Were the diaphragm merely a fibrous, non muscular septum, the other muscles of inspiration, the external intercostals and interchondrals, by raising and enlarging the costal margin of the thorax would cause a movement of the abdominal viscera. The inspiratory movement of the costal margin besides raising the floor of the thorax, also increases the circumference of the diaphragm from one to four inches, according to the degree of inspiration The liver, stomach, spleen, and colon, in contact with the under surface of the diaphragm, undergo a corresponding change in shape and movement Thus, by their traction on the costal insertion of the diaphragm, the external intercostals assist that muscle in its inspiratory efforts

THE FIXATION AND MOVEMENTS OF THE ABDOMINAL VISCERA

Some years ago, when I began to pay special attention to the manner in which the viscera were retained in position, I undoubtedly attributed too much importance to the passive bonds which fix the viscera to the walls of the abdomen. In tracing the evolution of the upright posture through the various intermediate stages to be found in the living genera of primates I found that with each advance towards the orthograde posture the abdominal viscera became more extensively and more firmly fixed to the walls of the abdomen. The extensive fixation found adult man marks the culmination of the movement, in his embryonic and fœtal stages man repeats with ful accuracy the various conditions revealed by a study the primates Later I saw that, however interesting visceral bonds may be, they are of but minor importance the causation or prevention of enteroptosis in with the diaphragm. Having dealt with the fixation movements of the diaphragm, the manner in which abdominal organ is kept in position may now be described

Radix mesenterica —At only one small area of abdominal cavity are its contents immoveably fixed front of the twelfth dorsal and first lumbar verte between the origin of the crura of the diaphragm, the emerges from the dorsal mesentery of the thorax, cove with a strong fibrous coat, and gives off the two gr arterial trunks of the viscera—the cœliac axis and mesenteric artery (Fig 7) Here is the hilum of peritoneal cavity From the crura of the diaphragm sheath of the aorta strong fibrous and fibro muscular stream outwards on the arterial trunks of the liver, and intestine. Imbedded in the mass of fibrous each side of the origin of the arteries are the ganglia, the solar plexus streams out on the sheaths of the vessels Rich leashes of mesente phatics pass along the sheaths to reach the recep chyli between the aorta and right crus A speci muscular band (muscle of Treitz) leaves the lef often the right, to end in the duodeno-jejunal and to bind it to the fibrous mass In the fork b the cœliac axis and superior mesenteric artery is bound a segment of the body of the pancreas. Wha displacement may happen to the rest of the abd viscera the duodeno jejunal flexure and the part of pancreas just mentioned remain in position To the r the two arterial trunks and the strong fibrous mass d from the crura and aortic sheath the name of "radix me terica" is given Prolongations from it stream into gastro hepatic omentum (see Fig 7) to the hilum of kidneys, to the mesentery of the small gut, and to the of the œsophagus It is the centre round which respiratory movements of the abdominal organs take The radix mesenterica is not a human peculiarity, essential for the welfare of all animals that the blood, n and lymph systems of the abdominal viscera should b safeguarded. With the exception of the two parts mentioned, all the abdominal viscera are fixed to muscular walls of the abdomen and are subject to respiratory movements.

FIG 7



Vertical section of the abdomen of a child at birth to show the fixation of the abdominal viscera at the radix mesenterica

Fixation of the liver —The liver is fixed solely to diaphragm, but so strong and close is the bond between that its removal from the abdominal cavity is a difficulty Of the various structures which retain the liver closely pressed within the concavity of the diaphragm—peritoneal reflections, connective tissue adhesions, vascular bonds, and muscles of the wall of the abdomen—the last named are by far the most important. The visceral shelf on which the under surface of the liver rests, composed of the stomach, duodenum pancreas, colon, and right kidney, is maintained by the action of the abdominal muscles. The vena cava and hepatic veins, by their intimate fusion with the central tendon of the diaphragm on the one hand and the substance of the liver on the other, constitute a highly important bond. When one comes to deal with the other uniting structures of the liver, the connective tissue adhesions and peritoneal reflections, the ill-defined condition of their nature and nomenclature prevents an accurate description. I refer especially to the connective tissue which binds so firmly the posterior aspect of the right lobe of the liver to the arcuate fibres and right leaflet of the diaphragm and to the reflexion of peritoneum which surrounds the connective tissue bond (Fig 8). It represents the dorsal mesentery

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[5] Die Entwickelung der Athemmechanik im Kindesalter Anatomischer Anzeiger Band xxii, 1902 p 119

FIG 8.

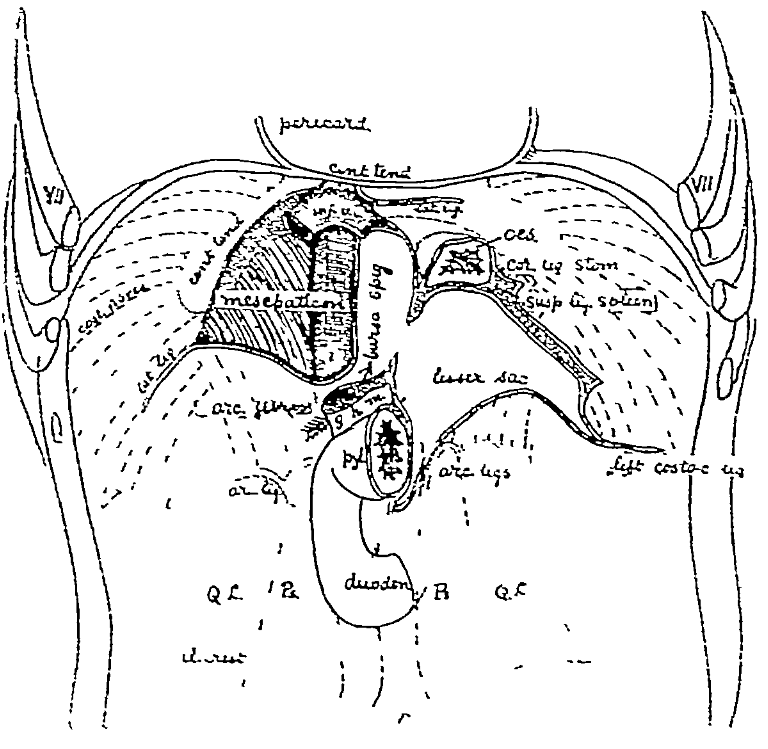

Diagram of the posterior wall of the abdomen, showing the attachments of the liver stomach, and spleen to the diaphragm. The arrow is placed in the foramen of Winslow

of the liver and therefore ought to be named the "mesepaticon."[*] It forms by far the chief passive bond of the liver The terms 'right lateral ligament" and left ateral ligament' should be reserved for the well marked membranous folds which stretch out to the right and left from the mesepaticon while the useless term 'coronary gament should be discarded. The suspensory ligament, he ventral segment, represents the ventral mesentery of the ver It is long and loose to permit the respiratory movements of that organ.

Bursa Spigelii or vestibule of the Lesser sac.—The diver culum of the lesser sac which separates the right crus of he diaphragm from the Spigelian lobe of the liver (see Fig 7) has scarcely received the attention it deserves. In his diverticulum or bursa the Spigelian lobe of the liver escends and ascends with each respiratory contraction of he crus. A better view of the bursa Spigelii is obtained hen the liver is removed (see Fig 8) when it is seen to be really the vestibule of the lesser sac. Although usually described as part of the lesser sac it is quite different in function and in development and more ancient in origin than the real sac of the omentum which lies behind the stomach and within the great omentum and opens into the bursa Spigelii in front of the cœliac axis. In all air breathing vertebrates the bursa Spigelii is developed as a diverticulum of the peritoneal cavity and growing into the dorsal mesentery separates the attachments of the liver from that of the stomach It is developed to allow the liver to accommodate itself to the filling and emptying of the lungs.

Respiratory movements of the liver.—If one accepts the conventional description of the diaphragm as a pair of ascending and descending muscular domes, then the viscera within each dome, the liver, the stomach, and the spleen must descend as visceral hammers amongst the viscera below them with each inspiration. Such a view holds true only for subjects in whom the thorax has been disturbed by disease or clothing and the normal action of the diaphragmatic fasciculi upset. To understand the normal respiratory movements of the liver it is necessary to remember (1) that in inspiration the bases of the lungs descend forwards, downwards, and inwards in the direction of the radix mesenterica and (2) that the liver lying in the floor of the right pleural cavity, has to be moved in the same direction to allow the expansion of the right lung to take place. The extent of the downward movement depends on the resistance of the belly wall muscles, in a marked thoracic type of respiration there may be no descent, but taking a type in which the thoracic and abdominal types are nearly equally blended the respiratory movements of the liver resolve themselves into the three rotations shown in Figs. 9 10, and 11.

The three movements.—1. The rotatory movement round a median antero-posterior axis shown in Fig 9 is well known. The lateral parts of the diaphragm being more muscular and more moveable than the central part the portion of the liver within the right dome descends downwards and inwards while the part beneath the central tendon remains nearly stationary as far as a movement in a vertical plane is concerned. (See Fig 10) 2. The rotation shown in Fig 10 is round a vertical median axis and is by far the most important of the three movements The long loose, suspensory ligament freely allows this movement. The forward swing of the right lobe of the liver in the third movement is produced by two sets of fibres (1) the costal fibres from the eighth ninth tenth, and eleventh ribs which, sweeping round the liver, are finally bound to it by the mesepaticon, and (2) the external intercostals by raising the abdominal ends of the lower six ribs upwards, outwards and forwards, assist the costal fibres in producing a forward movement of the liver 3. The third movement, represented in Fig 11, takes place round a horizontal axis drawn from side to side of the body While the posterior or dorsal part of the liver under the traction of the right arcuate and crural fibres, passes downwards and inwards and the Spigelian lobe slides down on the right crus and forwards on the pancreatic shelf, the anterior or subcostal part of the liver ascends with the sternum and ribs. The rotation of the liver occurs simultaneously with the tilt and swing of the cardiac platform described in my first lecture.

The respiratory movements of the liver are of more than theoretical import they explain the manner in which the organ is suspended and fixed, they take place without disturbing the function of the viscus, indeed their occurrence is probably a necessary condition of healthy hepatic action. Unfortunately the normal movements are liable to be disturbed from many causes. Relaxation or weakening of the wall of the belly may withdraw support from the visceral of descent, a part of the fundus is drawn within the dorsal mesentery of the thorax. Such cases have been recorded by Dr Rigby and myself[7], others have been described as diverticula of the œsophagus. Dr Andrews has also observed this displacement in cases of enteroptosis

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[*] I use the term on the authority of Slade and White.

Diverticula of the duodenum.—Up to the end of the second month of development the duodenal loop, as is the case in the lower forms of primates throughout life, is freely suspended by a mesentery which is attached to the spine at the radix mesenterica. The head of the pancreas lies within its mesentery, the gastro hepatic omentum, which fixes the right aspect of the duodenal mesentery to the liver, contains the common bile-duct and part of the head of the pancreas After the second month of development the right aspect of the duodenum, with its mesentery, the head of the pancreas, and the lower part of the gastro-hepatic omentum, become gradually bound to the vena cava and hilum of the right kidney by loose connective tissue. The bond is never a firm one With each respiratory movement of the liver the duodenum and head of the pancreas yield to the hepatic pressure unless held in position by a well established resistance of the abdominal wall. In ptosis of the liver the head of the pancreas may lie just above the brim of the pelvis and in such cases a well marked diverticulum will be found in the inner wall of the duodenum just above the entrance of the common bile-duct (see Fig 13) The bile-duct is stoutly coated and inelastic, its upper end is fixed by the gastro-hepatic omentum to the diaphragm, its lower end perforates very obliquely the weak, yielding inner wall of the duodenum When the pressure of the falling liver causes the duodenum and pancreas to descend, thus throwing a strain on the common bile-duct, the weakest part yields and that is the area of the inner wall of the duodenum to which the duct is bound. The inner wall of the duodenum is thus pulled upwards into a tent shaped diverticulum of the kind to which Dr H D Rolleston has called attention

The Lettsomian Lectures

ON

THE CONDITIONS WHICH MODIFY THE CHARACTERS OF INFLAMMATIONS OF THE SKIN, AND THEIR INFLUENCE ON TREATMENT

Delivered before the Medical Society of London

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F R C P LOND,

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LECTURE II[1]

Delivered on March 2nd

MR PRESIDENT AND FELLOWS,—In my previous lecture I discussed the modifying influences of different local conditions, chiefly microbic either singly or in combination on the production of inflammations of the skin and this, for the sake of clearness, was done from the local standpoint only quite irrespectively of the individual in whom these processes were going on

But it is not enough for the microbe to meet the man, the result depends quite as much on the kind of man as on the kind of microbe It is a familiar fact that for the microbe to flourish or even to get such a hold as will enable it to breed at all, there must be favourable conditions of the soil which we can sometimes recognise while in other cases they escape us Thus persons who are exposed to the exanthemata frequently escape the disease at one time, even when the exposure has been frequent or prolonged while at another very slight exposure may determine a severe attack. For example, a lady nursed her daughter through scarlet fever in October and went away with her to the seaside during convalescence. On her return in December the mother put on a dress which she had worn whilst nursing the girl in the early stage of the disease and contracted scarlet fever in a typical, but not severe, form Here there was no lowered vitality to make her vulnerable and we can only state the fact without explanation that she was susceptible at one time and not at the other Very similar coincidences occur in the microbic skin diseases that we have been discussing, but at the same time there are some factors traceable in the individual which are worthy of attention. Even in such a simple matter as age there are often striking differences, thus, the microbes staphylococcus aureus and streptococcus pyogenes, which may be considered together for clinical purposes, easily infect children and suppurations therefore are often induced in them, which may be very free and tend to get deep and to infect the general system if not checked in an early stage. In a newly born infant, if the surface layers only are invaded, the lesion is generally a bulla, while in older children impetigo contagiosa occurs in vesicular or pustular lesions, adults either resist the infection altogether or the eruption is often only an excoriation in appearance and I cannot recall in the whole of my experience a typical impetigo contagiosa in a very old person. Ecthymatous sores may, however, occur in severely itching diseases such as pediculosis corporis, but even then they are seldom abundant though sometimes deep and severe As regards boils and carbuncles old people cannot claim exemption, and carbuncles are more likely to spread in them to a dangerous extent. When suppuration does occur in old people, the step from suppuration to gangrene may be a short one, fortunately, therefore most of the forms of suppurative dermatitis in the list given in my first lecture are uncommon with them Gangrene without previous suppuration is also apt to occur in the elderly, of this herpes zoster, especially of the ophthalmic division of the fifth nerve, affords frequent examples

At the other end of the chain infants and children under three years of age are particularly liable to multiple patches of gangrene which may supervene upon any pustular eruption of which the most common is varicella, but I have also seen it develop on an apparently harmless miliaria. This liability appears to cease after the child is three years old It is not known for certain what bacillus produces this form of gangrene, but the bacillus pyocyaneus appears to be the most probable one. Local bactericide injections check its extension and should be employed at an early stage or life will be endangered Of the other deeper lesions, boils occur at any age but carbuncles are rare in the young, fairly common in middle age, and more common still in old age. As is well known boils and carbuncles frequently occur where other depressing influences are present, such as diabetes mellitus or sewer gas poisoning, while in perhaps the majority there is no special departure from health unless from their size or number their own toxins excite septic febrile disturbance. Glycosuria is also a strongly predisposing influence to gangrene, both of small superficial areas and of whole limbs. Once successfully implanted the evolution of boils is not stopped when the malign toxic influences are removed though it is not infrequent to find them in abeyance even for months and then to recommence with another succession. The only explanation which I can offer of this is the latency of germs—a frequent phenomenon in microbic diseases and a source of perplexity and disappointment to both medical attendant and patient, too often it makes the latter unjustly dissatisfied with his medical adviser Some of the recrudescences are probably due to the revivifying influence of toxin absorption from the intestine or other viscera, but not all of them, and it is often not possible to do more than to make a probable guess. At the same time we should not accept too readily these theoretical explanations and should investigate carefully all the bearings of the case. Quite recently I saw a patient who had boils in the winter but not in the summer On investigation I found that he took much more exercise and lived out of town in the summer while in winter he had to keep very closely to his profession. Further inquiry showed that there was a strong probability of sewer gas poisoning in his private house which he occupied very little in the summer, and the real factor therefore was the change of residence

Seborrhœic inflammations are less frequent in advanced life and cease altogether in old people. Old age, on the other hand is a strong predisposing condition for eczema especially in its drier forms. What appears at first to be a very trivial inflammation often spreads very rapidly over a senile skin. This is partly due to the degeneration of the senile skin with its dryness, its feeble innervation, and its defective nutrition generally, and I am strongly disposed to think that secondary microbic invasion plays an important part in these cases, though its most striking feature of extreme pruritus out of proportion to the apparent amount of dermatitis is due to the degenerated innervation. Still more important than the senile skin is the senile condition of the viscera with the consequent deficient kidney and liver action and faulty elimination of waste products as well as the imperfect assimilation of food. It is these factors which are, in my opinion, chiefly responsible for the meagre success with which we often have to be content in very old people. Nevertheless we need not fold our hands over our patient, for treatment often meets with an unexpectedly good effect when we scarcely anticipate it. The indication is to wash out the kidneys and alimentary canal with weak alkaline waters, such as Contrexéville or simple hot water, preferably distilled, to keep the lower bowel empty, and, in short, to get as much out of the worn-out organs as medical resources permit.

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[7] Proceedings of the Anatomical Society of Great Britain and Ireland, November 1901

[1] Lecture I was delivered on Feb 16th and was published in THE LANCET of Feb 21st 1903 p 491 and Lecture III will be delivered on March 16th

There are other tissue proclivities, both congenital and acquired. The congenitally dry skin is one of these. When the patient has pronounced ichthyosis it is readily enough recognised but when it is so slight as to be little more than dryness and perhaps slight roughness in parts it is easily overlooked, as the patient having always had it regards it as a normal condition and never thinks of calling attention to it. The clue to these mild forms is that the eczema of which he complains is always worse in the cold weather. The first touch of frost often excites it and the skin has a special tendency to chap and to crack, there is pityriasis of the scalp and the hair is thin, dry, and lustreless and the other evidences of a dry skin are readily found if looked for. It suggests a treatment in which the local applications should be of an oily or greasy character, or at least if lotions are applied they should contain a liberal proportion of glycerine. The administration of thyroid extract is sometimes advantageous, for though not producing a definite cure of the ichthyotic condition, it ameliorates it for the time being, and thus materially facilitates the cure of the eczema. The opposite condition of hyperidrosis is also a predisposing condition to certain forms of dermatitis. On the palms and soles it is a frequent factor of a form of eczema which leads to great hypertrophy of the horny layers and then, of course, the hyperidrosis ceases. Several papular and papulo-vesicular eruptions may also be excited when an excessive perspiration is checked by cold, such as miliaria of infants and adults and a papulo-squamous eruption generally considered to be a form of eczema[2] but really quite distinct. Acute miliary lichen planus may also supervene under similar conditions.

Another congenital condition though less easily demonstrable, is a liability to eczema on small provocation, either from without or within, possessed by many patients. Although eczema is not actually hereditary it is highly probable that a similarity of skin which will render the patient vulnerable is transmitted. The old French writers expressed this by saying that the patient had a dartrous diathesis but as that term assumed a great deal while it explained nothing it has justly fallen into disuse. At the same time, like many another old theory, it expressed a certain amount of truth which it behoves us to recognise. In practice all we can do is to use such prophylactic measures as lie in our power in the direction of the removal of sources of irritation either external or internal, and in young people to advise the parents as to their future career the life of a sailor for instance, being distinctly contra-indicated. When the disease is actually present the treatment would not be modified by our knowledge of this hereditary predisposition, but of course it would affect our prognosis of a definite cure. In psoriasis the hereditary element is more pronounced and if one parent is liable to psoriasis should there be several children one at least is almost sure to get it, but it is rare for the majority to have it, though in one family in my experience out of seven members two sisters and three brothers were victims of the disease. I should define the heredity as a tissue proclivity to grow the special microbe which in my opinion produces the eruption.

What we have to call "idiosyncrasy" whether congenital or acquired, exercises an important influence on the character of the eruption and its mode of evolution and in recurring eruptions, the constant character of this influence is very striking. Thus, erythema multiforme, which, as its name signifies, exhibits great diversity in the clinical features of the eruption in different persons, in its recurrences in any one individual shows remarkable constancy. If the first attack be nodular, papular or circinate, or whatever shape it may take, subsequent attacks will have the same characteristics. The case of a man with an unusual form of erythema iris illustrates this well. The disease is much less frequently seen on the palms than on the backs of the hands and the bullous forms are rare, yet in this man, in three successive annual attacks the disease always began on the palms and always took a bullous form.[3] The same fact is illustrated in the plate of psoriasis, in this disease the face and the palms are comparatively rarely attacked, but in one patient the face and in the other the palms and soles were invariably the parts first invaded. Again, a psoriatic or eczematous patient in whom pityriasis rubra has once supervened is extremely likely to have this rather rare *disease recur whenever the original eruption attacks him* afresh and here the knowledge of this can be turned to practical account by at once vigorously treating the primary affection and thus averting a very dangerous complication.

TOXIN ABSORPTION

A very powerful factor, in my opinion, in the production of eruptions is the formation in the viscera and absorption from them of toxins most frequently of intestinal origin. It is true that we can rarely in any particular case produce conclusive evidence that this absorption has caused the disease, but from time to time cases arise in which the probability is very strong that such is the case and there is an accumulation of facts which point in this direction. Granting that intestinal toxins produce eruptions, what forms do they take? The most frequent are varieties of erythema (morbilliform, scarlatiniform, or patchy), urticaria, eczema, and some forms of pemphigus. Here is an example. A boy, 10 years of age, was taken ill with febrile symptoms, some suffusion of the eyes, and a little coryza followed by a copious eruption of urticarial wheals in corymbose clusters scattered over the *trunk and to a less extent on the limbs, on the next day* this disappeared and an erythematous eruption of distinctly morbilliform character came out all over the body and the question of measles arose. I decided against this from the mode of development and from the absence of corroborative evidence (Koplik's spots were then not known), and the bowels being confined salines and enemata were given and large and offensive scybala were evacuated. The rash rapidly subsided and the boy quickly returned to health. Other children in the house remained well. The following case of dermatitis herpetiformis was probably of similar origin. A patient, aged 78 years, in good health for his age, had an attack of gastric disturbance with diarrhœa, of which he did not know the cause. A few days later he began to have groups of flat erythematous papules on the forearms and abdomen, on which vesicles and bullæ developed a few days later and a typical dermatitis herpetiformis was produced. The almost daily evolution of fresh eruptive elements led to exhaustion and death in seven weeks from the onset.

Sudden chills often appear to be, and I believe are, the exciting cause of eruptions of various kinds, erythematous, urticarial eczematous, pityriasis rubra and others the variety depending more upon the patient than upon the cause. They have a widespread usually symmetrical distribution either from the onset or they soon acquire it. In some cases the patient is quite well before the chill, but more frequently there is a predisposing cause already present. Here is an instance. A lady 26 years of age, seven months pregnant, rode outside an omnibus. The same night she had shiverings followed the next day by a scarlatiniform erythematous eruption on the upper part of the chest, the back of the wrists, the trunk, and the inner side of the thighs. It spread up to the face and down to the legs and was most marked at the knees, and in 48 hours from the onset it was universal. The temperature was at first 99·4° F., but it reached 101·4° with congested and swollen fauces and enlarged glands behind the sterno-mastoid. Scarlet fever was diagnosed by a physician to a fever hospital but she had not the strawberry tongue, she did not look ill, and she was quite lively, and I came to the conclusion that it was not scarlet fever—not from the morphology of the eruption which was typically scarlatinal, but from the mode of development and the fact of her general condition being good instead of her being profoundly ill, as she would have been in scarlet fever with that amount and intensity of eruption Further I had the advantage of knowing that she had had two previous attacks in connexion with pregnancy, in one of which I saw her just after her confinement, when the condition of the lochia left little doubt that the rash was of septic origin , also the distribution and development were the same as in the third attack. Her rapid recovery confirmed this opinion. In another case a policeman contracted a severe chill , this was followed by an erythematous eruption on the chest which developed into a universal pityriasis rubra. It had a prolonged course of several months but the patient finally recovered It is evident, therefore, that the same cause will produce totally different eruptions in different persons and further examples of yet other diseases in illustration might be given, but the above are sufficient for our purpose. For a time there was a tendency to scoff at chills as an exciting cause of eruption and many other diseases—pneumonia, for instance—because it was a bacterial disease, but although our predecessors had not the advantage which the knowledge of modern pathology gives they were very close observers of facts and these remain true though we give them a different explanation In my opinion, the most plausible explanation is that when the surface of the body is chilled there is a sudden and extensive contraction of the blood vessels of the skin, followed by wide dilatation, and during the latter there is a great withdrawal of blood often laden with toxin products from the intestine most frequently, but also from other viscera such as the post partum uterus, the liver in certain states, &c Many of these eruptions from chills being, therefore, really immediately due to toxin absorption the moral is to remove as far as possible the conditions which favour the production of toxins, such as constipation and all possible sources of septicism.

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[2] Author's Atl there described as of seborrhœic origin
but further exper to its being a sweat eruption

[3] Plate III. Fig 1, of the author's Atlas shows one such attack of bullous erythema iris. Plate xxviii., Fig. 1, shows a psoriasis attacking the face in a diffuse form and Figs. 2 and 3 the primary involvement of the palm and sole.

In offering this explanation I do not wish to underrate the part played by the nervous system in such cases and, indeed, it is probable that in many diseases—urticaria, for example—the toxins act through the nervous system I can adduce an example of even more direct action An elderly lady, slightly gouty and distinctly asthmatic suffered from eczema which began in a slightly exuding patch on the right leg and was followed by the development of a good number of patches on the limbs and trunk consisting of roundish groups of papules and papulo vesicles which were somewhat rebellious to treatment but at last yielded and only the original patch remained owing to an unsuitable application having revived its activity Whilst in this condition she fell downstairs and was of course, much shaken , beyond a sprained ankle she was not otherwise injured, but within three days a large number of lesions of a totally different character appeared on the trunk and limbs, especially inflamed under the breasts and groins. This new eruption began as papules of the size of hemp seed with scaly apex which enlarged peripherally into scaly discs of the size of a shilling with a central adherent crust, but there was no discharge unless the crust was rudely removed Here, then, a nerve shock made a complete change in the eruption—though even in this case a toxin absorption from the intestine could be invoked with a fair show of probability , and in the following somewhat similar case intestinal disorder was actually produced by a fall. A carman was thrown from his seat to the ground, a distance of about 12 feet. He was, of course, much shaken but no definite lesion was produced , two days later he vomited repeatedly without apparent cause and was very constipated, which was not the case before the accident. Within a week of the fall he had an eczematous outbreak on the scrotum, penis, umbilicus, and forearms, quite symmetrical, in some parts exuding, in others dry , on the thighs there were patches of erythema of the size of the hand, well defined and not of the eczematous character of the rest of the eruption He got well rapidly with saline aperients and a calamine lotion

Such cases as these illustrate some of the great difficulties which we encounter in endeavouring to unravel the etiology of so many inflammatory eruptions The pathogeny of an eruption is not necessarily the same in different individuals and the problem is still more perplexing, even in the same individual, in successive attacks, while the eruption has the same mode of onset and character the circumstances which excited it may be quite different. Take such a disease as psoriasis, it is seen most frequently in early life , 72 per cent of the cases occur for the first time under 30 years of age, and the numbers below 12 years, between 12 and 20 and between 20 and 30 years, are practically equal—viz., about 24 per cent. At these ages the disease generally attacks apparently healthy persons and is most likely primarily microbic, at first from without and afterwards from within, and the general health is seldom a factor When the disease occurs for the first time between the ages of 30 and 50 years—and not more than 5 per cent. begin after that age—defective assimilation is frequently a determining cause and may lead up to gouty manifestations. A still more important factor is rheumatoid arthritis, by many considered to be of septic origin, and this disease strongly predisposes to psoriasis Thus, then, in the early cases the microbe was everything and produced the disease when the powers of resistance of the organism were presumably at their highest , while in the cases of late commencement either the microbe could not obtain entrance or it was powerless until the soil was modified by diseased conditions of the body itself You must bear in mind that in all the above cases I am referring exclusively to the primary attack. Recurrences may come on at any age and it is seldom possible to account for any one of them.

The Nervous System

The influence of the nervous system on diseases of the skin is important, but for the most part indirect, with the sole exception of herpes zoster Given any particular nerve lesion you can never say that you will certainly get a corresponding skin disease. In herpes zoster, as is well known, inflammation of the posterior ganglion through which the nerves pass which supply the skin area affected is nearly always present, but peripheral nerve irritation or inflammation of the trunk of a nerve may also produce it, but it is probable that even in these cases the ganglion is secondarily affected. Quite recently I saw a bricklayer, aged 70 years, who during cold weather had leaned with his left hand on some brickwork to steady himself while working with the other hand , the left hand became numbed from cold, and a day or two later a violent attack of herpes zoster appeared on the palm of that hand as well as on the back and extended up the forearm and half way up the arm, with gangrenous ulceration in some parts Herpes has also been found in connexion with diseases of the posterior columns of the cord and in the posterior nerve roots above the ganglion. In short, while no doubt inflammation of the posterior ganglion is by far the most common cause of zoster, it may arise from any part of the nerve chain from the posterior column of the cord to the nerve periphery

Apart from shingles although numerous cases of lesions of the nervous system associated with skin lesions are on record, yet the results are so diverse, even when the nerve lesion is apparently identical, that the nervous influence must be indirect and require some other exciting factor Moreover, in by far the majority of cases of lesions of the nervous system there is no skin eruption at all. Nevertheless there must be innervation present or no inflammation of the skin will be produced This is well illustrated in the following cases of small pox. In a case recorded by Bouilly and Matthieu intercurrent small pox occurred in a patient after section of the sciatic nerve and the non innervated limb remained free from eruption. On the other hand, Chevallier saw a case of small pox in a hemiplegic patient in whom the eruption was confluent and hæmorrhagic on the incompletely paralysed side and discrete and normal on the healthy side. In a hemiplegic observed by Jamin de St. Just scarlet fever supervened , for two days the eruption was limited to the healthy side and when it did attack the paralysed side it was pale and fugacious A few years ago my colleague, Mr Christopher Heath, excised the right elbow of a young man , when he was nearly convalescent he went home to visit some friends and shortly afterwards a vesicular eruption developed on the hand and forearm of the limb operated on followed in a day or two by a more generalised eruption, and when I was asked to see him I found that he had varicella and that the eruption was most abundant on the hand and forearm of the side operated on The explanation of these apparently contradictory cases is not so difficult as it appears at first sight. In the first case there was no innervation and therefore no eruption , in the case of scarlet fever, with slight and fugacious eruption, there was a little vaso-motor influence left, but no cerebral , in the hemiplegic with small pox cerebral influence was abolished while the sympathetic was for the most part undamaged and unrestrained and the eruption was therefore confluent, in hæmorrhagic small pox both cerebral and sympathetic influences are paralysed by the poison and there is no eruption but only extravasation from the walls of the non-innervated vessels giving way In the varicella case the *nervous supply was slightly damaged but not destroyed and* the eruption, instead of developing in the usual positions, came first at the place of the least resistance. The outcome of this, therefore, is that the cerebral influence is a controlling one over the vaso motor centres and that the functional preservation of the latter are essential factors in the production of inflammation of the skin.

In lesions of the spinal cord bullous and vesicular eruptions are the most frequent as a sequence of inflammatory lesions of the posterior column. Less often ulcers and gangrene and vaso-motor troubles of an erythematous or urticarial character supervene, but there is no certainty about it, and even in locomotor ataxy eruptions are much more frequently absent than present Bullous eruptions may arise where there is damaged innervation in two ways, either from inflammation of any part of the sensory nerve path from the centre to the periphery or from the non protection from injuries of the part in which the innervation has been cut off. This is well seen in leprosy, in the early stage of the nerve form, when there is inflammation of the nerve set up by the lepra bacilli, bullæ often form on the fingers and toes in the area of distribution of the neuritis associated with shooting pains. They are spontaneous, small, and numerous, and the surface is painful. In the late stage of the same disease, when the nerve is utterly destroyed by the pressure of lepra products on the nerve fibres, the bullæ are large and solitary and appear on the non innervated area after slight injury or exposure to cold or heat of which the patient is usually unconscious, as the part is anæsthetic. When the nerve interference is partial from an injury ulceration follows the bullæ and sometimes there is suppuration like a whitlow at the commencement.

When we consider the influence of the *nervous system* on *the distribution of eruptions* we find it rises to the highest importance. Examples of many inflammatory eruptions such as zoster, eczema, and lichen planus occur parallel to the axis of the limb with a more or less linear arrangement, but it is more frequent in some congenital affections such as ichthyosis hystrix, including the linear verrucose nævi, glossy skin, &c. In a case under the care of Brouardel a man, 60 years of age, had a contusion of the shoulder followed by shooting pains down the arm and in 40 hours an eczema developed limited to the radial nerve distribution and became rapidly confluent, but got well in a fortnight.

Of far greater practical importance is the influence of the nervous system in the distribution of eruptions in the vaso-motor areas. Such is that of the bust and arm distribution which is most clearly demonstrated in xerodermia pigmentosa in which it is very constant, rarely extending lower than the level of the upper portion of the sternum in front and of the nucha behind, on the upper limbs from the middle of the back of the arm behind, sloping downwards and forwards almost to the flexure of the elbow in front while it covers the whole forearm and the back of the hand. This distribution is often seen in acute eczemas of the upper part of the body and for some time may be confined within these limits, though it will sooner or later spread beyond them if it is not efficiently treated. The recognition of this arrangement may often be turned to practical account in cases, not infrequent, in which the inflammation recurs again and again without apparent cause. The centre for this distribution can be got at through the cervical enlargement and I have found that counter-irritation over it—preferably by a piece of mustard leaf though other counter irritants will do—has a marked controlling influence, if applied early in sometimes preventing, and generally diminishing, the intensity of the recurrence of the accompanying pruritus. The latter symptom, which often rises to its highest intensity, and is quite maddening sometimes in eczema of the scrotum and neighbourhood, is often conspicuously relieved by similar counter-irritation over the lumbar enlargement which has a similar controlling influence over *inflammations of the lower* extremities as the cervical enlargement has over those of the upper In using this method of treatment the best results are obtained when it is used just before or at the very commencement of a recurrence. It should not be used in the declining stage. A smaller area but one affected by several diseases is the centre of each cheek, it is frequently the first affected in lupus erythematosus together, sooner or later, with the bridge of the nose, in acne rosacea, together with the centre of the face—viz., the forehead, nose, and chin, in a few cases eczema also is limited to this region, it can be influenced by counter-irritation over the mastoid on each side

PREGNANCY

Pregnancy is responsible for a few eruptions, but the principal and most distinctive one is the so-called "herpes gestationis" which is now acknowledged to be a dermatitis herpetiformis with a special etiology as precisely similar eruptions may occur both in single women and in males. Its general behaviour in relation to pregnancy is interesting *Once it has occurred in relation to this state it is almost sure* to recur in every succeeding pregnancy One of my patients had seven pregnancies in 11 years and it attacked her at each gestation. It tends to begin earlier and earlier in the pregnancy, until sometimes it is the first intimation to the patient of her condition With exacerbations and remissions it then continues throughout pregnancy and shortly after parturition an attack of explosive violence occurs and then the attacks diminish in severity until they cease altogether in from three to six weeks. Of course, they do not all run this regular course, some begin in the same month of each pregnancy and may stop before parturition and may recur after it, and some begin just after pregnancy They may also last for a very long time after parturition or may even become chronic or recur without a fresh pregnancy In one of my cases at the fourth attack the patient was found not to be pregnant but to have cancer of the cervix uteri. The same kind of eruption has even been known to begin independently of pregnancy, to disappear when this occurred *and to recur when the* menses appeared again, but of course this could not be called a herpes gestationis

THE INFLUENCE OF SEASONS.

The influence of seasons on eruptions has long been recognised in certain forms of disease, such as erythema multiforme and psoriasis. Both of these diseases show a decided tendency to recur in the spring, but unfortunately they do not restrict their activity to this season and many patients show special idiosyncrasy as to the *time for recurrence.* Thus in some, the onset of cold weather often excites an outbreak, but whatever the period of eruption may be that time is adhered to for the most part in future attacks The urticaria of infants also often dies down in the winter *and revives in the* summer and true prurigo also has a similar tendency though in some cases in this disease the season is reversed Many other examples *might* be given, but there is a more interesting class which belongs especially to summer or winter, though in certain circumstances minor attacks may be produced in what may be called their off season

Hutchinson was the first to call attention to one variety of these cases and Bazin to another These two varieties are pretty definite in their characters while in many members of the group the characters of the eruption are not so defined and their diagnosis rests rather on their general behaviour than on their morphology Hutchinson called his first cases "summer prurigo and there is a type which this *title fits fairly well.* It is distinguished by commencing in childhood, seldom before eight years of age, and attacks the exposed parts—viz., the face, back *of the hands*, and wrists—the face being the part principally involved, and it is only in exceptional cases that these limits are exceeded. The primary lesion is a simple one, a flatly convex erythematous papule which soon acquires a central scab from scratching or rubbing for the pruritus is most intense at the onset and height of the attack However abundant the eruption, the lesions nearly always remain discrete and this is an important diagnostic point. Unless there are secondary pus inoculation sores, the eruption is particularly dry and rough and suggests the use of ointments, but these in my experience invariably increase the irritation and the *patients* tell you *flatly that* they cannot use them Astringent drying lotions especially the organic silver salts, give the most relief and enable the patient in a *great measure* to abstain from scratching and then improvement occurs unless a fresh outbreak is produced by a direct exposure to the sun or to a bitterly cold wind. A precisely similar eruption may occur in winter in some patients, in these cases the cold winds being the greatest provocative and the sun's rays having less irritant action. The winter cases are much less common than the summer ones, but both the summer and winter cases continue to be liable to recurrences according to their special peculiarities year after year or several times a year until the patients reach adult age when the liability gradually ceases and it seldom persists after the age of 25 years The skin from the repeated inflammation is left rather thickened, pallid, and sometimes superficially scarred from the repeated excoriations.

Other forms of this summer eruption are papulo-erythematous, papulo-vesicular, and vesiculo-pustular, but the most common form consists of pale red conical papules with or without a little clear fluid at the apex, which dries up and shells off, leaving minute shallow scars which in the course of time impart a mottled look to the whole face The distribution, though always predominating on the exposed parts, is less limited than the summer prurigo type This does not exhaust the varieties in form of these eruptions, but the general behaviour being the same in all enables them to be recognised in spite of their different morphology

The summer disease first described by Bazin is known by the name of hydroa vacciniformis seu æstivalis It is fortunately rare, as it produces great and permanent disfigurement and even mutilation of the face and ears, so that in the final cicatricial stage the patient looks as if he had had a severe lupus, as the nostrils and ears are partially destroyed, there may also be extensive scarring of other parts of the face This disease generally begins in the first three years of life, and nearly all its subjects have their worst attacks almost exclusively in the summer from the direct effect of the sun, but artificial heat and cold winds will sometimes excite it, the eruption breaking out a few hours after exposure and recurring whenever the patient is subjected to the excitant from spring to autumn while he is comparatively free from October to February The attacks become milder at puberty and generally cease by the time that the patient has grown up The majority of patients are boys, but girls sometimes suffer from this complaint. The lesions which characterise this disease are vesicles of the size of hemp-seed on a red base which umbilicate and become pustular like small pox or spread peripherally like a vaccine pustule and finally dry into a crust which falls off in time and leaves a pitted scar This was the type that Bazin described as hydroa vacciniformis, but these vesicles may crowd together and coalesce into flattish bullæ with a red areola, the fluid portion drying up from the centre to the periphery and forming a superficial or thick scab, in the latter case producing a deep scar, the whole process lasting two or three weeks. The chief seats of the disease are the face, ears, neck, and hands, but the unexposed parts of the limbs may be affected while the trunk is rarely involved.

Unfortunately, as all these recurring eruptions are excited by atmospheric agents, drugs, either internally or externally, have only a palliative influence on each attack of the eruption All our efforts must therefore be directed to induce the patient not to expose himself to the sun and wind more than can possibly be helped The whole class are angio neuroses with a congenital vulnerability of the skin something like that of epidermolysis bullosa, but that requires slight injury such as blows or friction to bring up the bulla

INGESTA.

With the exception of certain drugs and alcohol few ingesta affect inflammatory eruptions directly Alcohol dilates the cutaneous capillaries and so increases the congestion and in alcoholics who are also the subjects of psoriasis the disease is often recognisably modified, large livid red patches are produced in which the scales form too rapidly to remain adherent into crusts, though blood stained inflammatory crusts are sometimes produced by scratching and with the other characters make a distinctive picture indicative of the patient's habits All forms of dermatitis, especially as regards itching, are no doubt aggravated by anything more than a very moderate use of alcohol in its simplest forms and some patients cannot take it at all, but there is nothing in the aspect of the skin disease alone which shows that the patient exceeds his limit whatever that may happen to be. The effect of wines, beyond what is due to the quantity of alcohol they may contain, is only indirect. In many patients, especially those with a gouty tendency, disorders of the liver and alimentary canal are produced within a few days of taking them with a constancy which leaves no doubt of their being in the relation of cause and effect and they may then produce an aggravation of any eruption to which the patient may be subject.

DRUG ERUPTIONS.

The subject of drug eruptions is too large to enter into in any detail. Although there are a large number of medicaments which are capable of exciting eruptions under certain conditions or in certain persons yet in practice untoward results of this kind are rather rare With the exception of those produced by bromides or iodides none of these eruptions are distinctive enough to indicate the drug which has produced them, and it is only by the knowledge that the patient has had a particular drug followed by a rash that the cause and effect can be connected. Of these non-distinctive eruptions, various forms of erythema, scarlatiniform, morbilliform, or patchy, are the most frequent, but urticaria and purpura are fairly common and next come vesicular, bullous, and pustular rashes. On all these I need not dwell, the mere enumeration of the drugs which may possibly produce them is too like a catalogue to be interesting or instructive.

With regard to the bromide and iodide eruptions the matter is on a different footing Although sometimes like each other the agminated forms are quite distinct from all other forms of eruption and a positive diagnosis can generally be made not only when there is no history of these drugs, but even when the history appears to negative such a supposition. Certain general statements may be made as to the circumstances under which they are liable to occur It is seldom a question of dose, small doses frequently produce an eruption while large ones may be taken with impunity I know of a lady who took, not by my advice, 80 grains of iodide of potassium three times a day for nearly a year without apparent injury, while the eruption shown in the plate[3] came out after a few five-grain doses. Nevertheless when the system is saturated with the drug, as happens sometimes with bromides with chronic epileptics, a violent eruption sometimes occurs without any warning, especially if there is any check to its rapid elimination. This last is the true cause of nearly all cases in adults, and if a pronounced bromide or iodide eruption occurs after moderate doses of either of these drugs the urine should be tested and the heart examined, for it, or the kidney, or both, are almost certainly at fault. In the case just alluded to, with what looks like a bullous iodide eruption the patient had pronounced albuminuria from the smooth white kidney, so also had the man illustrated by this photograph in whom the diagnosis was made in spite of a denial that iodide had been given—the source of fallacy being that the man had taken a quack blood purifier well known to contain iodide of potassium In another case where I was asked for a diagnosis the patient had been sent into a small pox hospital and advanced mitral disease was present and was the determining factor of the eruption A similar case has been recently recorded in one of the medical journals. Infants are especially liable to the eruptions from quite small doses which are comparatively common since bromides have taken the place of the gum lancet, but even before the teething period it may occur through the maternal milk when the mother is taking the drug A point which throws one off the scent sometimes is the fact that the outbreak often occurs a week or two after the drug has been stopped, the explanation being that both bromides and iodides are diuretics, and when this action ceases soon after the drug has been stopped there may be still enough circulating in the cutaneous vessels to set up inflammation. Another misleading fact is that these drugs have a special predilection for scar tissue, and I have seen several cases in which the vaccination scars have been the first point of attack and have led to the idea that the vaccination was at fault.

I will not go into detailed descriptions of these eruptions —they are to be found in all the text books—but I will only emphasise the fact that the most distinctive character of the bromide pustular eruption is the agmination of small pustules on a raised red plateau derived almost entirely from the swelling and proliferation of the prickle-cell layer and it therefore leaves no scar when it disappears unless a deep suppuration has been excited secondarily Such a lesion is absolutely distinctive.

The pseudo-bullous iodide eruption is also distinctive, it consists of transparent raised lesions like distended but flattened bullæ crowded together in irregular areas, when the supposed bulla is pricked, however, only a small drop of fluid escapes, for the lesion is really a solid œdematous swelling of the rete cells. Besides these characteristic bromide and iodide lesions there are several less distinctive eruptions produced by these drugs—erythema, in some cases like erythema nodosum, urticaria, purpura, of which some cases have been fatal, isolated pustules, true vesicular and bullous eruptions, which are rare, gangrene, and, in the case of iodides, anthracoid and vegetating lesions—the latter are very rare

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[3] Plate xxxvi. author's Atlas

Iodide of potassium should not be given to persons suffering from acne rosacea, which is often much aggravated by it, or in cases of bullous eruptions such as pemphigus and dermatitis herpetiformis, as it often greatly increases the severity of the lesions, and I have seen the bullæ become hæmorrhagic and even gangrenous as a consequence.

GOUT

Perhaps you are surprised that I have not given gout a primary position as an etiological modifying factor of dermatitis. I have purposely not done so for several reasons. While I do not doubt that gouty patients are easily predisposed to, or easily get, eczema and to a less extent some other forms of dermatitis, such as some forms of psoriasis which commence in middle life, some cases of pityriasis rubra, and some of the erythemata, there is no doubt that its influence has been overrated in the past by the profession, so much so that the public, who are usually a generation behind us, regard eczema and gout as almost synonymous terms and I am not infrequently asked by anxious mothers of eczematous infants in arms whether I think they have gout in their systems. The fact is, a gouty person is one who is vulnerable to inflammations of any or all of his tissues, especially of his mucous and synovial membranes and his skin, but it is not possible to decide solely from the kind of dermatitis present whether the patient is gouty or not, and it is sound practice only to infer it when there is other evidence in himself or in his family history No doubt if there is such evidence it is wise and right to treat such a patient by diet and medicines calculated to combat his gouty tendency, but we must all confess how often we fail to get a satisfactory result as far as the skin is concerned after we have done our best to fulfil the supposed indications.

Much more frequently we find in eczematous patients in middle life and beyond it, that a condition of faulty assimilation of food exists from imperfect liver action, dyspepsia of various kinds, constipation in women and its train of evil consequences, and when there is constipation you do not know where you are until you have got rid of it, at all events for a time. These conditions, too lead up to gout if allowed to go on unchecked and we must endeavour to modify the patient's mode of living as regards eating, drinking, and exercise. These are, however, to practitioners like yourselves familiar truisms and I will not dwell on them further but only ask you not to be eager to see gout in every case of eczema unless the general evidence is decidedly corroborative and even then the real factor is often the disordered condition of the alimentary canal which is so commonly associated with the gouty state, and probably many symptoms which we ascribe to uric acid are often really due to the absorption of toxins or ptomaines from the catarrhal condition of the intestinal canal. Intestinal disinfectants, therefore, such as salol are indicated, together with such a dietary as will not excite fresh catarrh and fermentation in the food.

While I have not yet exhausted the subject of etiology as it influences the form and course of inflammations of the skin—the subject of vaccination among others being untouched—I have come to the end of my time and I fear of your patience and will therefore pass on to the discussion of treatment in my next lecture.

ROYAL INSTITUTION —The Friday evening discourse at the Royal Institution on Feb 27th was delivered by Dr Adolf Liebmann the subject being Perfumes Natural and Artificial. Considerable reference was made to the success of chemical methods in the manufacture of essential oils identical with those upon which the fragrance of some plants depends the artificial products being in an extraordinary degree cheaper than some of the natural ones. Vanilline for instance, an odorous crystalline substance contained in the vanilla bean, in 1876 was worth about £150 a pound, but at present the price is only about £1 10s

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THE RISE OF BLOOD PRESSURE IN LATER LIFE[1]

BY T CLIFFORD ALLBUTT, M.A., M D, D Sc, F R.S, F R.C P,

REGIUS PROFESSOR OF PHYSIC UNIVERSITY OF CAMBRIDGE.

WHEN in the third quarter of the nineteenth century I entered the profession of medicine physicians were much occupied in the deadhouse, contemplating the ruins of mortality Surrounded by the last dilapidations of the human frame they laid bare almost daily in its inward parts some previously unknown wreck, blight, or decay In the wards, meanwhile, before Darwin's theory had changed the habit of thought, the mind of the physician was coloured by notions of the fixity of kinds, he was apt to attribute a certain fixity even to the species of disease, especially to those kinds which, as the phrase ran, were organic rather than functional. Functional diseases made no appearance in the deadhouse, indeed, many of the acute diseases had proved, in recent experience, to be, if often violent, yet temporary oscillations, tending, if let alone, to recovery the end of chronic visceral disease, however, seemed to be inevitable death in derision of drugs Thus it happened that to organic diseases, too rigidly conceived as entities, names derived not from original causation or clinical character but from the ultimate forms of destruction became attached, and as a student I well remember how one distinguished teacher and another would display a shrivelled kidney or liver, a distorted heart, or a softened brain, and ask disdainfully of what use medicines could be for such degradations, even in their earlier stages, how organs with such proclivities were to be converted by prescriptions? Not more than fifteen years ago I said to a late physician, one of the ablest of his generation, "I am sick of diseases, I want to know origins and processes" We were walking together and he, stopping, turned upon me and exclaimed, as if new light were breaking in, "Processes? Ah, processes! Yes, the pathology of processes is the work of the future." I had urged, for example that bloated or withered kidneys are not engendered of vice in the kidneys themselves but of the prolonged, uniform, symmetrical action upon both of them of some unknown poison or poisons circulating in the blood, an influence, furthermore, by no means confined to these organs but visible in widespread effect elsewhere in the body that to speak of such cases as cases of kidney disease is therefore misleading, and so on of other post-mortem wreckage. The discovery of such utter mischief after death is matter not for our despair but for our disgrace, it is not a declaration of the impotence of therapeutics but black evidence of our blindness and negligence in the past history of the individual If in the pathology of the dead there remains much to be discovered, we have nevertheless made great way in it, the pathology of the living is hardly begun.

These arguments may seem to savour of platitude, but I think even to-day that they have not lost their application, that you will not find it hard to carry your minds back so far as to realise the change—the transformation—which is passing over medicine at this time, and that you may find it still less difficult to accept at my hands some attempt to study disease at its sources rather than at the term when its work is done.

To my friendship with the late Dr Mahomed I owe much of my conviction of the clinical value of the study of arterial pressures, and a few years later I was encouraged and aided in this study by the late Professor Roy Thirty years ago physicians were putting the sphygmograph aside as "of no use in diagnosis," but, as I have said physicians were then too much ruled by the statical conceptions of the deadhouse They demanded of the sphygmograph that which it cannot directly indicate—namely the site, form, or even the very existence of particular local lesions in the heart. Yet Mahomed Sanderson, Galabin, and others—to speak only of English physicians—testified even then to its capacity of exhibiting, within limits, the dynamical conditions of the circulation, the kind and distribution of work done, which, after all, is the chief care of the physician And how imperfectly we had availed ourselves of this capacity of the instrument we may learn from the remarkable treatise on "The Pulse" published but a few months ago by Dr James Mackenzie. Unfortunately the sphygmograph, valuable as it is, when handled by those who are well aware of its limits, in the record of modes, forms, and distributions of pressure, cannot measure positive pressures. For many years, therefore, until lately when pressure gauges or sphygmometers of some trustworthiness were put into our hands,[2] I have had to compare arterial pressures as best I could with the practised and attentive finger and to go without units and records. Thus, unsupported by permanent numerical computations, I found it a difficult task to convince my brethren of the importance even of approximate estimates.

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[1] A paper read before the Royal Medical and Chirurgical Society on Jan. 13th, 1903 The substance of this paper was contained in my Hunterian *Lecture for* 1895 and in one of my *Lane Lectures* in 1893.

Arterial pressures vary very widely. If I lift a chair from the ground my arterial pressure may rise 20 per cent and fall again as rapidly as I come to rest. During the use of the sphygmometer, if the patient be not cautioned against contracting his muscles—if, for instance, he be seated in a cramped position—the pressure may fluctuate considerably. On a certain occasion I observed a high pressure in a patient in whom a high rate was not anticipated. No fault was found in the parts or arrangements of the instrument, and a second inflation revealed a still exorbitant though a lower rate, a third but a few minutes later registered an ordinary rate of about 120 mm. Hg, and remained steady about this figure. The previous excess I should still have attributed to some experimental fallacy, had not the patient, as I put the instrument aside, said to me that he had feared from it a violent electric shock, such as one which many years before at a fair had put him in an agony which he had never forgotten. As the shock did not occur he was reassured, and the pressure fell. In patients who enter upon a consultation with acute anxiety of mind the pressure at first is often excessive. When close accuracy is of importance it is well then to take two observations, one as the patient undresses, another, after all other physical examination, before he puts on his coat. The large majority of my observations are taken upon the patient seated easily at my table, it is better to keep to a uniform method, and in private practice this position is more convenient than recumbency. Observations on patients in bed rule rather lower, but in my practice they have been comparatively few.

With Hill and Barnard's sphygmometer the pressures of adults vary from 95 to 105 mm. Hg in temperate young men much occupied with athletic exercises, to 250 mm Hg (the highest figure in the scale) in disease,—as, for example, in Bright's disease.[3] Between these extremes every degree of variation may be found. I often apply the instrument in cases of life insurance, and in healthy men in middle life it should not record more than 120 mm Hg. I have never applied it to a healthy woman nor to a child, but by the finger I have often noted high arterial pressure in children.

In sufferers from arterio sclerosis—I use the name arterio-sclerosis loosely for present convenience—exorbitant pressures are often but by no means constantly found. Between disease of the arterial tree and blood pressure there is no direct relation, in arterial disease, even in the extreme degree of it, normal or relatively low pressures are commonly observed but I often notice that in cases of arterial degeneration the reading extends uniformly over a wider range of the scale—say over 15 or 20 units, in which cases I record the mean figure and the extremes. In denying that elevation of blood pressure depends directly upon arterio-sclerosis I have stood alone for some years, against the high authority of von Basch and many others, but I think that some recent observers now admit the validity of my contradiction, and the matter is one of cardinal importance. So far as intermittent observations are to be trusted, I repeat that pressure may be, and often is, low throughout the course of arterial degeneration, or, again, having been high, it may fall, though of course, in some elderly persons with arterial decay occasional transient attacks of high pressure, such as occur at times in all of us, may be observed. I need not add that a considerable and persistent fall late in a case, a fall not a result of treatment and not coincident with general amelioration, usually signifies heart failure and presages death within a few months, for it is remarkable how long high pressures are maintained, even when the dilated and overwrought heart is labouring towards the end of its day. When the subject of arterio sclerosis begins to be short of breath he has entered upon the last stage of his pilgrimage.

If, then, arterial degeneration be a *vera causa* of elevation of blood pressure its effects may be and often are so modified by incidental and coöperative conditions as to be negligible. In many cases of arterio sclerosis in which the blood pressures are not high, to the best of our knowledge they had never been high. Conversely, however, high blood pressures cannot long continue without straining the vessels, and I suggest that in elderly persons, in whom taint of lead, of syphilis, of alcohol, or other alien infection is set aside, and kidney disease also excluded, arterio-sclerosis be divided into two kinds, one the result of persistent high blood pressure, the other the result of some more intimate causes, perhaps some unknown poison, or the tooth of time. It is very difficult in arterial diseases to find distinctive histological marks of kind, even in a kind so distinct as the syphilitic, the characters seem to depend more upon the rate than upon the kind of the change. But I think that what I am wont, speaking clinically of the radial and brachial, to call the "leathery" vessel is suggestive of prolonged high pressure, persistent or past. The leathery vessel occurs in two forms—as the narrow and wiry and the voluminous vessel, the former being the more difficult condition to cure. Fulness of an artery is, of course, no indication of high pressure. The quality of the arterial coats is more easily felt in the brachial artery, on semi-flexion of the elbow, but the volume of the brachial may be normal or excessive when the radial is contracted. A certain degree of sclerosis does not render an artery incapable of response to vaso motor influences.

The leathery artery sometimes becomes calcareous, or is associated with calcified vessels elsewhere, as, for example, in the brain, but when calcification is a prominent and comparatively early feature in the superficial arteries pressures are apt to be moderate or even low. In the so-called "ipecacuanha radial" high blood pressure is by no means the rule, and as high pressure is not the rule in these cases so apoplexy is not the common event of them. Old persons with very calcareous and often grotesquely tortuous arteries, but with low pressures, are to be found abundantly in every workhouse or asylum where work is nominal and diet spare. They live long and die of an atrophy. Thus softening of the brain and gradual or rapid arterial obstructions occur in the group, but cerebral hæmorrhage may be called rare in them. In the wealthier classes these patients are found rather among the women, who are less addicted to high living.

Under conditions of high arterial pressure, on the other hand, of whatsoever causation, apoplexy is frequent, apoplexy, uræmia, and outworn heart account for the end of most of these patients. Yet it has been a matter of surprise to me to see that very high pressure may be maintained, as it would seem, even for years, without much more apparent deterioration to the arterial tree than time of life might account for. I come here to-night, however, to urge an earlier recognition of such rising pressures, and the timely use of therapeutical means to prevent the strain and break up of the circulatory system. Herein, however, is an initial difficulty that the subject of high pressure may not soon feel ill, nay, a steady maintenance of high pressure in the brain may conduce for a while to a sense of vivacity and endurance. The heart has grown up to the work, and let me repeat my opinion, though now necessarily without argument, that the arteries hypertrophy likewise in the muscular coat, so that until these compensating growths in heart and artery dwindle or deteriorate, usually after the fibroid form, the patient may believe all to be well with him and may not seek the physician till considerable mischief is done. Not infrequently, however, such persons come before us in an early stage of rising pressure, by the chance of some intercurrent disorder, or on the prompting of some vague discomforts, such as fatigue and low spirits.

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[2] My own observations have been taken with von Basch's instrument and Hill and Barnard's. I have obtained better results with the latter instrument. Dr Oliver's sphygmometer is well spoken of but as yet I have no experience of it; it has seemed to me better to keep to one and the same instrument. Von Basch's instrument or at any rate that one which I possess registers 20 mm Hg above Hill and Barnard's and thus I have been led occasionally to make false entries in my notes (e.g., Practitioner January 1902, p 7 "120 to 125" should read *95 to 100*.

[3] On the day when these words were written I found maximum pressures of from 230 to 250 mm. Hg in a man, aged 65 years whose arteries were yet fairly healthy and in whom were no symptoms of renal disease. He complained of slight vertiginous attacks, lassitude, melancholy, and some loss of flesh.

Let us take such a case, say, in a patient, 50 years of age, a professional man, perhaps a merchant or a student who lives a sedentary life but lives well—for mental work and business cares create a desire even for more and richer food than is excited by bodily exercise in the fresh air, though they do far less for excretion. His sleep becomes disturbed, sick headaches are more frequent, he is moody in rising from bed and is fretful and apprehensive until he warms to his day's work, a good luncheon and a glass or two of sherry improve matters, and in the evening he dines out cheerfully, denying himself nothing of meat or drink. We may tell him that his liver is out of order, we may change his wine to whisky and soda, we may exhibit mercurials and salines, and send him to one of the spas, or we may do worse, we may not dwell on the laboured quality of the pulse, we may listen to the cuckoo cry of overwork, his wife will implore us not to lower him, urging that he is always better for his wine, and that a tonic and some rest are all that are needful and too often he gets the tonic, and is sent off for six weeks holiday wherein to do as he pleases. In order to gain strength he indulges his appetite, but as he does not dine out, and gets plenty of air and exercise, he comes home better, yet only to repeat the same experiences nine months later and to prescribe a holiday for himself, perhaps without consulting his physician So things go on, until one day he has a hitch in his speech, a cloud of albumin is found in his scanty and lateritious urine, and a trace of œdema rises upon his shins his pulse is now tighter than ever, his arteries are stretched like an old glove, and his heart is big and clanging Partially remediable his state may still be, he may live for a year or two, but he is past cure. At one time I busied myself with deobstruents, rigid diet, and regulated exercise, to turn such a patient back into health, but even in earlier stages than this I was forced to realise that in the corporeal as in the moral sphere repentance may come too late. We may succeed more or less in our immediate purpose, the pulse does become softer under the finger perhaps much softer, the heart comes in a little, the apoplexy or the pulmonary congestion is staved off, but the patient pettishly persists that he is no better And he is right, the stroke of death may have been parried but what of that to a man who is good for nothing? Such a case, perhaps you will say, was a bad one, then I will dwell upon a man not so old, not yet incapable of some hard work, one whose deteriorated cardio-vascular state is apparent only to the skilled observer, but whose blood pressure for two or three years has been from 150 to 180 mm. Hg and whose vascular system has thereby become stretched and inelastic, even in him treatment now can be but a compromise. If you bring his blood pressure down to the normal you will make him slack and spiritless, his circulation has become adapted to an abnormal capacity and you have henceforth to steer him as you can between the listlessness and malaise due to a reduction of pressure below his acquired habit on the one hand and an apoplexy on the other This is a task of much nicety and vigilance, and it is as likely as not that meanwhile the patient, who cannot enter into your refinements, will desert you for some more thoroughgoing practitioner

But now let me suppose that the finger, educated by the discipline of the sphygmometer leads us to suspect an abnormally high blood pressure and that we by the machine verify this in the first stage of the perversion—that is, during the initial disorder of which I spoke. In this period no cases lend themselves more satisfactorily, not only to palliation, not only to temporary amendment, but even to permanent cure. If excessive pressure be recognised in its earliest phases the course is clear, the treatment is not difficult, cure is fairly certain, and with due watchfulness in years to come shipwreck may be wholly averted. I cannot, then, urge too strongly the perils of neglecting these incipient increases of blood pressure and the importance of educating the finger in the early detection of them. Unfortunately, in this incipient stage very few physicians are alert to detect this process, so baneful in its ascendancy but if withstood in its first manifestations, so fugitive, for, unless the case be one of Bright's disease, we are too apt to be indifferent to some excess of pressure and early cardiac hypertrophy is not easy to recognise. Nay I have often heard patient and physician congratulate each other that at any rate the pulse is a good strong one. I am ready to admit that high pressure in the radial is not always unmistakeable even to the vigilant touch, although the aortic clang may be altered and the heart's apex a trifle outward Often even then the pressure gauge is needed to convince us that the heart is thrusting against abnormal resistance. In the small hard pulse the hardness may escape notice in the small size of the vessel, especially if the wrist be fat, moreover, these contracted vessels do not so readily become tortuous, indeed, when the artery is larger and laxer and the coat thickened, it is often difficult to be sure of excessive pressure, even when recourse to the pressure gauge, which must always be used in case of doubt, may prove it to be far above the normal. The reason of this latency of excessive pressure to the touch is a little difficult to understand, fortunately, the fallacy is more common in later stages when other features have become obvious The sense of duration of the wave is often a more definite indication than that of tightness of the vessel.

Let us now return to the physics of the circulation. It is usually said—as, for example, by Sir Lauder Brunton but a few months ago—that "arteries which lose their elasticity in old age offer an increased resistance to the blood stream and as a result the heart hypertrophies," this eminent observer holding, I presume, the current opinion, which I have already challenged, that arterial disease comes first and rise of blood pressure consequently Now I have always been ready to admit that the more carefully the principles of physics are studied in respect of living beings the more apparent becomes the difficulty of calculating their validity under the complexities and contingencies which in biological problems overlie and qualify them, but we may feel pretty sure that resistance must depend substantially upon, first, the calibre of the tubes, and secondly, the viscosity of the blood Is it, then, certain that defect of elasticity narrows the bed of the blood stream as a whole? Is it not at least as likely that, on the whole, it may widen it? If in some areas an obliterative process prevail, in others distension may make up for it, and the mean capacity of the channels at any rate may not be diminished [4] Clinical observation of the cases of extreme arterial deterioration without rise of pressure to which I have already referred impresses this opinion upon me. If any chronic arterial disease narrows the bed of the circulating blood surely it is the syphilitic. Now this manifestation of syphilis often occurs in young, active, and temperate men, and in many of these arterial pressure does not rise, as I have had occasion to ascertain in two or three cases observed continuously for many years—in one case for the last 19 years of the patient's life, beginning at the age of 31 and ending with death by aneurysm of the aorta at 50 In him cerebral symptoms had been distinct ten years before his death, and were wholly removed, though every superficial artery was thick. In another case of Jacksonian epilepsy, due to syphilitic arterial disease, the blood pressure was normal during years of occasional observations, and so on of many other such cases.

Omitting, then the rarer arterial diseases, such as obliterative arteritis, neuritic arteritis, and periarteritis nodosa, I suggest three classes of so-called "arteriosclerosis" 1. The involutionary—common in old people, often hereditary, not necessarily or usually associated with rise of arterial pressure, the nature of which, intrinsic or extrinsic, is unknown, but does not lie in high living This kind may be vaguely referred to the "faltering rheums of age." 2. The mechanical—the result of long persisting high blood pressure of whatsoever origin. 3 The toxic—resulting from such causes as lead, alcohol, or syphilis, usually met with in younger persons in some of whom the pressure rises, in others not.

I must now undertake the formidable task of meeting in the gate those many opponents who will tell me that the cases of rising arterial pressure which I have cited are virtually, if not obviously cases of granular kidney, or, at least, to notice for a moment the current phrase, "renal inadequacy" This equivocal phrase, introduced by Sir Andrew Clark in—I venture to think—one of the less successful essays of this sagacious physician, suggests notions founded, as yet at any rate, on no positive facts or reasons, and it lends itself too readily on the one hand to those hollow explanations which are a snare to us, and on the other to the inexorable dictations of the deadhouse. In a recent thesis of considerable merit one of my graduates tried to convince me of the secret influence of granular kidney in arterial disease by imperfectly we had availed ourselves of this capacity of the instrument we may learn from the remarkable treatise on "The Pulse" published but a few months ago by Dr James Mackenzie. Unfortunately the sphygmograph, valuable as it is, when handled by those who are well aware of its limits, in the record of modes, forms, and distributions of pressure, cannot measure positive pressures For many years, therefore, until lately when pressure gauges or sphygmometers of some trustworthiness were put into our hands,[2] I have had to compare arterial pressures as best I could with the practised and attentive finger and to go without units and records. Thus, unsupported by permanent numerical computations, I found it a difficult task to convince my brethren of the importance even of approximate estimates.

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[4] Sir Richard Douglas Powell (THE LANCET Jan 24th 1903) urges his thesis that the high pressure may be and is maintained by arterial constriction. In THE LANCET for Jan. 31st I ventured with the utmost respect to contest this hypothesis.

Arterial pressures vary very widely If I lift a chair from the ground my arterial pressure may rise 20 per cent and fall again as rapidly as I come to rest. During the use of the sphygmometer, if the patient be not cautioned against contracting his muscles—if, for instance, he be seated in a cramped position—the pressure may fluctuate considerably On a certain occasion I observed a high pressure in a patient in whom a high rate was not anticipated. No fault was found in the parts or arrangements of the instrument, and a second inflation revealed a still exorbitant though a lower rate, a third but a few minutes later registered an ordinary rate of about 120 mm. Hg, and remained steady about this figure. The previous excess I should still have attributed to some experimental fallacy, had not the patient, as [I put the instrument aside, said to me that he had feared from it a violent electric shock, such as one which many years before at a fair had put him in an agony which he had never forgotten As the shock did not occur he was reassured, and the pressure fell. In patients who enter upon a consultation with acute anxiety of mind the pressure at first is often excessive. When close accuracy is of importance it is well then to take two observations, one as the patient undresses, another, after all other physical examination, before he puts on his coat. The large majority of my observations are taken upon the patient seated easily at my table, it is better to keep to a uniform method, and in private practice this position is more convenient than recumbency Observations on patients in bed rule rather lower, but in my practice they have been comparatively few

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In sufferers from arterio sclerosis—I use the name arterio sclerosis loosely for present convenience—exorbitant pressures are often but by no means constantly found. Between disease of the arterial tree and blood pressure there is no direct relation, in arterial disease, even in the extreme degree of it, normal or relatively low pressures are commonly observed but I often notice that in cases of arterial degeneration the reading extends uniformly over a wider range of the scale—say over 15 or 20 units, in which cases I record the mean figure and the extremes. In denying that elevation of blood pressure depends directly upon arterio-sclerosis I have stood alone for some years, against the high authority of von Basch and many others, but I think that some recent observers now admit the validity of my contradiction, and the matter is one of cardinal importance. So far as intermittent observations are to be trusted, I repeat that pressure may be, and often is, low throughout the course of arterial degeneration, [or, again, having been high, it may fall, though of course, in some elderly persons with arterial decay occasional transient attacks of high pressure, such as occur at times in all of us, may be observed I need not add that a considerable and persistent fall late in a case, a fall not a result of treatment and not coincident with general amelioration, usually signifies heart failure and presages death within a few months, for it is remarkable how long high pressures are maintained, even when the dilated and overwrought heart is labouring towards the end of its day When the subject of arterio sclerosis begins to be short of breath he has entered upon the last stage of his pilgrimage.

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[2] My own observations have been taken with von Basch's instrument and Hill and Barnard's I have obtained better results with the latter instrument Dr Oliver's sphygmometer is well spoken of but as yet I have no experience of it It has seemed to me better to keep to one and the same instrument. Von Basch's instrument or at any rate that one which I possess registers 20 mm. Hg above Hill and Barnard's, and thus I have been led *occasionally to* make false entries in my notes (e.g., Practitioner January 1902, p. 7 ' *120 to 125* should read *95 to 100*

[3] On the day when these words were written I found maximum pressures of from 230 to 250 mm. Hg in a man aged 65 years whose arteries were yet fairly healthy and in whom were no symptoms of renal disease He complained of slight vertiginous attacks lassitude, melancholy, and some loss of flesh

Let us take such a case, say, in a patient, 50 years of age, a professional man, perhaps a merchant or a student who lives a sedentary life but lives well—for mental work and business cares create a desire even for more and richer food than is excited by bodily exercise in the fresh air, though they do far less for excretion. His sleep becomes disturbed, sick headaches are more frequent, he is moody in rising from bed and is fretful and apprehensive until he warms to his day's work, a good luncheon and a glass or two of sherry improve matters, and in the evening he dines out cheerfully, denying himself nothing of meat or drink. We may tell him that his liver is out of order, we may change his wine to whisky and soda, we may exhibit mercurials and salines, and send him to one of the spas, or we may do worse, we may not dwell on the laboured quality of the pulse, we may listen to the cuckoo cry of overwork, his wife will implore us not to lower him, urging that he is always better for his wine, and that a tonic and some rest are all that are needful and too often he gets the tonic, and is sent off for six weeks holiday wherein to do as he pleases. In order to gain strength he indulges his appetite, but as he does not dine out, and gets plenty of air and exercise, he comes home better, yet only to repeat the same experiences nine months later and to prescribe a holiday for himself, perhaps without consulting his physician. So things go on, until one day he has a hitch in his speech, a cloud of albumin is found in his scanty and lateritious urine, and a trace of œdema rises upon his shins his pulse is now tighter than ever, his arteries are stretched like an old glove, and his heart is big and clanging Partially remediable his state may still be, he may live for a year or two, but he is past cure. At one time I busied myself with deobstruents, rigid diet, and regulated exercise, to turn such a patient back into health, but even in earlier stages than this I was forced to realise that in the corporeal as in the moral sphere repentance may come too late. We may succeed more or less in our immediate purpose, the pulse does become softer under the finger perhaps much softer, the heart comes in a little, the apoplexy or the pulmonary congestion is staved off, but the patient pettishly persists that he is no better And he is right, the stroke of death may have been parried, but what of that to a man who is good for nothing? Such a case, perhaps you will say, was a bad one, then I will dwell upon a man not so old, not yet incapable of some hard work, one whose deteriorated cardio-vascular state is apparent only to the skilled observer, but whose blood pressure for two or three years has been from 150 to 180 mm. Hg and whose vascular system has thereby become stretched and inelastic, even in him treatment now can be but a compromise. If you bring his blood pressure down to the normal you will make him slack and spiritless, his circulation has become adapted to an abnormal capacity and you have henceforth to steer him as you can between the listlessness and malaise due to a reduction of pressure below his acquired habit on the one hand and an apoplexy on the other This is a task of much nicety and vigilance, and it is as likely as not that meanwhile the patient, who cannot enter into your refinements, will desert you for some more thoroughgoing practitioner

But now let me suppose that the finger, educated by the discipline of the sphygmometer, leads us to suspect an abnormally high blood pressure and that we by the machine verify this in the first stage of the perversion—that is, during the initial disorder of which I spoke. In this period no cases lend themselves more satisfactorily not only to palliation not only to temporary amendment but even to permanent cure. If excessive pressure be recognised in its earliest phases the course is clear the treatment is not difficult, cure is fairly certain, and with due watchfulness in years to come shipwreck may be wholly averted. I cannot, then, urge too strongly the perils of neglecting these incipient increases of blood pressure and the importance of educating the finger in the early detection of them. Unfortunately in this incipient stage very few physicians are alert to detect this process, so baneful in its ascendancy but if with [illegible] in its first manifestations so fugitive, for, unless the case be one of Bright's disease, we are too apt to be indifferent to some excess of pressure and early cardiac hypertrophy is no easy to recognise. Nay I have often heard patient and physician congratulate each other that at any rate the pulse is a good strong one. I am ready to admit that high pressure in the radial is not always unmistakeable even to the vigilant touch although the aortic clang may be altered and the heart's apex a trifle outward. Often even then the pressure gauge is needed to convince us that the heart is thrusting against abnormal resistance. In the small hard pulse the hardness may escape notice in the small size of the vessel, especially if the wrist be fat, moreover, these contracted vessels do not so readily become tortuous, indeed, when the artery is larger and laxer and the coat thickened, it is often difficult to be sure of excessive pressure, even when recourse to the pressure gauge, which must always be used in case of doubt, may prove it to be far above the normal. The reason of this latency of excessive pressure to the touch is a little difficult to understand, fortunately, the fallacy is more common in later stages when other features have become obvious The sense of duration of the wave is often a more definite indication than that of tightness of the vessel.

Let us now return to the physics of the circulation. It is usually said—as, for example, by Sir Lauder Brunton but a few months ago—that ‘arteries which lose their elasticity in old age offer an increased resistance to the blood stream and as a result the heart hypertrophies,” this eminent observer holding, I presume, the current opinion, which I have already challenged, that arterial disease comes first and rise of blood pressure consequently Now I have always been ready to admit that the more carefully the principles of physics are studied in respect of living beings the more apparent becomes the difficulty of calculating their validity under the complexities and contingencies which in biological problems overlie and qualify them, but we may feel pretty sure that resistance must depend substantially upon, first, the calibre of the tubes, and secondly, the viscosity of the blood. Is it, then, certain that defect of elasticity narrows the bed of the blood stream as a whole? Is it not at least as likely that, on the whole, it may widen it? If in some areas an obliterative process prevail, in others distension may make up for it, and the mean capacity of the channels at any rate may not be diminished [4] Clinical observation of the cases of extreme arterial deterioration without rise of pressure to which I have already referred impresses this opinion upon me. If any chronic arterial disease narrows the bed of the circulating blood surely it is the syphilitic. Now this manifestation of syphilis often occurs in young, active, and temperate men, and in many of these arterial pressure does not rise, as I have had occasion to ascertain in two or three cases observed continuously for many years—in one case for the last 19 years of the patient's life, beginning at the age of 31 and ending with death by aneurysm of the aorta at 50. In him cerebral symptoms had been distinct ten years before his death, and were wholly removed, though every superficial artery was thick. In another case of Jacksonian epilepsy, due to syphilitic arterial disease, the blood pressure was normal during years of occasional observations, and so on of many other such cases.

Omitting, then, the rarer arterial diseases, such as obliterative arteritis neuritic arteritis and periarteritis nodosa, I suggest three classes of so-called "arterio-sclerosis" 1. The involutionary—common in old people, often hereditary, not necessarily or usually associated with rise of arterial pressure, the nature of which, intrinsic or extrinsic, is unknown, but does not lie in high living This kind may be vaguely referred to the ‘ faltering rheums of age.” 2. The mechanical—the result of long persisting high blood pressure of whatsoever origin. 3 The toxic—resulting from such causes as lead, alcohol, or syphilis, usually met with in younger persons in some of whom the pressure rises, in others not.

I must now undertake the formidable task of meeting in the gate those many opponents who will tell me that the cases of rising arterial pressure which I have cited are virtually, if not obviously cases of granular kidney, or, at least, to notice for a moment the current phrase, renal inadequacy" This equivocal phrase, introduced by Sir Andrew Clark in—I venture to think—one of the less successful essays of this sagacious physician, suggests notions founded, as yet at any rate, on no positive facts or reasons, and it lends itself too readily on the one hand to those hollow explanations which are a snare to us and on the other to the inexorable dictations of the deadhouse. In a recent thesis of considerable merit one of my graduates tried to convince me of the secret influence of granular kidney in arterial disease by collecting the records of a vast number of necropsies of the kind, and declaring the existence of fibroid changes in the kidneys in 94 per cent. of them. A large part of his list consisted of cases of elderly, and even aged, persons in whom no definite diagnosis of Bright's disease had been made, but in whose dead kidneys a greater or less amount of fibroid deterioration had been detected The list contained also, of course, a large number of cases of granular kidney properly so called with which cardiac arterial disease was as usual associated, with these last we have no further concern.[5]

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[4] Sir Richard Douglas Powell (THE LANCET Jan. [illegible], 1903) urges his thesis that the high pressure may be and is maintained by arterial constriction. In THE LANCET for Jan. 31st I ventured with the utmost respect to contest this hypothesis.

It is impossible at this hour to enter upon the pathology of the fibroid deteriorations found in the kidneys, no less than in many or most other organs, of old subjects, but I must briefly indicate my opinion that this process has little or nothing in common with that of granular kidney proper This fibroid deterioration is a partial atrophy, or a factor of an atrophy, and is consistent and generally associated with a large remnant of normally secreting elements Granular kidney, on the contrary, is the result of a protracted submission of the whole kidney to the action of some poison, often unknown, which has primarily a necrosing effect on the secreting, and an irritating effect upon the connective, elements. This effect is best seen in the acuter cases, as in the kidney of pregnancy, of typhoid fever, of diphtheria, and the like, where the poison is more virulent, the corrosion more acute, and the results less obscured by irritation and by the attempted processes of repair

And I must appeal again from the deadhouse to clinical observation chronic Bright's disease is a malady with features of its own such as headache, nausea, anæmia, retinitis, and so forth, moreover, its mean incidence falls at a somewhat earlier age than that of the malady I am discussing Among its features are undoubtedly high arterial pressure and the baneful consequence of cardio-arterial strain, but leaving aside for the moment the quality of the blood, the state of the retina, and other characteristic symptoms a careful supervision of the urine alone will distinguish Bright's disease if, in some obscure cases, not on a single examination, yet certainly after some days' vigilance. I am not concerned to confine myself to well marked Bright's disease, I am ready to assume that the process, especially in the elderly, may be so chronic as to present its symptoms in a larval shape, yet even in cases so slow so insidious, a careful study of the urine will tell us if the case turns upon the kidneys. In the kidneys of old persons undergoing some involutionary change, there is secreting area enough to clear the system. Dr Rose Bradford's ablation experiments support our experience herein, and pathological methods rarely exhibit in these cases a deep intrusion of alien tissue During life albumin, at times abundant, will rarely prove to be absent for many days together Even in the early stages of disease we may distinguish the high arterial pressure of renal origin from that not of renal origin, as in the latter albumin is absent, but in the former, if not constantly, is frequently present. Granular casts, again, absent in the non renal cases, in the renal are not infrequent. Such a case as the following is no uncommon one a man between 50 and 60 years of age presents himself with a big heart thick and tortuous arteries, a blood pressure of from 230 to 240 mm. Hg, and some œdema of the lungs. Death may be staved off for a while but his condition is perilous. Now, if ever, his urine should present evidences of "renal inadequacy" He passes for us, however, a small quantity, high in colour, of normal or high specific gravity, which thickens as it cools, and may paint the bottom of the pot. There may or may not be a little albumin in it, but, even after spinning, no casts or but a few hyaline casts are discovered. On subsequent observation during alterative treatment a week's urine proves to be up to the normal mean of solid excretion, or the fall in urea corresponds with a restriction of the diet, a condition often forgotten. After death we find the kidneys tough, the capsule a little adherent, the surface a little rough, and presenting some shallow intrusion of fibre into the parenchyma, and we find evidences of fibroid deterioration not only in the heart and arteries but in many other parts also Now, I have watched such cases from beginning to end for many years, and in not a few of them I have witnessed all the phases of the malady in the same individual the lesson I have learned from them and would impress upon others is that the first deviation from health is not arterial disease but rise of blood pressure, the arterial disease being secondary and due to strain, that although this malady has, in common with Bright's disease, the feature of a rise of blood pressure and consequent cardio-arterial strain, it is essentially distinct from the latter and has no tendency to drift into it, that on its first appearance this arterial plethora is remediable—nay, on its second or even third appearance it may be driven away, and that even when somewhat advanced, if the tendency may not be eradicated, it may under due regulation of life and medicine be held in check. In an elderly man, or in one of "gouty" family, a week's high living will produce the state, and a few days fasting and blue pill will dispel it.

On the causes of the process I have described I have little to say worth your hearing If you call it gouty you will give me little help Gout is a clinical series, in the type of which inflammation of a joint or joints must be included, and in which rise of arterial pressure is not the rule or, if present, is incidental. I find that in many men badly afflicted by recurrent gout, if free from kidney disease and of temperate habits, rise of arterial pressure does not occur, their vessels remain fairly healthy and they attain to ripeness of years. Persons accused of "suppressed gout" are found in every consulting room, their only common feature seems to be the absence of the chief characteristic of gout—namely, arthritis, they solicit it, they pray for it—for they believe that it would resolve their disorders, but they pray in vain. On the nature of overt gout he is a bold man who expresses a positive opinion, suppressed gout I believe to be the label of a heterogeneous bundle of maladies, many of which have little or nothing in common, but among them my arterial plethora plays a large part. That this malady has any part in gout, or gout in any part in it, I have no knowledge or surmise, their association in the individual seems to me not to exceed the ratio of mere coincidence, though gout seems to have more than this ratio in the family history of such patients Arterial plethora is not a common disease in the poor or in persons who live actively and eat and drink sparingly

And this brings me to the second physical factor of blood pressure—namely, the viscosity of the blood. For nearly ten years past I have endeavoured, but with much mishap, to estimate this factor Time after time the subject has been agreed upon for a graduation thesis, and as often the research has broken down for one reason or another My suggestion is that, in the simple cases of rising arterial pressure which I am discussing, the blood is above the normal viscosity, viscosity is not the same quality as specific gravity, nor do they necessarily vary together And I speak of the viscosity of the blood as a whole, *not of the plasma*. Dr A. Haig assures me that in gout the blood does stick in the finer vessels, because of admixture of uric acid, and he most kindly sent to me a little instrument by which this lagging is to be demonstrated, an instrument of which as yet I have had insufficient experience. The injection of uric acid into the blood of animals raises the arterial pressure, if at all, very transiently That we may have to do with some of the purin bodies, lately investigated by Dr Walker Hall and others, is not unlikely, that uric acid is the offending element I have not satisfied myself In some persons faulty metabolism, without extrinsic poison, may set up granular kidney, and my contention that under mental distress a fault of this kind is apt to arise and to have this issue, is, I think, now generally admitted to be true, in other persons some such perversion, sparing the kidney, seems primarily and of itself to set up resistance in the periphery of the circulation, and thus to lead to strain of the arterial tree. It may be that the formation of "anti substances" to protect the system against the toxins of digestion is not equally active in all persons The disposition to fibrosis, which is found generally, if not universally, in the tissues of such patients may be a direct consequence of the perverted juices, or may be a feature of slow atrophy due to failing blood streams. The vasa vasorum suffer early, and it is as yet impossible to say what part, whether as cause or consequence, these tiny channels play in the deterioration of the larger vessels which they should nourish Of these vasa vasorum the coronary arteries are the chief, here, however, we see to our surprise—as I urged more at length in my Lane lectures of

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[5] Sir William Broadbent at the meeting of the society and Dr A Morison (THE LANCET, Jan 28th 1903) agreed with me that renal cases may be distinguished from the cases I have now under consideration.

1895 and elsewhere—that the heart can hypertrophy, and in substantial measure of time and degree retain its hypertrophy, when its coronary arteries have both of them been very gradually but completely occluded

On treatment I can now touch only in the briefest way. If, as I believe, one main cause of rising arterial pressure in middle life is excess of feeding—that is to say, of food in excess of work and excretion—the remedy obviously lies in prevention. That alcohol, apart from excess of food, will produce the condition I am not sure—I think not, on the other hand, I do feel sure that with such excess it is a potent ally, as in its alliance with arsenic, it seems to prepare the way by lowering tissue resistance. We see a few old men who, usually of lean habit and inheriting longevity, are endowed with enormous and persistent energy of mind and body, and who have never denied themselves meat or drink, yet at threescore and ten or fourscore years have good arteries and a moderate blood pressure, but such men are few, in most persons, as life slows down, the powers of expenditure and excretion fall within much narrower limits The ordinary man must be warned—say as he passes the age of 40 years—to keep up muscular exercise in the open air, and to control his appetite Many, I should say most, men eat and drink far more than they need for the day's work, they are supplied with food generously, without hunting for it, and annual blood letting has gone out of fashion. As soon as high pressure becomes manifest rigorous diet, deobstruent remedies, and exercise such as cautious hill climbing under the careful regulation of the physician, are necessary, and necessary not only during a Homburg month and its "after cure," but also for the rest of the patient's life. Catch him early and he is quite curable, let him drift and cure may be out of reach

My purpose to-day is fulfilled if I can impress upon my hearers the importance *obstare principiis* It is in such means as these that we see the value of the Chinese practice of paying the physician only during the days of health, though the method should be supplemented by a provision for the recovery of damages from the patient who disobeys our prescriptions.

Cambridge

REPORT ON THE INFLUENCE OF SANITATION IN CHECKING ENTERIC FEVER AND DYSENTERY AT HARRISMITH, ORANGE RIVER COLONY, SOUTH AFRICA, IN THE YEARS 1901 AND 1902

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THE following report has for its chief object the demonstration of the remarkable results attained by sanitation—more especially directed towards preventing the spread of infection by flies—in controlling both the extent and virulence of the above diseases during the fever season of 1901 and 1902 The 8th Division marched into Harrismith on August 7th, 1900, and the temporary hospital, from which all the earlier returns have been taken, was first opened on August 26th, 1900

In previous years Harrismith had always suffered from enteric fever and dysentery during the summer months. While a certain amount of dysentery was prevalent all the year round the enteric fever season was almost entirely confined to the period between the end of October and the middle of April. With the exception of the year 1890 both these diseases had been of a mild type, and it was not until the recent war that their virulence increased to such an alarming extent Although the epidemic of 1890 was severe the civilian practitioners of the town told me that it could not compare with that of the season of 1900 or that of 1901.

The two seasons compared in the following statistics are (1) that from the last week in August, 1900, to the end of April, 1901, and (2) that from the last week in August, 1901, to the end of April, 1902. For the sake of brevity the first will be called "Season A," and the second "Season B"

POSSIBLE CAUSES OF ERROR IN THE TABLES.

1. A certain element of error with regard to the fatality of the diseases in question must necessarily enter into the statistics taken from the military hospitals owing to the number of cases transferred down country whose subsequent death or recovery it has been impossible to ascertain, but this applies equally to both seasons and hence cannot materially affect conclusions drawn from a comparison between them.

2 Special notification of cases locally contracted was not instituted till April, 1901, and it has therefore been necessary to divide those contracted in Season A into (*a*) direct admissions and (*b*) cases transferred from other hospitals Every endeavour has been made to ascertain whether any of the direct admissions had been contracted on trek, as, for example, in those instances in which men have been admitted with enteric fever or dysentery a few days after arrival in Harrismith On the other hand, a certain number of cases shown as transferred from other hospitals were from field hospitals which had remained for some time in Harrismith and were consequently of local origin. As at this time the cases contracted on trek were invariably first admitted to a field hospital and then transferred to the temporary hospital at Harrismith, the greatest care being taken to distinguish between "direct admissions" and "transfers," the error arising from the above two sources is so slight that for the sake of comparison it may be disregarded.

3 During Season A a certain number of cases which were probably enteric fever were diagnosed and transferred as simple continued fever, whereas in Season B most of these cases were recognised to be abortive enteric fever and were diagnosed as such.

ARRANGEMENT OF THE TABLES

To give a comprehensive view of the diseases in the following tables the total number of cases admitted has been shown in the centre, where they were contracted locally or on trek, on the left side, and their ultimate disposal, either by return to duty, by transference, or by death, on the right side.

It will be seen that in Season A from August 26th to the end of September 1900, there were only 15 cases of enteric fever and 16 cases of dysentery and that none of these were fatal Indeed, as many as three patients suffering from enteric fever and 15 suffering from dysentery were returned to duty, the remainder being transferred down country In October, however, the number of cases of enteric fever and dysentery had an increase over the previous month of two and of 10 respectively and the commencing virulence of the former disease is shown by the fact that the patients in two cases died. In November the totals suddenly rose to 68 cases of enteric fever, of which 11 patients died, and of 45 of dysentery, of which one patient died. In December the epidemic reached its maximum with regard to the virulence, the number of cases of enteric fever being 121, of which 28 patients died, and 45 of dysentery, of which three patients died In January, 1901, the maximum number of admissions was reached though the total number of deaths was nine less than in the previous month The number of cases of enteric fever admitted was 184 of which 19 patients died, and 36 of dysentery, of which three patients died. February showed a drop both in the admissions and deaths, the patients admitted suffering from enteric fever being 120 of whom 14 died, and from dysentery 28, of whom one patient died In March the number of admissions for enteric fever increased by one and the deaths by three over those of the previous month, while the patients admitted for dysentery were one less, there was one death from this disease, as in February April showed a further drop to 114 cases of enteric fever, of which eight patients died while the cases of dysentery increased to 69, of which one patient died A summary of the tables shows for this season a total of 756 cases of enteric fever, of which 631 were of local origin, and 260 cases of dysentery, of which 219 were of local origin The fact, however which gives the best idea of the severity of the epidemic is that the deaths amounted to 99 from enteric fever, of which 81 cases were of local origin, and to 10 from dysentery, of which nine cases were of local origin.

CAUSE OF THE EPIDEMIC

When seeking to account for the appalling spread of this epidemic it became a question of vital importance to discover the mode of dissemination of the germs. One naturally turned first of all to the water supply This was obtained from the Platberg, a large hill lying close to the town and with an extent of surface, approximately, of five square miles The water, after percolating through the soil, issued from the side of the hill in springs Several of the streams formed by these springs, extending over an area of about two square miles, were made to converge towards the water tanks, which latter were fenced in to protect them from the encroachment of animals. The whole catchment area was not fenced in at the time of my investigation and there was, therefore a risk of contamination of the streams from this source, though, as there were but few animals grazing on the slopes of the Platberg, the danger could not be accounted as very great. Besides which, the water, when chemically and bacteriologically examined, was invariably found pure I ascertained from the town clerk that in previous years, when peace prevailed, it had been usual to graze a large number of cattle over this ground, yet former epidemics had been trifling in comparison with the one in question Hence, one was compelled to seek elsewhere for a cause. Fresh milk at this time was very scarce and tinned milk took its place to a large extent. Those inhabitants of the town who used fresh milk generally obtained it from a cow of their own, the troops, who were the chief sufferers, being supplied wholly with tinned milk, so that this source of infection had to be put out of court

It will be well to consider here the condition of the town and garrison at this time. Since its construction the town had been for the most part occupied by Boers whose ideas of general cleanliness might be taken as a negligible quantity Refuse had been allowed to collect in back yards and waste ground to such an extent that the town was a veritable rubbish bin and in addition those inhabitants who had abandoned their houses at the commencement and during the progress of hostilities had neglected to have their latrines cleaned and locked up before they left Several of these contained excreta several months old and kept in the best possible condition for breeding germs Natives and others finding them open had used them from time to time, so that their general filthy condition can be better imagined than described. Various units were camped in the vicinity of the town and at this time their ideas of sanitation were primitive in the extreme They were using open latrine trenches, with little or no attempt to keep the excreta covered and the men were most probably in the habit of urinating on the ground. I make this latter statement because I have found by practical experience that, unless special buckets are placed close to the men's tents at night, it is quite impossible to prevent the ground being polluted. The above condition of camps prevailed in spite of efforts made to remedy it, simply because there had been no time to institute a definite hygienic system. I found that it took months to train units into carrying out a systematic sanitary routine Columns would come into Harrismith for supplies from time to time and would camp within the outposts. These columns either considered sanitary measures superfluous or else did not consider them at all, for it was usual to find latrines uncovered and quantities of refuse on the ground after the columns had left. Native locations existed close to the town which were under little or no supervision, hence excreta and refuse of all kinds could be seen in the dongas and on the banks of spruits adjacent to these locations. As can be well understood, all this tended towards the breeding and maintenance of enormous quantities of flies which were constantly flying backwards and forwards between the excreta and food Indeed, their numbers were so great that one could only account for the fact that every one was not infected by supposing that many had become immune through constantly imbibing small doses of the poison.

At this time I was in command of a half field hospital and I found that whenever our column put into Harrismith for a few days for supplies numbers of the men suffered from diarrhœa and muco enteritis which usually came on from two to three days after our first camping near the town This was of such frequent occurrence that we were only too glad to start off on trek again. I am fully convinced in my own mind that this sickness was produced by the direct contamination of the food with fæcal matter conveyed by flies. To me it is quite conceivable that if flies can convey pollen from one flower to another they can also convey particles containing germs I have little doubt that the common house flies take an active part in fertilisation, as I have myself noticed that several species of flowers are visited by these insects. The recent experiments of Major C H. Hale, D S O, R.A M C, at Ficksburg lend confirmation to the theory of infection by flies Lime was sprinkled over an open latrine and a piece of raw meat was placed within a few yards of it It was found that within a comparatively short space of time the meat was covered with a layer of lime, this having been conveyed by the flies from the latrine to the meat. One of the arguments with which I have been assailed is that the town was as filthy and the flies were probably as many as in former years, yet that no previous epidemic was so severe. My answer to this is that it is doubtful if the town was ever so filthy before, for, as explained above, many of the inhabitants had left in a hurry, without attending to sanitary matters before leaving, and it was not until the present war that camps had existed all round the town But even leaving this out of account I do not claim that the flies determine the virulence so much as the *spread* of infection Once given the introduction to the town of a virulent form of enteric fever by the troops—and it is a recognised fact that this fever is never so virulent as during a campaign—the existing conditions of the town were such as to favour its spread by the agency of flies.

Harrismith, like most towns in South Africa, suffers severely from dust storms and it has been suggested that infection is carried by such means. It is only natural to suppose that the germs can be thus conveyed, but I do not think that in this particular epidemic this mode of infection was the chief one. It must be considered that for infection to be conveyed in this way it is necessary for the excreta, or other germ containing medium, to be first dried by the sun and air and so reduced to minute particles capable of being disseminated by the wind, but surely this very process of desiccation which it has gone through must have either killed, or at any rate devitalised, the germs, to a large extent, by the sterilising action of the sun. On the other hand, the flies are constantly flying to and fro between the infected matter in its fresh state and the food so that it is only reasonable to suppose that this source of infection must be far the more potent of the two

SANITARY PRECAUTIONS.

The sanitary measures adopted at Harrismith, though they include the usual precautions commonly recognised under this head, were in the main devoted to preventing the contamination of food with germs conveyed by flies and the possible infection by dust. These measures naturally came under three headings—viz. (1) the protection of excreta from flies, (2) the destruction of flies and prevention of their breeding, and (3) the protection of all kinds of food from flies.

1 *The protection of excreta from flies* —For this purpose it became necessary to employ some covering which would mechanically protect the excreta. If one could have been certain that a thick layer of dry earth would always be kept over the excreta and that the greatest care would be taken to exclude flies when the pans were being emptied, one would have been disposed to employ this method as being the most economical but knowing the difficulties in this respect and taking into consideration the virulence of the germs with which one had to deal, it became clear that some form of disinfectant which would at once serve the double function of keeping off flies and devitalising or destroying the germs should be employed. In choosing a suitable disinfectant for use with troops, it seemed to me to be a very important consideration to choose one which, in addition to having the above qualifications, would at the same time be easily visible to the inspecting sanitary or other officer and so would prevent the men from saying that they had used it when they had not All liquid disinfectants had the disadvantage that they sank to the bottom of the pans and in consequence neither formed a mechanical protecting layer nor left any visible evidence of their recent use. Powders, on the other hand, had neither of these disadvantages Hence, it was finally decided to employ a dry disinfectant and the one which seemed especially to meet the requirements was chloride of lime. Its odour kept the flies off more than ordinary lime and being white it could always be seen after use These advantages applied equally when it was used in excreta tubs and in urine tubs, for in the latter case it formed a frothy layer on the surface of the liquid The orders issued with regard to the use

of this disinfectant were to the effect that pioneers should be appointed at each camp and post to go round five or six times a day to see that the excreta and refuse were always kept covered and that the disinfectant was also used in the urine tubs. The men were directed to use the disinfectant freely before leaving the latrine, notices being placed in the latrines to this effect, and the non commissioned officers in charge of the posts were made personally responsible for the strict observance of these orders. Attention was directed to the question of disinfecting the urine as well as the fæces, for it seemed conceivable that infection might be conveyed by flies from ground on which infected urine had been spilt when the urine tubs were being emptied I found that as new units arrived it took from two to three months to drill them into anything approaching perfection in the carrying out of the above precautions, but the condition of the Harrismith outposts and camps at the time of writing was such that one may visit any number of these and yet rarely find any excreta or refuse visible. Corrugated iron latrine sheds were constructed for the excreta buckets. These, by protecting the contents of the pans from the light, materially assisted in keeping off the flies, as the latter will not so readily feed in the dark. An additional advantage was that stained latrine paper was prevented from being blown about. Prior to the introduction of these sheds it was no uncommon sight to see quantities of this paper being blown by the wind from place to place, especially when high winds prevailed

2 *The destruction of flies and prevention of their breeding* —Tons of refuse which had no doubt formed breeding grounds for these insects were removed from the town and its precincts In the case of the town this was accomplished chiefly by the aid of the military native prisoners, as the municipality could not afford to keep natives for this purpose, while the ground surrounding the town was kept clean by a sanitary corps specially formed for this purpose In addition, the inhabitants were encouraged to cultivate their waste ground as far as possible, as it was found that the soil which had been left undisturbed for some time contained quantities of eggs and young flies just hatching out. Special notices were distributed throughout the town calling attention to the danger of infection being conveyed by flies and the inhabitants were urged to do all in their power to destroy these insects It was found that the only satisfactory method for this purpose was to use Keating's powder This was dusted at night over the walls of kitchens and other rooms in which the flies tended to collect and also over the window sills during the day In this way, with the expenditure of comparatively little time and trouble, it was possible to destroy thousands of the insects daily in each house.

3 *The protection of all kinds of food from flies* —Meat safes made of perforated zinc were erected at every camp and post, and units were encouraged to construct fly tight boxes for the other rations such as bread and vegetables. It was also recommended that these boxes should be taken down to the supply depôt and the rations placed under cover as soon as they were drawn and so conveyed back to the unit with no danger of contamination during transit. Notices were distributed throughout the town to the same effect and the inhabitants were advised to protect their houses by fixing gauze screens over the windows. The best form of screen was found to be one consisting of a metallic gauze of fine mesh fixed to a wooden frame which was hinged to the outside supports of each window To clear a room of flies all that was necessary was to flick the walls with a fly wisp or cloth. The disturbed flies invariably settled on the gauze screen which was then opened and the flies were brushed out The closing of the screen again prevented other flies from entering

Other sanitary precautions were taken which, though they were not specially directed towards preventing infection from being conveyed by flies, in many cases indirectly assisted towards this end

Native sanitary corps —First and foremost among these must certainly be placed the formation of the native sanitary corps mentioned above The greatest possible difficulty was experienced at first in having carcasses and refuse removed promptly, owing to the scarcity of wagons and the fact that natives were only occasionally available for the work It often occurred that several weeks would elapse after these had been reported before they were removed this being especially the case during epidemics of rinderpest from which numbers of cattle died at different times The carcasses would be sometimes left so long that they became too decayed to allow of their removal and in consequence they often had to be buried where they lay This was especially objectionable when they had died in the vicinity of camps or on ground likely to be subsequently used for camping purposes, to say nothing of the unpleasantness caused by the foul odours which had been given off during the process of putrefaction Hence, it became imperative that some systematic removal and burial of carcasses and refuse should be inaugurated and to meet the difficulty a native sanitary corps was formed. This had for its *personnel* a combatant officer, a non-commissioned officer, three privates a conductor, an overseer, and 100 natives It was provided with 10 wagons, two Scotch carts, and two teams of oxen for drag purposes. Prior to the formation of this corps it had been customary for all units to remove their camp refuse in their own wagons which were at other times used to convey rations This formed a great element of danger from possible contamination of the food, as the non-commissioned officer in charge of the wagon, when drawing supplies, could not be trusted effectually to protect the rations. When the sanitary corps was formed this danger ceased, as the work of removal of camp refuse was undertaken by the corps as one of its routine duties.

Water —As explained above, the municipal water reservoirs were protected by a wire fencing at the time of the British occupation of the town, but the catchment area as a whole was not fenced in. The importance of taking this latter precaution without delay was pointed out by the principal medical officer of the 8th division, but many objections were raised to the scheme, the chief of these being (1) the difficulty of deciding whether this should be undertaken by the military or by the municipality , (2) the cost, which it was found would be very heavy, as several miles of fencing were required , and (3) the question of labour Colonel J L Notter, Professor of Hygiene, inspected the water supply on March 4th, 1901, and, seeing the danger of the water being polluted by cattle, recommended the construction of filter beds, but the objections raised to the first scheme applied far more to this, as the cost and labour necessary in this case were infinitely greater than in the former Early in November the whole of this area, from the reservoirs up to the Platberg, was inclosed and the Harrismith water supply could then be said to compare favourably with any in South Africa Although this practically raised the water above suspicion strict orders were nevertheless issued to the effect that all water used for drinking purposes or for washing plates, vegetables, &c , was to be boiled before being used and that water carts and tanks were to be cleaned out once a week with a solution of potassium permanganate. The same precautions were also taken with the men s water bottles. The use of Berkefeld filters was also encouraged as an additional precaution, but only a few of these were available

Ultimate disposal of excreta and refuse —As the various outposts and many of the camps round Harrismith were permanent it became in the highest degree desirable to prevent the ground from becoming contaminated more than was absolutely necessary With this object in view a pail system was adopted and arrangements were made that both the soil buckets and urine tubs should be emptied at least once a day Not a single outpost, however distant or difficult of access, was without this provision The work of removal was given over to a civilian contractor who arranged for the transport of the excreta, by means of tank carts, to a piece of ground lying well outside the town Urine tubs were ordered to be placed close to the men s tents at night, to prevent the pollution of the ground This allowed of the urine being disinfected and eliminated the danger which would have followed its drying on the ground and so infecting the dust.

Precautions at blockhouses —Precautions were also taken at the various blockhouses which formed the outposts of Harrismith. It was found when these blockhouses were first constructed that a layer of dust, consisting chiefly of dry earth, invariably formed on the floors and that this rendered it impossible to keep the ground clean It was therefore decided that all the blockhouses should be floored with a mixture of ant heap and water This, in drying, formed a hard level surface which could be easily brushed. It was also found that by frequently whitewashing the beams and interior of the blockhouses with a mixture containing chloride of lime the flies could be kept away to a very considerable extent

Notification of disease —A system was introduced by which the resident magistrate rendered a weekly report to me of the name and residence of any civilian suffering from enteric fever or dysentery, this information being regularly notified to him by the civilian practitioners of the town. On receipt of this report I visited the house and recommended any sanitary measures which I considered necessary to prevent the spread of the disease. In addition, I was also notified of the number of cases of these diseases in the Boer refugee camp, the report being sent by the superintendent through the resident magistrate. In No. 19 stationary hospital each case was most carefully investigated to ascertain whether it had been contracted locally or on trek. In the former case a report was sent to me giving the name of the patient and the camp from which he had been admitted. I visited these camps in a like manner and if the tent previously occupied by the man could be identified it was taken down, scrubbed, and moved to a new site and the ground on which it had been standing was then limed and left to the action of the sun and air for some time before being again used for camping purposes. Inquiries were always made to ascertain if the patient had been in the habit of frequenting any particular eating house in the town, but I never succeeded in tracing any particular case to this origin.

Removal of the hospital.—I think one may justifiably include this under the head of "sanitary measures." When the town was first occupied the school house and church, as being the most suitable buildings, were formed into a temporary hospital and remained as such from August 26th, 1900, to February, 1901, when No. 19 stationary hospital was sufficiently advanced in construction to allow of patients being transferred to it. This latter hospital consisted of wooden huts and marquees and was placed half a mile outside the town, so that there was far less danger of infection being conveyed by flies from the hospital to the town after the removal of the patients to this distance than was the case formerly.

The above particulars will give a fair idea of the general principles which were carried out. As to their efficacy Table I. will speak for itself.

CASES DURING SEASONS A AND B (TABLE I.)

Regarding the table of Season A and Season B I wish especially to draw attention to the column headed "contracted locally." The difference between the two years will be at once apparent.

The relative number of locally contracted cases in the two seasons was as follows:—Season A: Enteric fever, 631; and dysentery, 219. Season B: Enteric fever, 62; and dysentery, 30. Yet the total cases admitted were greater by 321 and 187 respectively in Season B than in Season A.

TABLE I.—*Showing the Total Number of Cases of Enteric Fever and Dysentery admitted.*

SEASON A.—*From August, 1900, to April, 1901.*

—	—	Contracted locally	Contracted on trek	Total	Returned to duty	Transferred	Died
1900							
Last week in August (six days)	Enteric fever	4	0	4	2	2	0
	Dysentery	7	5	12	11	1	0
September	Enteric fever	6	5	11	1	10	0
	Dysentery	3	1	4	4	0	0
October..	Enteric fever	8	5	13	5	6	2
	Dysentery	7	7	14	8	6	0
November	Enteric fever	40	28	68	0	57	11
	Dysentery	19	26	45	16	28	1
December	Enteric fever	95	26	121	1	92	28
	Dysentery	29	16	45	7	35	3
1901							
January ..	Enteric fever	141	43	184	0	165	19
	Dysentery	31	5	36	4	29	3
February	Enteric fever	103	17	120	0	106	14
	Dysentery	23	0	28	4	23	1
March ..	Enteric fever	120	1	121	5	99	17
	Dysentery	26	1	27	9	17	1
April	Enteric fever	114	0	114	36	70	8
	Dysentery	69	0	69	59	10	1
Totals	Enteric fever	631	—	756	60	607	99
	Dysentery	219	—	280	121	149	10

SEASON B.—*From August, 1901, to April, 1902.*

1901							
Last week in August	Enteric fever	0	0	0	0	0	0
	Dysentery	1	0	1	1	0	0
September	Enteric fever	2	23	25	4	20	0
	Dysentery	0	2	2	2	0	0
October	Enteric fever	4	23	27	5	0	1
	Dysentery	0	0	6	6	0	0
November	Enteric fever	3	18	21	5	33	1
	Dysentery	3	28	31	12	2	0
December	Enteric fever	3	27	30	1	2	0
	Dysentery	9	36	45	31	0	2
1902.							
January	Enteric fever	17	130	147	3	101	0
	Dysentery	11	119	130	41	75	2
February	Enteric fever	9	363	372	16	226	15
	Dysentery	0	110	110	37	87	0
March	Enteric fever	7	312	319	11	247	17
	Dysentery	4	96	100	13	72	2
April	Enteric fever	17	119	136	20	156	7
	Dysentery	2	40	42	20	26	4
Totals	Enteric fever	62	1015	1077	65	765	41
	Dysentery	30	437	467	163	262	10

A comparison of the number of cases admitted during the various months shows that in Season A the month with the largest number of admissions for enteric fever was January and that with the largest number for dysentery was April, whereas in Season B the months showing the largest number of admissions were February and January respectively. Very little can be deduced from this, as the number admitted in any one month was necessarily influenced by the number of columns operating in the neighbourhood, which was by no means a constant quantity, but it is satisfactory to note that, although in Season A during the months mentioned most of the admissions for enteric fever and all those for dysentery were locally contracted, in Season B nearly all the cases were contracted on the veldt. In the locally contracted cases which arose in the hospital itself the patients were orderlies actually attending on the sick, and the latter were men who had been admitted to the convalescent camp from the hospital only a few days before developing symptoms of enteric fever and who had no doubt caught the infection in the hospital. As these cases were beyond the influence of sanitary measures applied to the garrison at large they should, strictly speaking, have been eliminated from this report, but it was impossible to strike out cases contracted in this way in Season A as no record was kept of these, so that for the sake of comparison they had also to be included in the figures of locally contracted cases in Season B. It will be seen that of the 62 local cases of enteric fever 1 per cent. was contracted in the hospital and 2 per cent. were contracted in the convalescent camp and of the 30 local cases of dysentery two were contracted in the hospital, leaving only 41 cases of enteric fever and 28 cases of dysentery for the garrison itself.

DEATHS (TABLES II. AND III.)

The most significant figures are to be found in Tables II. and III., for they show that although no less than 81 of the 99 deaths which occurred from enteric fever in Season A were of cases locally contracted *not a single locally contracted case died during Season B*. Similarly, with dysentery in Season A nine of the 10 deaths were locally contracted,

TABLE II.—*Showing the Number of Deaths from Enteric Fever in Season A as compared with those in Season B, distinguishing those contracted locally and on trek.*

-	Oct		Nov		Dec		Jan.		Feb		March		April	
	Locally	On trek	Locally	On trek	Locally	On trek	Locally	On trek	Locally	On trek	Locally	On trek	Locally	On trek
Season A.	2	0	6	5	20	8	16	3	12	2	17	0	8	0
Season B	0	1	0	1	0	0	0	0	0	15	0	17	0	7

Total deaths from enteric fever .. { Season A 99 of which 81 were locally contracted
Season B 41 0

ABLE III —*Showing the Number of Deaths from Dysentery in Season A as compared with those in Season B, Distinguishing those contracted locally and on trek.*

—	Oct.		Nov		Dec.		Jan		Feb.		March		April.	
	Locally	On trek	Locally	On trek	Locally	On trek	Locally	On trek	Locally	On trek	Locally	On trek	Locally	On trek
eason A.	0	0	0	0	0	2	0	2	0	0	0	2	0	4
eason B...	0	0	0	1	3	0	3	0	1	0	1	0	1	0

otal deaths from dysentery { Season A, 10 of which 9 were locally contracted.
{ Season B 10, , 0

TABLE IV —*Showing the Number of Civil Cases of Enteric Fever treated by Private Practitioners in Harrismith* *

—	No of cases.	Deaths
Season A	145	10
Season B	54	2

* No accurate returns of deaths from dysentery could be obtained

while *no local case died in Season B*[1] This proves that the virulence of the epidemic in Harrismith had decreased in a very remarkable degree in spite of the fact that the disease was very severe on the veldt.

PERCENTAGE OF DEATHS.

Enteric fever —The percentage of deaths on the total cases of enteric fever dropped from 11 7 per cent. in Season A to 3 8 *per cent.* in Season B This coupled with the fact that the percentage of deaths from cases contracted on trek in Season B was between a third and a quarter of that of Season A, shows that the epidemic as a whole, affecting individuals both on the veldt and in the town, was undoubtedly less severe in Season B than in Season A, but in the case of the locally contracted cases the percentage of deaths fell to 0 per cent. in Season B *as against* 11 1 *per cent. in Season A*—a far greater fall in proportion and one which may reasonably be attributed to the sanitary precautions taken. In other words, the difference of severity between the two seasons was remarkably greater in the cases locally treated than in those contracted on the veldt

This is at once an answer to the argument that the reason for the lessened severity of the fever in Harrismith in Season B was due to this disease tending to vary, being less severe in some years than in others, for it is apparent that although the severity of the total epidemic was less, the disease in Harrismith was of a far less severe type than that on the veldt.

Dysentery —The severity of the epidemic of this disease, both on the veldt and in the town, is also shown to be less in Season B than in Season A, the deaths having dropped from 3 6 per cent. *to* 2 1 *per cent*, but this can be shown to be wholly due to the lessened severity of the disease in Harrismith, as the figures show that there was actually a higher mortality on the veldt (2 3 per cent.) in Season B than in Season A (1 6 per cent.) This likewise is an answer to the argument mentioned above

CIVILIANS SUFFERING FROM ENTERIC FEVER (TABLE IV)

As one of the local practitioners did not keep a record during the first season of the number of dysentery cases which he treated I have not been able to obtain statistics of this disease for comparison, so I am only showing the cases of enteric fever It will be seen that in Season A the total number of cases treated was 145, the patients in 10 of which died, while in Season B the total was 54, of which two died.

As these two were the only cases out of the whole garrison and town which died during Season B it will be of interest to see what kind of cases they were, in order to account for their fatal termination. One was that of an old lady who had suffered from asthma for many years and who died from heart failure. The other was that of a child, ten years of age, who died from meningitis complicating the enteric fever

CIRCUMSTANCES ACTING IN ANTAGONISM TO HYGIENIC MEASURES.

There are several of these which in themselves were sufficient to account for the local cases of enteric fever and dysentery during Season B

Boer concentration camp —I looked upon this camp as a very great menace to the health of the garrison and town. Enteric fever and dysentery existed among the refugees in a severe form, and but for the barrier formed by the stringent measures in force they would no doubt have spread beyond the camp Indeed, it is more than probable that several of the local cases were due to germs conveyed in this way This camp was under the civil administration and the general health of the garrison and town so largely depended on its being kept in a sanitary condition that it became necessary for me to inspect it frequently in my capacity of civil sanitary officer I found it impossible to get my recommendations carried out thoroughly, this being specially the case with regard to the protection of the excreta from flies. A few suggestions, however, bore fruit and notably those for the installation of an incinerator for the destruction of infected excreta from the hospital and the thorough disinfection of all hospital linen Although it is almost beyond belief that human beings could become so degraded, it is none the less a fact that women in this camp were known to throw excreta into other women s tents as an act of spite and the sergeant living in the camp informed me that it was no uncommon thing for the Boers to use their tent walls in place of latrine paper From this it can be easily judged how difficult the task of the superintendent must have been to instil cleanly principles into these people and how great was the danger of the spread of disease from this camp during an epidemic.

Natives.—Probably the next greatest menace was from the natives. We have to consider the permanent native locations, and in addition several thousands of native refugees who were brought in from the veldt and camped in the vicinity of the town. My recommendations to the civil authorities were practically ignored, with the result that when Professor Simpson made his inspection I was able to show him human beings living under the most startling insanitary conditions which it would be possible to conceive. It would take up too much space to give all these in detail and it would be unnecessary for the purpose of this report Fortunately the danger was realised in time and these camps were broken up and the natives were sent down the line to other locations near Albertina The work of removal took some months and all this time the town was exposed to danger from this source—a danger which can hardly be overestimated, as many of these natives were suffering from enteric fever and dysentery at this time. It takes some time to accustom natives to the use of latrines and it often happens that, although these are provided for them, they prefer to make their way to some donga or spruit In order to prevent this native policemen were posted over likely dongas and any native caught polluting then was made an example of but it can be readily understood that it was impossible entirely to suppress this evil. As it was not unusual for natives suffering from mild enteric fever or dysentery to refrain for some time from reporting themselves to be sick, the danger from this source can be easily appreciated. One very dangerous habit of the natives which I discovered was that of using stones in lieu of latrine paper At one time it was not unusual to find a latrine full of these stones, any one of which might be covered with pathogenic micro-organisms. I had all these stones regularly removed at the time that the excreta buckets were emptied. Disinfectants were also freely used in these latrines.

Mobile columns —Although units which were camped for some time round the town could be drilled into carrying out systematic sanitary principles it was quite otherwise with those columns which merely stayed in the vicinity of Harrismith for a short time The ground became so fouled by these that recommendations were strongly made to the general officer commanding to the effect that all such columns should be ordered to camp outside the outposts. If it became imperative that such a column should camp within the outposts latrine buckets were supplied to it at once and the sanitary corps cleaned the ground immediately after it had left. Occasionally detachments would be ordered into Harrismith from places such as Tyger's Kloof in which enteric fever or dysentery was prevalent. These were a menace to the whole garrison. Especial care was taken to instil the principles mentioned above into these detachments and the grave consequences which would follow neglect in the carrying out of these were pointed out to them.

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[1] In case it may be said that the above figures were due to more of the serious cases being transferred in Season B than in the other I may here say that this was not the case, as in both seasons especial care was taken to retain all serious cases until they could undertake the journey without danger

Disposal ground for refuse, carcasses, and excreta —This is unquestionably a very great blot on the hygiene of Harrismith. From its proximity to the river it must necessarily foul the water and it forms an attraction and breeding ground for quantities of flies. Until some more sanitary form of disposal is introduced this will always be a source of danger to health. The questions of changing the site of the ground and of the installation of incinerators has been frequently mooted, only to be overruled by a number of objections which for the time being it was impossible to overcome. It would take up too much space to go into all these in this report, but it may be said that the main difficulty in the way is the lack of municipal funds. I am fully convinced that in years to come, when trees have been planted around the town, when an effective method of disposal of refuse has been introduced, and when the inhabitants have been educated into the carrying out of common sense sanitation there should be no more salubrious spot in South Africa than Harrismith.

In considering the fall in the mortality which occurred in Season B one cannot ignore the fact that the altered hygienic conditions under which the cases were treated in No 19 stationary hospital probably assisted towards this end, but as all cases (both those contracted on the veldt and in the town and garrison) were treated under the same conditions this will in no way affect the fact that the mortality-rate of the cases contracted on the veldt was much higher than that of those contracted in the town and garrison

Stanley gardens, W

A CASE OF ACUTE TETANUS WITH CERTAIN POINTS OF INTEREST

By L. DIMOCK SAUNDERS, M R.C S Eng, L R.C P Lond

THE patient, a man, aged 38 years, was thrown from a dogcart on to a rough bank on Feb 2nd, 1903, and he sustained a somewhat deep and lacerated wound just above the left knee-cap, and several scratches about the hands and face. Within an hour after the accident he was taken to the Salisbury General Infirmary where the wounds were carefully washed and dressed with carbolic lotion and the cavities were stuffed with iodoform gauze He came under my care on the following day and I continued personally to dress the wound which appeared to be making uninterrupted progress towards recovery, the edges of the wound freely granulating and gradually contracting On the 12th everything appeared perfectly satisfactory The patient was cheerful, in good spirits, and made no complaint of any discomfort in the wound. On the afternoon of the 13th word was brought to me that slight difficulty in speaking was noticed. I went immediately to see the patient and I found that there was a distinct change in the voice and in the expression of the face, the masseters and sterno mastoid muscles were becoming tense. He also complained of aching pains in the jaws and shoulders The temperature was normal, the pulse was 60, and the heart sounds and the lung sounds were normal. The teeth could be separated about three-quarters of an inch As the patient was slightly constipated four grains of calomel were given. Antitoxin was immediately telegraphed for and it arrived that night, 10 cubic centimetres being injected into the lumbar region at 11 P M, 15 grains of chloral hydrate were also administered and I ordered him to be given as much of meat jelly essence, beef tea, and milk as he would take. On the 14th at 10 30 A.M the pulse was 96 and the temperature was normal. The teeth could now only be separated about a quarter of an inch. 10 cubic centimetres of antitoxin were injected. Dr H. P Blackmore, who saw the patient with me at 1 P M, confirmed the diagnosis and advised following on with the same treatment. At 9 30 P M 10 cubic centimetres were again injected. The patient was now very restless and the abdominal muscles were quite rigid. The muscles of the legs and arms were unaffected. The pulse was 130, the temperature was normal, and there was profuse perspiration. The hands and feet were very cold. Hot bottles were applied to the extremities and 30 grains of chloral hydrate were administered On the 15th at 10 A.M. the teeth could only just be separated, but the patient could still swallow without difficulty The pulse was 148 and the temperature was normal The abdominal muscles were very hard though there were no general spasms, the patient was much warmer but still he was perspiring profusely 10 cubic centimetres of antitoxin were injected. At 3 P M. the patient was very excited and for a short time before my arrival he had persistently refused to take food (previously he had been taking it well) The temperature was 101 8° F and the pulse was very rapid but of good volume. I now noticed for the first time momentary spasms of the opisthotonos variety of the muscles of the back and legs. The jaws were tightly clenched but owing to the irregularity of the line of the teeth food could still be easily administered by pouring the liquid within the inside of the cheek. The patient complained of a pain just below the heart which gradually increased in intensity The opisthotonos now gradually became more marked, though never of great severity, and the patient died quietly at 6 P M, apparently free from pain.

The antitoxin used was that supplied by the Pasteur Institute. Constipation was obstinate throughout, notwithstanding the administration of calomel and other aperient drugs

This case of acute tetanus appears to me to have the following points of interest 1. The antitoxin apparently had no effect whatever on the course of the disease 2. No premonitory symptoms were complained of before the onset of the disease on the eleventh day after the accident. 3 Although the pulse gradually increased in frequency the temperature was normal and it only rose to 101 8° F just before death. 4 The opisthotonos spasms were comparatively slight and unaccompanied by pain and were only noticed a few hours before death. 5 The end came quite quietly and painlessly and apparently was due to sudden heart failure. The patient was quite conscious to the end and was able to swallow his nourishment without much difficulty At the time of the accident the patient was in good health and had no history of previous illness

Salisbury

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

NOTE ON AN UNUSUAL FORM OF VESICAL CALCULUS

By HERBERT W PAGE, F R C S Eng,
SENIOR SURGEON TO ST MARY'S HOSPITAL, LONDON

BY suprapubic opening I removed from the bladder of an idiot boy admitted to hospital on Dec 9th, 1902, a calculus of such singular formation as to make it worthy of a short note in THE LANCET

The patient, aged seven years, was sent up from a village in Oxfordshire with the history of having begun in August last to show difficulty in passing his urine and to have abdominal pain. Not until three weeks before admission was a medical man consulted and by him he was sent to St Mary's Hospital. The child was then suffering agonies of pain which were most distressing to witness and at frequent intervals he was passing small quantities of alkaline urine containing pus and blood. Stone was suspected and Mr Nicholson, my house surgeon sounded but could feel nothing The bladder would not hold more than an ounce of fluid Nepenthe and fomentations were ordered, but there was next to no relief from pain On Dec. 11th I had the patient anæsthetised with a view to removal of the suspected stone by lateral lithotomy, but when I sounded I could feel none. I found it impossible to inject more than half an ounce of fluid into the bladder Now, however, there was to be felt a hard lump in the hypogastrium and as manipulation enabled me to pass the sound higher than before it was thought that the lump felt through the abdominal wall might be a calculus lodged in a bladder diverticulum near the fundus But the sound struck no hard substance. Lateral lithotomy was out of the question and accordingly I opened above the pubes and removed a calculus which Mr W H. Clayton Greene, the surgical registrar, has thus described "The mass was about the size of a large walnut and consisted of some 10 to 12 layers of laminated tough material in appearance like wash leather and like the decolourised blood clot from an aneurysmal sac The layers could be separated without difficulty In the centre of the mass was found a soft friable nucleus of mixed urates and phosphates about as large as a kidney bean This was doubtless the origin of the trouble and round it blood had been deposited in laminæ which had gradually been decolourised." No bladder pouch was discovered and it is not easy to account for the deposition of laminated blood clot round a nucleus subjected, as it must have been, to the perpetual wash of urine. I have never seen anything like it before. After the operation the child was kept in a warm bath and recovery was uninterrupted He very soon lost his pain and began to take as much interest in his surroundings as his idiot state would allow He was discharged well on Feb 10th.

THE MICROSCOPICAL OBSERVATION OF THE GLYCOGEN REACTION

By DR. G SPEZIA.

THE *microscopical reaction* with iodine showing the presence of glycogen in the white corpuscles may occur under both physiological and pathological conditions

Physiologically I have observed it in the human subject during the digestive leucocytosis following hearty meals Studying this phenomenon in guinea pigs which did not show this reaction in their blood I succeeded in producing it very distinctly, not only with injections of peptone into the peritoneal cavity as Gabrietschewsky did, but I obtained it even with subcutaneous injections of fats (olive oil), albuminoids (peptone), and carbohydrates (glucose) Physiologically, I have observed it also in pregnant guinea pigs. I therefore place on record this reaction with the formation of glycogen by the action of various diastases from various nutritive materials which exert a positive chemiotaxic action.

Pathologically, I have observed that it is always accompanied by hyperleucocytosis in excess of that which has long been known to occur in suppuration and that it is manifested in the polynuclear neutrophile cells, it is found in inflammatory foci and also in the blood In the blood it is the more evident in proportion to the closeness of the relations between the blood and the organs affected (as in croupous pneumonia, for instance)

The glycogenic reaction of the anæmias is found also in the hæmopoietic organs. This reaction is very evident in the sputa in inflammatory diseases of the lungs, in these cases I have observed it, not only in the white corpuscles, but also (and I believe that I was the first to do so) in the large phagocytes in which karyokinetic figures were displayed.

This reaction is the expression of a resistance of the organism to toxic agents, whatever be their origin, whether bacterial or not, a resistance which places in a circle (*il quale mette in circolo*) a substance (glycogen) which must serve to arouse an increased degree of defensive activity, as is proved by the following facts 1. This reaction is manifested after the injection of various nutritive substances. 2 In pathological cases it attains its highest point in the inflammatory centre, as, for instance, in the *foci* of pneumonia or broncho pneumonia, in which I have observed droplets of glycogen of a size from 0 5 μ to 20 μ (from 0 00002 to 0 0008 of an inch) 3. It is greater in severe toxic affections than in mild ones. 4 It is accompanied by hyperleucocytosis 5 It is accompanied by evidences of cellular division (for example, in tumours)

Turin.

NOTE ON A CASE OF HYDATID CYST OF THE SPLEEN

BY FRANK R. SEAGER, L.R.C P, L.R C S. EDIN, L.F P S GLASG,
HOUSE SURGEON SALOP INFIRMARY SHREWSBURY

A BOY, aged 11 years, was admitted into the Salop Infirmary on Jan. 11th, 1903, under the care of Mr A. Jackson, the senior surgeon complaining of "a lump in the stomach on the left side" The history of the case was that four months previously he had first noticed a swelling below the ribs on the left side. The size of this swelling was not at first definitely noticed and there was no pain, but it gradually increased and the lad began to experience slight pain which he likened to "stitch." It was now noticed that the swelling varied in size, being larger after a meal and at night. There was no sickness and the pain was not aggravated by taking food The bowels acted regularly The family history was very good. As regards the habits of the boy it was elicited that he was fond of accompanying keepers in beating for game and that he used to drink freely of the water in brooks and to eat watercress which was plentiful in his neighbourhood. Physically he was robust and well nourished. In the abdomen a swelling of the size of a small orange was distinctly noticeable in the left hypochondrium projecting from below the costal margin, with its centre just internal to the nipple line. Palpation of the tumour, beyond giving the sense of a cystic swelling, revealed nothing to suggest its nature or as to which was the organ affected The percussion note was resonant over the tumour There were no increase in splenic or renal dulness, no pain or tenderness on manipulation, and no appreciable movement with inspiration. The urine showed a trace of albumin. The diagnosis was thought to lie between a hydro-nephrosis or a hydatid cyst of some part.

Two days after admission an incision was made under an anæsthetic over the tumour and on opening the peritoneal cavity the spleen at once presented in the wound, with two-thirds of its anterior surface occupied by a tense shining, yellow coloured tumour which fluctuated on palpation. This was tapped and fully half a pint of clear limpid fluid was drawn off. The wound made by the tapping was then enlarged and a thick cyst-wall was shelled out in the ordinary way The wall of the cavity was then stitched to the skin, a tube was inserted, and the rest of the wound was stitched The boy made an uninterrupted recovery The cyst was single with no daughter cysts.

For permission to publish this note, which I hope may prove of interest from the diagnostic point of view, I am indebted to Mr Jackson.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON

The Excretion of Alkalies in certain Conditions of Renal Disease —Ehrlich's Dimethyl (p) Amido-benzaldehyde Reaction.—The Relation existing between Uric Acid Excretion and the Breaking Down of White Blood Corpuscles

A MEETING of this society was held on March 3rd, Dr W D HALLIBURTON the Vice-President, being in the chair

Dr W P HERRINGHAM read a paper on the Excretion of Sodium and Potassium in cases of Renal Disease. In experiments on the toxicity of urine when injected into the blood of animals, an account of which was given to the society three years ago, he had been led to disbelieve Bouchard's explanation and to conclude, with Feltz and Ritter Astachensky and others, that all the symptoms seen in rabbits might be accounted for by the potassium salts held in solution. There was no necessary connexion between the toxicity of urine and uræmia Indeed, it seemed to him probable that uræmia was not due to the retention of any normal product but to something abnormal. Nevertheless, he had thought it advisable to examine the excretion of sodium and potassium in renal disease to see if it varied from the standard of health. The standard of health was not, however very certain, it varied within considerable limits He had expected that if any marked change occurred in cases of nephritis it would be in the excretion of potassium. He found on the contrary, that the great variation was on the side of sodium. In patients who died there was found a great, in some cases a complete, retention of sodium He had made 16 analyses in 11 cases of chronic interstitial nephritis and of these six were fatal. In every one of them the sodium excretion was *nil* or very small. It was not so in any of the five cases which did not end fatally

He had made 20 analyses in nine cases of diffuse or parenchymatous nephritis and of these two were fatal Both showed complete absence of sodium from the urine on one or more days None of the seven cases in which recovery resulted exhibited this Thinking it might be due to diet or that the sodium might be passed in the fæces he had in one case of interstitial and in one case of parenchymatous nephritis analysed the diet, the urine, and the fæces for a series of days These were included in the numbers given above. A man aged 47 years, who died from chronic interstitial nephritis, with a dilated, hypertrophied, and fibrous heart, took during the last four days of life food containing 10 2 grammes of potassium and six grammes of sodium and excreted over 13 grammes of potassium but no sodium at all. A girl, aged 17 years, the subject of severe parenchymatous nephritis, took during eight days food containing 13 grammes of potassium and five grammes of sodium and excreted 13 grammes of potassium and 2 4 grammes of sodium (This close approximation of *ingesta* and *egesta* was considered accidental It was beyond what was possible in an investigation of this kind) On three of these days she excreted no sodium at all by the urine She did not die till 30 days after the end of the experiment. A man, aged 38 years convalescent from pleurisy, was used as a control In 11 days he took food containing 23 9 grammes of potassium and 9 3 grammes of sodium, and excreted in urine and fæces together 20 9 grammes of potassium and 10 1 grammes of sodium The sodium was wholly excreted by the urine, the fæces containing none. That the excretion of urea and salts was uneven in renal disease had already been shown by van Noorden and his pupils. The diseased kidney did not accommodate itself to change so quickly as the healthy, but that did not apply to those patients who had been on the same diet for a long time The results were very remarkable and if the absence of sodium was proved by further researches to be really an indication of fatal cases the analysis would be of importance in prognosis Retention of sodium was not, however, peculiar to Bright's disease. Salkowski had already shown it to occur in several acute fevers. Dr Herringham had also found it in two cases of large ascites repeatedly tapped In one of them there was no sign whatever of kidney disease, but the other was a doubtful case. The latter had left the hospital and could not be traced , the former was still an in patient. The retention could not be supposed to be due to inability of the kidneys to excrete sodium while excreting potassium freely It must be due, therefore, to some need of sodium within the organism. In the case of a large ascitic effusion yielding roughly 20 pints every fortnight of a fluid containing 0 3 per cent of sodium the need was obvious But this did not seem to apply to the cases of interstitial nephritis which had little œdema. Dr Herringham said that he owed special thanks to Dr Kennedy Orton and to Dr Hurtley, who had invented and elaborated the analytic process used, and to Dr Hurtley for his coöperation, without which the analyses, which were very long and laborious, could not have been performed. —Dr G O Garratt said that the retention of sodium in the body in the form of sodium chloride might be for osmotic purposes, or if not retained as sodium chloride the purpose could only be conjectured This retention of sodium chloride within the body had been observed by Prout in persons about to die and it had been found that after death from uræmia there was an excess of sodium chloride in the tissues. He suggested that the alteration in the osmotic tension of the blood in uræmia was in some way related to the retention of the sodium salts In fevers he had never found complete absence of sodium salts in the urine. If sodium citrate was given in fevers it was retained until the fall of temperature and presumably for the purpose of neutralising some acid condition He was of the opinion, however, that the sodium salts were retained in renal disease for osmotic purposes —Dr R. Hutchison referred to the retention of chlorides in pneumonia, which he said had been attributed to cloudy swelling of the renal epithelium which frequently accompanied that disease. He doubted the observation and had undertaken some investigations as to the excretions of chlorides in renal disease and in all the cases examined (which were not advanced cases of renal disease) he had always found a fair amount of chlorides. He considered that the absence of sodium salts in the urine of the cases cited by Dr Herringham was probably accounted for by the retention of the excess of serous fluid in the tissues owing to the imperfect secretion of water from the body which might be present in the later stages of renal disease.—Dr Herringham, in reply, said that the amount of chlorides generally varied directly with the sodium. The sodium was probably retained in the body as sodium chloride He agreed with the last speaker that the sodium chloride was probably retained within the body in the serum in the tissues.

Mr H. W Armit read a paper on Ehrlich's Dimethyl (p) Amido-benzaldehyde Reaction. He said that dimethyl (p) amido-benzaldehyde had the formula of $C_6H_4 - COH - N(CH_3)_2$ and was found by Ehrlich to unite with a constituent of normal and pathological urine, forming a red-coloured body The chemistry of this combination was not exactly known, but Ehrlich believed that the methylene group of the reagent joined with the unknown body in the urine, which he believed contained a pyrrol ring Proescher had studied the chemistry of the red compound and gave as its approximate empirical formula $C_{16}H_{24}O_6N_2$ which would give the formula of the unknown body as $C_7H_{15}O_6N$, after subtraction of O and addition of water After dealing with some points of the chemistry of the reagent Mr Armit pointed out that other observers had employed a somewhat inexact method of testing in the cold but he had come to the conclusion that the test could be more usefully applied by the following method. To one cubic centimetre of urine, heated to frothing, 0·01 cubic centimetre of an acid solution (2 per cent.) was added and if the urine was coloured cherry red the reaction was positive, while if the drop was seen to fall through the column of urine like a red worm, or when on the addition of more drops the froth was tinted, and the colour only appeared on the addition of two such drops he called it a colour change of the second degree, and when the colour appeared on the addition of the third drop a colour change of the third degree. Clemens had tested a number of pathological urines, but his results were irregular Koziczkowsky had used another method and had obtained results more like those which Mr Armit had obtained. Among his cases of gastro-enteric diseases he obtained good positive reactions in two out of eight cases of typhoid fever during the acute stage, while five gave less good reactions. None of the 35 cases convalescent from typhoid fever gave reactions Of three cases of acute appendicitis, one, which was complicated with fæcal fistula and pneumonia, gave a positive reaction and the other two gave no reaction, the abscess having been opened in both Of the cases of gastritis, only three gave second and third degree colour changes A number of other diseases were mentioned which gave no reactions In acute infective processes no reaction was obtained in rheumatic fever, rheumatic endocarditis, variola, or erythema nodosum , two cases of pneumonia gave positive reactions, while two gave colour changes of the third degree. In both the cases where a positive reaction was obtained the patients were very acutely ill One case of diphtheria during the acute stage gave a colour change of the second degree and was a moderately bad case, while two others which had been treated with antitoxin with apparent success gave no reaction Of six cases of scarlet fever during the acute stage two gave colour changes of the second degree, one a colour change of the third degree, and three no reaction. None of the convalescing patients (fever) gave a reaction. One case of vaccinia, which was admitted into hospital with the diagnosis of typhoid fever and in which the patient was acutely ill, gave a positive reaction 85 patients suffering from pulmonary tuberculosis were examined in this way 16 gave reaction up to the third degree and eight gave positive reaction, including one case of acute phthisis in whose sputum many cocci as well as tubercle bacilli were found A second case of acute phthisis, where tubercle bacilli were present in the sputum in almost pure culture, showed no reaction. No reaction was met with in miliary tuberculosis One case of bronchitis gave a change of colour, probably of the second degree , all the others gave no reaction. In influenza the antipyrin prescribed for the pains produced some colour changes. In infective endocarditis all the cases gave a positive reaction In early septicæmia and in the severer forms of sapræmia the reaction proved positive. In all he examined over 350 specimens of urine The diazo test did not correspond with this test Since all the patients who gave positive reactions were in fever and were sweating he sought to find out if sweating could produce it. Injecting pilocarpin nitrate into himself only increased the reaction slightly, as did hard exercise. Mr Armit came to the conclusion that the unknown body was either excreted in larger quantities or was manufactured in larger quantities under certain conditions of increased destructive metabolism, and he believed that the action of certain toxins especially some coccic toxins, produced it. From a clinical point of view he regarded the positive reaction as indicating a very grave prognosis and he pointed out that while a colour change of the second degree might assist to a correct diagnosis in some circumstances a positive reaction when there was clinical evidence of endocarditis pointed to the affection being infective The colour combination could be demonstrated in the tissues and he described some experiments on rabbits which showed that the unknown body was stored up in large quantities in the perichondrium and in smaller quantities in the white matter, kidney, liver, and mesentery in animals which had died from diphtheria toxæmia Papenheim suggested that the body was urobilin, but Mr Armit was able to disprove this. The urine of a horse suffering from tetanus gave the reaction well Horse's urine was supposed to be free from urobilin, and in this case Jaffé's and Gerhardt's tests were negative. The filtrate after precipitation with acetate of lead gave some colour change. Urobilin was increased in all cases of pyrexia, while the unknown body was not constantly increased. Several compounds were capable of joining dimethyl-amido benzaldehyde to form red colour bodies, but Mr Armit came to the conclusion that the pathological reaction was formed by the union of the reagent with only one body, the chemical nature of which was not known. It might contain either a pyrrol or a benzol ring — Dr A. E. GARROD criticised the correctness of the formula of urobilin given by Mr Armit.—Dr P HORTON SMITH asked whether the presence of the reaction in patients with chronic tuberculous disease was of grave prognostic significance — Mr ARMIT, in reply, said that the prognosis was bad in cases of chronic pulmonary tuberculosis in which the reaction was present.

Dr O K WILLIAMSON read a paper on the Relation existing between Uric Acid Excretion and the Breaking Down of the White Blood Corpuscles The conclusions arrived at by previous workers at this subject did not agree. Horbaczewski, however, demonstrated the relationship experimentally, whilst of the clinical observations those of Kühnau alone carried conviction. It was pointed out that isolated observations of uric acid excretion and of the white blood count at a corresponding time were of less value than continuous observations extending over a considerable period of time showing the corresponding variations. The observations recorded, therefore were carried out on the latter lines. The object aimed at was to determine whether an increased destruction of the white corpuscles as opposed to a diminished production was followed by an increase in the excretion of uric acid. This increased destruction would seem to be taking place, firstly, whenever a fall in the number of white corpuscles was followed by a rise in the amount of phosphoric acid excreted , secondly, a diminution in absolute number of the older forms of the white corpuscles, whilst the young cells did not correspondingly diminish would also point to an increase in destruction If, however, the young cells as distinguished from the older forms, diminished markedly in number this would indicate a diminished production. In order, then, to determine the times of increased destruction daily estimations of the amount of phosphoric acid in the urine were made and, corresponding to the daily white blood counts, differential counts from stained films. Eleven patients, most of them suffering from pulmonary tuberculosis, were chosen for the observations which were recorded in tables and curves. These showed (1) that in nearly every case in which a rise of the phosphoric acid curve followed a fall in the white corpuscle curve this rise corresponded with a rise in the uric acid curve , (2) that in the majority of cases confirmatory evidence of increased destruction could be obtained from a study of the differential counts , (3) that in those cases in which there were sudden and marked variations in the white corpuscle curve there were similar variations in the curves of uric and phosphoric acid , and (4) that in the case of the children the amounts of phosphoric acid and uric acid excreted were relatively greater than in the case of the adults and that the rises in the curves of phosphoric and uric acid followed more rapidly on the fall of the white corpuscle curve than in the case of the adults.—Dr HALLIBURTON said that he thought that it had been proved that uric acid originated from nuclein, either from the food or from the metabolism of the body He considered that undue stress was often laid upon the conditions of the leucocytes and investigators forgot the small volume occupied by the white corpuscles. If all the white blood corpuscles were destroyed every day the products of destruction would only form a very small quantity of the uric acid often excreted. The glandular cells of the liver, lymphatic gland, and other tissue contributed the larger share of the uric acid.—Dr W D'E EMERY suggested that the phosphorus resulting from the destruction of the white cells was often retained within the body and was not excreted.—Dr HUTCHISON asked if Dr WILLIAMSON had made any observations with regard to the condition of the uric acid secretion in cases in which there was a diminution of white corpuscles.—Dr WILLIAMSON replied.

CLINICAL SOCIETY OF LONDON

Exhibition of Cases

A MEETING of this society was held on Feb 27th, Mr HOWARD MARSH, the President, being in the chair

Mr LEONARD S. DUDGEON exhibited three cases of Volkmann's Contracture. The first case was that of a child, aged five years, who had fractured the right upper arm near the elbow joint in December, 1900 When put in plaster the fingers had become swollen and cyanosed and a pressure sore had formed on the flexor aspect of the forearm. In January, 1903, the forearm was found to be shortened and strongly pronated, the position of the hand and fingers being quite typical. Passive movement, massage, and faradism had resulted in very slight improvement The second case was that of a boy, aged nine years, who had met with an injury to the left forearm two and a half years before. A pressure sore had also resulted in this case In March, 1901, the patient was taken to St Thomas's Hospital and the electrical reactions showed partial reaction of degeneration. There was also partial motor and sensory paralysis in the region of the forearm. In February, 1902, Mr H. H. Clutton had performed resection of the radius and ulna. Under daily massage great improvement had taken place. The third case was that of a boy, aged eight years, who had injured the left forearm in December, 1901, after which the arm became shrunken, the fingers contracted, and there was sloughing on the forearm. In September, 1902, the child was taken to St. Thomas's Hospital, the hands and fingers then being in the typical position. In October Mr Clutton excised three quarters of an inch from the radius and ulna Great improvement had resulted.

Mr H B. ROBINSON showed a case of Dislocation of the Long Tendon of the Biceps Flexor Cubiti. The patient, who was aged 27 years, had had the head of the *left* humerus excised in St. Thomas's Hospital on Sept. 19th, 1900 by the late Mr William Anderson for recurrent dislocation Recurrence had occurred nine times in the preceding three years. The result had proved most satisfactory Six months previously he fractured the right clavicle which united rapidly On Jan 3rd last he fell from a van and subsequently noticed that the *right* arm could not be brought properly to the side The position of the arm was characteristic The humerus was abducted and inwardly rotated to a slight extent, the shoulder joint being then fixed attempted movement was attended by rotation of the scapula. The malposition could be easily rectified, after fixing the scapula, by bringing the elbow forward, thus relaxing the biceps, and then rotating outwards The condition was apparently associated with an abnormal laxity of the joint capsule and an increased play of the tendon in its groove —Mr A. PEARCE GOULD suggested that the abnormality might be due to a hypertrophied synovial fringe.—The PRESIDENT was not convinced that it was dislocation of the long tendon of the biceps. This displacement generally took place inwards and not outwards. The case, he urged, should be thoroughly investigated.—Mr ROBINSON, in reply, thought that the joint might be explored but asked what ought to be done if it proved to be a dislocation of the tendon He did not think that it was indispensable to remove the head of the bone as on the other side.

Mr T H KELLOCK showed a case of Varicose Internal Saphena Vein in a child, aged seven years. The condition was first noticed accidentally about a year ago The course of the vein seemed to be slightly abnormal, passing towards the inner surface of the thigh. Varicosity was also noticeable at the inner side and front of the patella, behind the internal malleolus, and over the inner side of the foot No cause could be discovered —Mr PEARCE GOULD said that he had never seen varicosity in so young a female patient, though varicocele was met with in male children. He thought that this condition supported the view that varicosity was not due solely, or even chiefly, to increase in venous pressure, but rather to over-development of the venous tissue akin to venous nævus —Mr HARRISON CRIPPS recalled the case of a girl, aged 15 years, who had enlargement of the whole limb, but in her case there was also involvement of the lymphatics. In Mr Kellock's case the limb was slightly longer and the foot was somewhat bigger than on the other side , in fact, the case resembled incipient giantism.—Mr KELLOCK, in reply, admitted that the limb was about a quarter of an inch longer than the other, but there was no indication of the lymphatics being involved He proposed to remove a piece of the vein

Dr H. D ROLLESTON and Dr W L. ASCHERSON exhibited a case of Acute Lymphatic Leukæmia. The patient was a female child, aged seven years, whose leading symptoms were debility, pallor, and shortness of breath There was a recent history of transient facial paralysis and lately her skin had bruised very readily A day or two before admission there had been pyrexia, epistaxis, and bleeding from the throat. When admitted there was still some bleeding from the gums and the tonsils, the glands were enlarged on both sides of the neck and in the left axilla, and the spleen extended to three inches below the costal margin. Examination of the blood showed 2,320,000 red corpuscles per cubic millimetre , there were some poikilocytosis and irregularity in the size of the individual corpuscles , the hæmoglobin amounted to 30 per cent , and the leucocytes numbered 60,000 per cubic millimetre, of which polymorphonuclear cells amounted to 3 3 per cent., hyaline leucocytes 1 8 per cent., and lymphocytes 95 per cent The lymphocytes were for the most part large and showed characteristic fraying of the edges and irregularity in shape —Dr J ROSE BRADFORD questioned whether the case was really acute and suggested that it might be a case of some standing in which the symptoms had suddenly become more prominent.—Dr ROLLESTON pointed out that the patient had markedly improved under treatment

Dr A. E RUSSELL exhibited a case of Syringomyelia with Dissociative Anæsthesia, Neurotrophic Joints, Muscular Atrophy, and Exaggerated Knee-jerks. The patient was a man, aged 50 years, with well marked atrophic arthropathy of the left wrist and carpal joints Both shoulders creaked on movement and the left had a tendency to swell on attempting to work The dissociative anæsthesia was distributed over both hands and arms, neck, scalp, and trunk down to the level of the fifth thoracic segment There was considerable muscular atrophy of some of the intrinsic muscles of the right hand, especially of the abductor indicis. The knee-jerks were greatly exaggerated but the gait was not spastic —Mr A. A BOWLBY recalled a case in which the patient complained of pain, &c., in the shoulder associated with characteristic destruction of bone, but this destruction was more apparent on the parts external to the joint He suggested the desirability of obtaining a radiogram of the joint.—Dr RUSSELL, in reply said that the rays showed considerable changes in the bones

Dr W PASTEUR exhibited a case of Cerebro spinal Meningitis with Optic Neuritis accompanied by complete loss of sight, followed by partial recovery of vision of an unusual character The patient was a woman, aged 22 years, in whom there was no evidence of syphilis. The present illness began in September, 1902, with severe occipital headache, pains in the arms and legs, vomiting strabismus, and sleeplessness On admission to hospital in October the leading symptoms were rigidity of the muscles of the neck, marked paresis of the arms and legs absence of knee-jerks, and Babinski's sign She began to improve after Oct. 22nd at which time the sight was totally lost and there was optic neuritis. The latter began to subside and vision was partially recovered on Nov 4th. In December she could not tell light from darkness but was able to distinguish a hand or a book. In January there was marked atrophy of both optic discs and she was still unable to see an electric light held close to her face, but she recognised the shapes of objects. In February she was recovering her vision for light and muscular power had been almost completely restored —Dr ROSE BRADFORD referred to a patient under the care of Mr John Tweedy who could not distinguish between light and darkness, though he could distinguish forms He thought that this curious condition had been described by certain German observers.

Mr RAYMOND JOHNSON showed a case of Webbed Arm in a lad, aged six years. The anterior fold of the right axilla was prolonged downwards in the form of a web which passed to the inner side of the elbow The pectoralis major was either absent or represented merely by a few fasciculi of the clavicular portion. In the free border of the web could be felt a slender fibrous cord, ending below at the internal condyle of the humerus and at its other extremity terminating in a muscular fasciculus attached apparently to the second costal cartilage (the chondro-epitrochlearis muscle). There was impaired development of the whole upper extremity and the four inner digits were webbed. The right scapula was smaller and lay at a higher level than the left.

Dr H BATTY SHAW exhibited two cases of Graves's Disease occurring in father and son The father, aged 46 years, had been suffering from weakness for the last four years. Exophthalmos of slight degree was noticed a little over two years before and a month or two later the neck was found to be swollen He was a very nervous subject and was frequently troubled with palpitation. There were also tachycardia, tremor of the hands, and retraction of the upper eyelids, and von Graefe's sign was well marked , flushing of the face was common and the skin generally was moist. The enlargement of the thyroid gland was greater on the right side than on the left. His son, aged 21 years, had always been rather nervous and there appeared to have been for several years some prominence of the eyeballs Nearly two years before he met with a rather severe bicycle accident and since then had noticed marked palpitation and he stated that the eyes had been more prominent since the accident. The pulse rate was about 120 to the minute, there was marked tremor of the hands, especially the right, and the eyes were prominent. There was also enlargement of the thyroid gland Albumin was present in the urine, sometimes only a trace, sometimes a well marked cloud.—Dr S P PHILLIPS said that he had met with the disease in mother and daughter He had seen the second of Dr. Shaw's cases previously, the chyluria having ceased in 1901.

Sir HUGH R BEEVOR exhibited Skiagrams of a case of Pneumothorax.

EPIDEMIOLOGICAL SOCIETY

Risk of Introduction of Yellow Fever into Asia

A MEETING of this society was held on Feb 25th, Mr SHIRLEY F MURPHY being in the chair

Dr PATRICK MANSON, F R S , read a paper on the Panama Canal and the Risk of the Introduction of Yellow Fever into Asia. The diffusion of disease by insects and especially by mosquitoes as intermediary hosts of the specific hæmatozoa was, he said, a subject presenting problems of surpassing interest and the recent inclusion among those thus propagated of yellow fever, the scourge of tropical America, the etiology of which had hitherto baffled investigation, was full of promise, giving a far less hopeless aspect to the question of its prevention He would confine his remarks to (1) the risk of the extension of the fever to the populous regions of Asia involved in the opening of the Panama Canal to which the Government of the United States was pledged , and (2) the means to be adopted for lessening the risk. Shiploads of labourers from China, Japan, and India would soon be plying between Panama and the sea ports of Asia, and if the traffic were unrestricted the disease would inevitably be introduced into the populous, densely crowded, and insanitary cities of China and India, where its ravages would be incomparably greater than they could be in the sparsely peopled countries and smaller cities of South America. The Epidemiological Society had a duty and an opportunity that it could not ignore to impress on the Governments of the civilised world the urgency of the occasion The freedom from yellow fever hitherto enjoyed by Asia was, like that of America until recently from cholera and the plague due, not to any conditions unfavourable to its spread, but to the absence of direct communication with the localities where it was endemic, California and Chili lying beyond the fever zone on either side of the equator It was true that the parasite was present in the blood for a few days only at the commencement of the fever, but if taken from the patient during this period by a mosquito it retained its vitality in the body of the insect for eight or ten weeks and might be at any time communicated by its bite to previously healthy individuals. The yellow fever patient was in himself no more dangerous to others than was the sufferer from malaria and it was the stegomyia that, like the anopheles, conveyed the germs from him to others, infecting them in turn. It was thus quite possible for a ship, the crew of which were perfectly healthy not only on sailing but throughout the voyage, to convey the disease provided the passage did not exceed, say, ten weeks Stegomyiæ that had recently bitten a fever patient got on board in the harbour and might or might not attack the crew, when the vessel put to sea they sought shelter in the hold and if sugar, fruit, or other food or rats were accessible probably did not leave their hiding places until disturbed by the discharge of the cargo at the port of arrival, when the infected insects attacked those who whether members of the crew or labourers belonging to the port, were engaged in the work of unloading Cases might or might not occur during the voyage, but it was not they but the infected stegomyiæ that would introduce the disease into the new locality In one or other way yellow fever had been carried to every seaport on the eastern coast of America between lat. 38° N and 38° S., as well as to Peru on the west coast In Africa it was still limited to the west coast, north of the equator, and in Europe, though it had never become endemic, the footing it temporarily obtained at Lisbon in 1853 proved that such a contingency was not impossible. The stegomyia fasciata was the most widespread, but other species could serve equally well as hosts, so that no country in the tropical or warmer temperate zones was safe Such being the etiology of yellow fever it was evident that it could not be carried by cargo or fomites, nor even by infected persons, to places where stegomyiæ were absent. Quarantine and disinfection of cargo were alike useless, the sole means of prevention being the extermination of the stegomyiæ, for which, so far as shipping was concerned, sulphur fumigations of the hold and between decks were the most efficient, with the destruction of the larvæ in the bilges and water tanks On land the war must be conducted on the same lines as had been employed against the anopheles. That this was feasible had been amply proved by the Governor General Wood, himself a medical man, and Dr Gorgas at Havana There the deaths for the past ten years had averaged 467 per annum but between April, 1901, and March, 1902, there had been only five deaths and since that time there had not been one. He trusted that the Americans, though they had no direct interests in Asia, would carry out the sanitary control of the canal with equal thoroughness, but it would be advisable that the civilised powers most concerned, such as England, France, Germany Holland, Italy, Japan, and Siam, should constitute an international board of supervision and subvention. The measures he would recommend were simple enough but must be inexorably enforced. Every vessel coming from, or having called at, a port within the yellow fever zone should be boarded on entering the eastern end of the canal by an officer and assistants whose duty would be to destroy by fumigation and other means all stegomyiæ on board and before leaving the canal it should be inspected by others who should satisfy themselves of the completeness of the work. To prevent the infection of a vessel in its passage through the canal the country for half a mile on either side should be cleared of trees, standing water, and everything that could afford shelter for mosquitoes or their larvæ. Dr Manson remarked that all that was known of the etiology of yellow fever was due to the labours of a band of American epidemiologists, Major Walter Reed, Dr Carroll, Dr Lazear Dr Agramonte, and Dr Guiteras, the pioneer being Major Reed who though he never saw the hæmatozoon itself, having satisfied himself of its transmission by the stegomyia, applied this knowledge with the brilliant results that had been obtained at Havana. Major Reed and Dr Lazear however, died martyrs to their work

Dr NUTHALL remarked that the extinction of yellow fever in Havana had removed a great danger from the United States since in every epidemic in Florida and the valley of the Mississippi the disease had been introduced from that port. The mosquitoes stegomyia fasciata or other species, were very retentive of vitality so long as they had access to water, as in the holds of vessels in the water tanks of which the larvæ might be seen in thousands. It was as insecticides, not as germicides that sulphur fumigations had been found successful. He might mention that one epidemic in New Orleans had cost the city 10 000 000 dollars in various ways

Dr STRONG stated that yellow fever had recently been very prevalent in Panama and was constantly carried from one port to another on the esat coast of South America. He described at some length the several importations into western and southern Europe and said that at least six instances had been recorded recently of its conveyance by ships on which no cases had occurred. The distance between Panama and Honolulu was less than that between Rio de Janeiro and Naples.

Dr BOUSFIELD, who had been through several outbreaks in the West Indies, complained of the apathy of the British authorities even when convinced of the truth of his representations. The only preventive work in respect of malaria—that at Sierra Leone—was due to private enterprise, the colonial governments would do nothing

Dr LOUIS SAMBON insisted on the necessity for immediate action, the danger being more imminent than Dr Manson represented, since a steam service would very shortly be opened between China and Mexico, and should the disease once be introduced into China it would rapidly spread to Japan, India, and Australia The prophylaxis was simple, but the difficulties presented by popular ignorance and official apathy were well nigh insuperable.

LIVERPOOL MEDICAL INSTITUTION

Human and Bovine Tuberculosis

A MEETING of this society was held on Feb 26th, Mr RUSHTON PARKER, the President, being in the chair

Dr NATHAN RAW read a paper upon Human and Bovine Tuberculosis. He commenced by saying that Professor Koch, the greatest authority upon tuberculosis, in an address at the British Congress on Tuberculosis in London in 1901 greatly disturbed the scientific world by announcing his now well known theory that human and bovine tuberculosis were separate and distinct diseases and that bovine tuberculosis could not be conveyed to man. Now, it must be admitted that the great body of experimental evidence was in favour of Koch s first contention that the two diseases were distinct. Phthisis pulmonalis was essentially a disease of young adult life. It was rare to see it as a primary affection under the age of 12 years, the great majority of deaths taking place between the ages of 30 and 40 years as his tables would show On the other hand, strumous or tuberculous joints, enlarged joints, spinal disease, and abdominal tuberculosis with tabes mesenterica were essentially diseases of infancy and childhood and were only rarely seen in adult life. From these general clinical and pathological observations Dr Raw inclined to the opinion that primary intestinal tuberculosis, tabes mesenterica, and other tuberculous affections of the serous membranes in children were probably bovine tuberculosis conveyed by milk and were not in any way related to human tuberculosis, although the bacillus of Koch was found in them all and was identical. Veterinary authorities, such as Nocard Bang Dollar and McFadyean, agreed that about 30 per cent. of dairy cattle suffered from tuberculosis Dr Raw wished to point out that the infection commenced in the mesenteric glands from the intestine, slowly spread to the retro-peritoneal glands then through the diaphragm to the glands in the posterior mediastinum and finally to the lungs. If the child lived long enough the brain might be affected too At necropsies this process had been corroborated again and again Dr Raw remarked that taking all these facts into consideration and after a careful study of tuberculosis in all its forms during the last ten years, he was of opinion that bovine tuberculosis was very virulent for children and was accountable for tabes mesenterica and other varieties of abdominal tuberculosis—in fact, that it was more virulent to children than was human tuberculosis There was much evidence, also, that acute miliary tuberculosis, especially that of the typhoid form, was in reality a bovine tuberculosis produced by ingestion of food. Since the two diseases could not exist together in cattle, might it not be that they could not exist together in man ? and that the serum of a cow affected with tuberculosis might have a curative effect in a case of pulmonary phthisis exactly on the same lines as small pox and cow-pox ? Who knew ?—it was only an idea, but in the treatment of such a fell disease anything was worth consideration It would appear, therefore, that infants and young children with a feeble power of resistance were susceptible to bovine tuberculosis more especially if they were fed for a prolonged period on infected milk, but that as age advanced the susceptibility decreased, until at adult life there was little risk of more than a purely local affection of the glands of the neck, which, however, might occasionally extend directly to the lung, and even result in a general miliary tuberculosis Considering that tuberculosis was so common, and even increasing, in this country among dairy cows, something ought to be done by the legislature to prevent the wholesale distribution of tuberculous milk to the public A more rigorous inspection of dairy cattle should be made by the health authorities and as it was perfectly easy and certain by the tuberculin test to diagnose a tuberculous cow there should be no difficulty in at least eradicating the disease from dairy cattle. The onus of responsibility of supplying pure milk to the public should not rest on the health authority but on the producer, and although the health authority could do a splendid and humane work by providing the community with sterilised milk at a cheap rate, still the real responsibility must be with the man who actually delivered milk for sale to the public Dr Raw concluded by expressing the opinion, based almost exclusively upon clinical and pathological evidence, that human and bovine tuberculosis were separate and distinct diseases, as shown by Professor Koch, but that the human body was susceptible to both, and especially to bovine tuberculosis in the early periods of life. The two diseases were so rarely seen together in the human body that there seemed to be some ground for presuming that they were antagonistic to each other and that bovine tuberculosis might possibly confer an immunity against human tuberculosis. If this opinion should prove correct he ventured to submit that it would entirely reconcile the conflicting opinions which had been so frequently expressed during the last two years on that most terrible of all diseases.

The PRESIDENT said that opinions formed upon a question of this kind were based partly upon clinical impressions and partly upon scientific considerations. He thought that they were in need of pure science to control the impressions which they were tempted to rely upon. He had himself not gone much into the intimate pathology of the question He had originally operated for the purpose of removing the local disease An experience of 30 years had satisfied him as to the correctness of this procedure, he had only met with phthisis pulmonalis four times out of about 300 patients

Dr W CARTER recognised the ingenuity of Dr Raw's suggestion of two different diseases but he considered that the view that true human tuberculosis could not be communicated by bovine tuberculosis was too absolute and was disproved by recorded facts. If the words had been "is not generally communicated" he, like everyone else, must have assented It was too early to dogmatise He thought that the difference of results probably depended on difference of soil, the seeds being identical.

Dr R CATON admitted that apparently two forms or types of tuberculosis occurred in the human subject (1) pulmonary phthisis, and (2) tubercle of glands, bones, and nervous organs, and that usually the course and termination of the two types presented marked differences This fact supported Dr Raw's interesting generalisation Dr Raw's theory, if fully demonstrated, would have most important practical results

Dr W ALEXANDER said that he had had 62 cases in the last three years and out of 885 babies in the Liverpool workhouse hospital 82 were diagnosed as suffering from marasmus or tabes mesenterica. A good many cases of tabes mesenterica recovered completely, so that it was probable that in many cases the disease was not tuberculous. The children who suffered from this disease belonged to the lowest class of society They lived on small quantities of milk which was used without being sterilised Many of them suffered from attacks of intestinal and gastric catarrh through improper quantity or quality of food and these attacks produced enlargement of the glands in just the same way as eruptions of the scalp and discharge from the ear produced enlarged glands in the neck. If the intestinal condition recovered the glands lessened in size, but if the condition was prolonged for a sufficient time the microbe of tubercle gained admittance and they had tuberculous disease just as happened in the neck or glands elsewhere If Dr Raw's views were correct they would have to go back to the sterilisation of milk Dr Alexander hoped that the whole subject would be promptly investigated

Dr A S F GRÜNBAUM agreed with Dr Raw that tabes mesenterica was due in many cases to milk carrying bovine tubercle bacilli. Experiments on anthropoid apes tended to confirm this view Dr Raw's isolation of the bovine bacillus from a mesenteric gland was the first published confirmation of Ravenel's results in the same direction But that was no reason for considering the diseases produced separate and distinct. It seemed probable that the disease was one and the same Whatever the source of the bacillus although undoubtedly more virulent when of bovine origin, the lesions produced by the inoculation of either form were practically the same.

Sir W M. BANKS said that if Dr Raw's thesis were true then persons dying from phthisis need not specially show any signs of having been afflicted during childhood in any marked degree with tabes mesenterica, diseased cervical glands, or articular trouble It was his conviction that children who suffered from glandular and articular diseases did not suffer in later life in any marked degree from phthisis. He therefore was opposed to the dissections of the neck sometimes practised These children died from exhaustion and waxy disease when they did succumb For himself he found a difficulty in looking upon bovine and human tuberculosis as two absolutely distinct diseases. He would prefer to call them variants of the same disease affecting each its own locality The seeds of the various kinds of cabbage did not show notable differences of appearance, but the wild progenitors of the edible flourished in the sea while the big cultivated cabbage would only grow on good land. Soil in this question probably had much to be reckoned with.

Dr J HILL ABRAM said he had never been convinced of the soundness of Koch's theory He would like to draw attention to the following point Koch's great dividing characteristic between bovine and human tubercle was the non communicability of the two organisms to human and bovine respectively—i.e, human to cow and bovine to man. Ravenel's, and now Dr Raw's cases shattered Koch's theory and restored the unity of tubercle

Other speakers followed and Dr RAW replied.

BRADFORD MEDICO-CHIRURGICAL SOCIETY —A meeting of this society was held on Feb 17th, Dr H J Campbell, the President, being in the chair —Dr F W Eurich brought forward a communication upon the Treatment of Epilepsy, chiefly with reference to the theory that there is in epilepsy an excessive storage of sodium chloride in the body He detailed a number of cases which had been very successfully treated by comparative privation of salt and its replacement as an article of diet by sodium bromide, about half an ounce of which was taken each week. In one case intermission of the fits had been procured, when the patient began to take salt again freely The fits at once recommenced but were stopped again when the ingestion of salt was discontinued. Trinitrin in occasional doses was useful in relieving headache.—The President, Dr A H. Robinson, Mr S W Rhodes, Dr A. H. Bampton, and Dr J Metcalfe took part in the discussion.—Dr R. A R. Lankester read a paper on the Administration of Anæsthetics with some remarks on Somnoform. Ether, he said, was undoubtedly safer than chloroform and ought to be used in all cases where it was available. The preliminary administration of nitrous oxide was strongly advocated in ether cases, as being more pleasant, quicker, and safer for the patient In prolonged operations the sequence of nitrous oxide, ether, and chloroform was advocated, the change to chloroform not to be made during struggling or during deep ether anæsthesia. Ether was quite suitable for children six years of age and upwards If nitrous oxide was not available as a prelude to ether a few whiffs of chloroform or mixture of ether and chloroform might be given till the patient was partly unconscious. Oxygen might be an important adjuvant to ether in cases of spasm such as might occur in alcoholic or asthmatic patients. Mixtures of ether and chloroform were of value in old persons, very fat subjects, and those with severe emphysema and bronchitis. These mixtures were wasteful and had many of the dangers of chloroform. Chloroform ought to be given without closed apparatus of any kind, so that there might be no doubt about the admission of plenty of air Somnoform, he said, was a mixture of 60 parts of ethyl chloride, 35 parts of methyl chloride, and five parts of ethyl bromide The components had been arrived at by physiological experiments. The advantages claimed for it were (1) that no cumbersome apparatus was required, (2) that its action was very rapid, (3) that the return to consciousness was rapid, and (4) that it was very safe. It was administered by spraying it into a mask which fitted closely on the face. The patient's colour remained good, the respirations were regular and deep, and became sonorous when anæsthesia was induced. The pulse was slightly quickened and the tension was increased There was slight rigidity which passed off as the anæsthetic was pushed, the conjunctival reflex was lost, and the pupils became dilated and fixed. When this point was reached the mask was removed as the patient was fully "under" The period of anæsthesia was quite one and a half minutes. Somnoform was available for cases requiring a rather longer period of anæsthesia than could be obtained by nitrous oxide and where otherwise chloroform or ether would be used. The patient was generally able to walk away a few minutes after the administration There was not as a rule any vomiting —Dr J G Moffat showed the pieces of a Uric Acid Calculus weighing seven and a half ounces which had been removed from the bladder through the perineum after lithotrity had been performed —Dr William Craig showed Fœtal Bones extruded from an abdominal abscess 18 months after probable rupture of an ectopic gestation.—Other specimens were shown by Mr C F M. Althorp, Dr R. H. Crowley, Dr T J Wood, and Mr F E. Meade.

North of England Obstetrical and Gynæcological Society —A meeting of this society was held in Liverpool on Feb 20th, Dr J E. Gemmell, the President, being in the chair —Dr W E. Fothergill (Manchester) showed a specimen of Hyperplasia of the Thyroid Gland from a Fœtus in a case of Eclampsia.—Professor A. M Paterson showed a Uterus having a Utero-Vaginal Septum —Dr D Lloyd Roberts (Manchester) showed an Ovarian Tumour which with its contents weighed 30 pounds. It was removed from a woman, aged 60 years and contained 16 pints of brownish, grumous fluid.—Dr Fothergill recorded a case of Hyperpyrexia associated with Thrombosis of the Vena Cava Inferior The patient was delivered by a midwife on March 21st 1902. Fever set in and became intensified until the patient's removal to hospital on the fifth day Improvement followed intra uterine douching at first, but a relapse occurred on the 31st, so the uterus was curetted, several pieces of placenta being removed On April 6th the temperature reached 111 2° F but was reduced to 107° by hot sponging Thrombosis of the right femoral vein was quickly followed by involvement of the left and from this time onwards till the patient's death on May 14th there were no special symptoms except increasing weakness, though the temperature continued high and remittent, with repeated rigors. There was no sign of suppuration or embolus in any other organ. The immediate cause of death was œdema of the lungs The necropsy showed that the uterus and other pelvic organs were normal, there was no sign of general or pelvic peritonitis, the inferior vena cava and its tributaries were filled with ante-mortem clot from the heart downwards. He was inclined to regard the curetting as the cause of the thrombosis.—Dr A. C F Rabagliati (Bradford) referred to cases in which temperatures of as much as 120° had been recorded and held that mere elevation was not so important as variability of temperature He suggested that the thrombosis might have been due to some general condition—e g, hyperinosis of the blood.—Dr J B. Hellier (Leeds) read notes of a case of Double Pregnancy in a Double Uterus. The patient, aged 34 years, had had three normal labours previously During the fourth pregnancy the uterus was larger than usual. After a normal labour a female child was born, head first, the placenta following The presence of a second child was discovered, but the medical attendant on introducing his hand found the uterus empty Dr Hellier found a second os lying high up in front of and to the left of, the other, and delivered a male child by podalic version. The uterus was bicornate, a fairly thick septum dividing the two cavities, and there were two separate ora uteri opening into a single vagina.—Dr H. Briggs said that he had seen three cases of the kind and he confirmed Dr Hellier's account of the relative positions of the two ora uteri.—Dr T Arthur Helme (Manchester) read a short communication on Dilatation of the Cervix Uteri in Eclampsia of Pregnancy by means of Bossi's dilator Dr Helme found that this dilator could effect full dilatation in 20 minutes, another ten minutes being required for complete delivery with forceps. He had been surprised by the ease and comfort with which the instrument could be used without any laceration of the cervix and thought this means afforded a marked contrast with manual dilatation and its frequently accompanying discomfort and cramp.—Mr S. Rumboll (Leeds) said that he had used Bossi's dilator in a case at the sixth month and he preferred it to fingers and Barnes's bags It was easily used and did not tear the cervix.—Dr A. Stookes and Dr Glynn Whittle also took part in the discussion

Glasgow Obstetrical and Gynæcological Society —A meeting of this society was held on Feb. 25th, Dr J Nigel Stark, the President, being in the chair —Dr. J K. Kelly opened a discussion on the Diagnosis and Treatment of Suppurative Conditions in the Pelvis He divided the cases into two groups according to their situation, the first was invasion of the connective tissue, the second of a closed cavity either natural or acquired. With regard to division of the cases according to the etiology, those occurring in the puerperium were usually from infection of the cellular tissue, while in the non pregnant cases the preformed cavities were usually involved. There were exceptions, of course, to the rule. The reason for this selection of tissue was obvious. During delivery traumatisms were frequent and injured tissue was easily infected. The cervix being the most commonly injured the course of the infection was through it to the pelvic cellular tissue The infection after invading the broad ligaments, usually passed forwards and became subcutaneous above Poupart's ligament. Occasionally however, the route took a posterior turn and the track extended upwards as far as the kidney, the abscess might point in the loin or even burst into the pleura. It was fortunate that these collections tended to open externally In the non pregnant cases the track taken by the infection was along the mucous surface. After a chronic endometritis the tube was apt to become implicated and when this took place the abdominal ostium became closed and pus collected in the tube. The ovary when it became the seat of the disease formed either a large pus cavity or a number of smaller ones Further extension of this infection involved the bowel and the peritoneum, &c. The progress of the malady was according to the situation. When the cellular tissue was involved the infection worked its way to the surface while when in a closed cavity its progress was more difficult. Thus in long standing cases the virulence of the infection became less and might disappear altogether With regard to the differential diagnosis the history, location, and course were all different in the two types In cellular abscess there were parturition and injury, in pyosalpinx there was no injury save gonorrhœa, long standing endometritis, or the fact of intra uterine medication having been resorted to The treatment of the condition was relative to its nature. When the connective tissue contained pus it ought to be evacuated. Sometimes there were large effusions which did not progress to the formation of pus and it was difficult to say if pus were really present. Many different phases of the disease were to be considered. In certain cases it might be expected that the trouble might subside, while a tubal disease giving rise to attacks of peritonitis, to adhesions, and tending to wear out the patient from the pain, was a condition definitely requiring operation.

Forfarshire Medical Association —A meeting of this society was held on Feb 14th, Dr. A. J Duncan being in the chair —The Secretary showed, for Mr. D M. Greig, a Boy after treatment for severe injuries to the right upper extremity These injuries were a severe compound fracture of the humerus (a considerable part of the bone was denuded of periosteum) and a simple fracture of both bones of the forearm in its upper half. A large part of the humerus necrosed and the sequestrum was removed. The result showed a very useful arm with free movement at the elbow —Mr G Halley read notes of eight cases of Hereditary Ichthyosis of the Palms of the Hands and Soles of the Feet and showed a table drawn up with six other cases affected in five generations, making 14 cases in all. The table, like other tables published of similar cases in four or five generations, showed that both sexes were alike affected and that the affection passed through males and females alike. He was of opinion, from what he knew of this family, that the affection in such cases appeared soon after birth and if looked for at birth would probably be noticed then. All of the patients had good health and were able to earn a livelihood in the mills —Dr J M. H. Macleod read a paper on the Treatment of Skin Disease by the Finsen Light and the X Rays. He considered that in suitable cases of lupus the treatment by the Finsen lamp was the best. Coarse skins required longer treatment than fine skins and dark complexions required longer treatment than light complexions. Too early exposure after reaction or too long exposure was dangerous. Epithelioma was sometimes set up Out of 70 cases treated by him 11 were cured apparently and one was made worse. He had found this treatment beneficial in gummata and granulomatous patches occurring in sycosis of the chin. In some forms of lupus erythematosus it was harmful. Comparing the Roentgen rays with the Finsen rays he said that the Roentgen rays were more powerful, more difficult to regulate, and had a totally different action, they also had a wider field of action and therefore protective coverings beyond the field required were a necessity Dermatitis following exposure to x rays had been succeeded by epithelioma. Treatment by x rays required careful watching It was an excellent adjunct to treatment by Finsen rays but not equivalent. It was useful in some cases of ringworm of the scalp and favus but not in hypertrichosis Its chief value was in rodent ulcer and in superficial epitheliomata —Professor D MacEwan, Dr R. Sinclair Mr Halley, and Professor J A. C Kynoch took part in the discussion.

Therapeutical Society —A meeting of this society was held on Feb 17th, Mr W Parson, Master of the Apothecaries' Company, being in the chair —The Secretary read a brief sketch of the formation of the society, which was started in July last. The Apothecaries' Company agreed to give the use of its rooms free of charge. Rules were drawn up and officers and council were chosen. 107 Fellows joined the society —Dr R. Hutchison read a paper on the Use of Acid Sodium Phosphate in Alkalinity of the Urine. The alkalinity of the urine was estimated either by precipitating alkaline phosphate by barium chloride and then estimating the acid phosphates by adding uranic nitrate solution or by adding phenalphthalein and titrating with a standard solution of alkali He found that mineral acids, even in large doses, had very little effect in rendering the urine acid, nor did organic acids have more than a slight effect, but the acid sodium phosphate had a marked influence on the reaction It had been tried with very satisfactory results in cases of cystitis and it was found particularly useful after operations on the bladder to keep the urine acid. The dose was from 30 to 60 grains every three hours, but it was best given by dissolving two drachms in a pint of water and allowing the patient to drink it from time to time If diarrhœa was produced the drug should be stopped for a short time.—Dr James Burnet read a paper on Ichthyol in the Treatment of Pulmonary Disease. He said that ichthyol was a definite chemical compound and formed a thick liquid substance of dark brown colour with characteristic taste and odour It contained from 15 to 16 per cent. of sulphur At present it was much used as an external medicament but its internal use had been much neglected in this country It was certainly of great service in cases of pulmonary disease. It arrested the disease when administered in suitable cases, but did not eradicate it Good results were also obtained in cases of bronchiectasis The mode of administration was by means of capsules, the dose varying from eight to 20 grains four times a day In pulmonary tuberculosis it was to be preferred to creasote and its preparations, for ichthyol never caused any gastric derangement, whereas creasote often did. To be of any service ichthyol must be used for a long period.

Midland Medical Society —A meeting of this society was held in Birmingham on Feb 4th, Dr H. W Langley Browne, the President being in the chair —Mr W Edward Bennett showed a specimen of Perforated Typhoid Ulcer which had been operated upon by him The patient, a married woman, 23 years of age, was admitted into the workhouse infirmary on August 12th 1902, being then in the second week of the disease, which presented the usual symptoms She progressed favourably until Sept. 8th, when a relapse occurred, the symptoms indicating perforation. On the 10th some 14 hours after perforation was supposed to have occurred the abdomen was opened and a perforation of about the size of a small pea and situated about four inches from the ileo-cæcal valve was found and stitched up The patient progressed very favourably until the fifth day after the operation when a severe hæmorrhage from the bowel resulted in her death. At the necropsy two other large ulcers were found in the ileum below the seat of perforation, one of which had apparently eroded a large vessel in its immediate neighbourhood. There was no peritonitis.—Mr Bennett also showed a specimen of Gastric Ulcer taken from a female, aged 18 years, who had suffered from anæmia and symptoms of gastric ulcer, dating back for 12 weeks Symptoms of perforation showed themselves suddenly on the morning of Jan. 4th, 1903, and on opening her abdomen 16 hours afterwards Mr Bennett found gastric contents in the peritoneal cavity and a slit-like perforation at the pyloric end of the stomach just below the junction of the gastro-hepatic omentum and the lesser curvature of the organ. The perforation was stitched up and an opening was made above the pubes The abdomen was irrigated and a tube was left in the pouch of Douglas The patient died at 8 A.M on the 5th At the necropsy a large ulcer was found on the posterior wall and lesser curvature of the stomach, the perforation having occurred at its upper and anterior margin. There was general peritonitis —Dr O A. Leedham Green showed a patient from whom he had removed the Gasserian Ganglion by a modification of Krause's method —Mr J Jameson Evans read a paper on the Occurrence of Neuroretinitis in Anæmia.

Dermatological Society of Great Britain and Ireland —A meeting of this society was held on Feb 25th, Dr J H. Stowers, the President, being in the chair — Dr T D Savill showed a case of (?) Tinea Imbricata with a microscopical section of the affected skin Dr Savill and Mr A. Shillitoe exhibited photographs of typical cases of the disease.—Dr P S Abraham showed (1) a case presenting a Vesiculo-varioliform Eruption with tendency to leave punctate scars (the disease was of 12 years' duration and was contracted in South Africa), (2) a case of Ichthyosis in a baby, (3) a case of Lupus Erythematosus, and (4) a case of Tinea of the Scalp in an elderly woman (some hairs from this case were placed under the microscope) —Dr E G Graham Little showed (1) a case of (?) Pemphigus Foliaceus, (2) a Perforating Ulcer of the Foot in a man who showed no signs of Locomotor Ataxia, (3) a case of Urticaria Papulosa presenting a nearly universal eruption of flat shining papules of 14 days' duration (lichen planus infantum), and (4) a man suffering from Seborrhœa, with Alopecia of the Scalp and a Ringed Eruption on the Limbs —Mr Shillitoe showed —1 A case diagnosed as Tertiary Roseola. The man contracted syphilis six years previously and was fully treated for the same In September, 1902, he developed small sores on the penis, which had constantly recurred since and were still present in the form of herpetic blisters and small round abrasions The roseola appeared in November (It was considered by some members that this was a case of re-infection) 2. A case presenting Syphilomata of the Tongue and Lip 3. A case of Recent Syphilis in which the eruption on the neck tended to form very distinct hollow squares —Dr A. Eddowes showed a case of "Vest Rash" and a section of a Sebaceous Cyst taken from the patient.

Edinburgh Royal Medical Society —A meeting of this society was held on Feb 27th, Dr W H. Prentice being in the chair —Dr A. H. Firth read notes on a case of Ophthalmoplegia. The patient was a woman, 34 years of age, and the condition was brought on by a severe chill On the right side there were ptosis, complete immobility of the eyeball, and loss of pupil reaction to light and accommodation. Under iodide of potassium and counter irritation the symptoms improved.—Dr W B Drummond gave a lantern demonstration on several surgical affections of children. He showed skiagrams of tuberculous and syphilitic diseases of bones, osteomyelitis, fractures and dislocations and congenital dislocation of the hip —Dr S A. K. Wilson read a dissertation on Pigmentation

Royal Devon and Exeter Hospital —The annual meeting of the subscribers to this institution was held on Feb 26th, under the presidency of the Bishop of Marlborough. The medical report stated that during 1902 the in-patients numbered 1349 as compared with 1258 in 1901 and that 5214 out-patients were treated against 5103 in the previous year The financial statement showed that the income amounted to £7141 and the expenditure to £9616 To make good the deficit the committee had been obliged to withdraw some invested funds The Bishop of Marlborough was re-elected president

Reviews and Notices of Books.

International Clinics Vol. II. Twelfth Series. Edited by HENRY W CATTELL, A.M. M.D London J B. Lippincott Co. 1902. Pp 295. Price 10s 6d

THIS volume of International Clinics, which is the second of the twelfth series, contains a number of papers of very unequal merit. Although nominally international the character of this particular volume is clearly transatlantic and, although comparisons are not always the best means of description, it may perhaps be permitted us to contrast this hospitable receptacle for literary productions with the somewhat similar and decidedly superior publications of our own Sydenham Society Among the contributions which deserve special mention must be included that of Dr R Romme (Paris) which supplies a full account of Gersuny's method of prothesis by subcutaneous injection of vaseline. The reported successes of this new development of plastic surgery were at first regarded as the vain boastings of megalomania. At the present time, however, as may be gathered from the perusal of Dr Romme's paper and from recent cases published in THE LANCET the record of experimental and clinical work clearly demonstrates that the method deserves a place amongst the most useful innovations in surgery Dr Romme's paper, though containing much useful and practical information, is of the nature of special pleading rather than of a critical review Another article which will be read with interest is from the pen of Professor Thomas Jonnesco (Bucharest). This paper describes the successful treatment of exophthalmic goitre by the heroic method of resection of the cervical sympathetic, his heroism has in a certain number of instances gone the length of complete extirpation of the entire cervical sympathetic chain on both sides of the neck, and judging from photographic illustrations before and after the operation this line of treatment must be admitted to have supplied most favourable results in Professor Jonnesco's hands. In view of the result of the surgical removal of this portion of the peripheral nervous system our conception of its physiological functions evidently demands reconsideration, for as the result of the operation Professor Jonnesco assures us that none of the sequelæ which physiologists have led us to suppose would be the inevitable result of extirpation have followed. Indeed no dystrophic results were noticed in the vital organs such as the lungs or the heart, or in the less important tissues such as the skin. The third paper to which we would draw attention has been prepared at the request of Professor Pavloff of the Imperial Institute of St Petersburg by Dr Bodissof. In this paper are described in length and detail the results of experiments on the glands of the stomach and buccal cavity by means of a special method of research. With regard to the gastric secretion, to examine its mode of production and its action Professor Pavloff has modified the method employed by Heidenheim and has secured for direct observation a form of accessory stomach shut off from the main cavity by means of a septum of invaginated mucous membrane. By this method of procedure the continuity of the filaments of the pneumogastric nerve has not been interfered with and hence the nervous mechanism of the accessory stomach can act in unison with that of the main viscus. The results obtained by this method have very important bearings on the therapeutic management of the processes of digestion, for it has been shown that the stomach is capable of secreting a gastric juice by the direct stimulation of its mucous membrane by chemical irritants and by certain extractive matter and also by psychical impressions reaching it from the central nervous system by way of the pneumogastric nerve. It has further been shown by the same method of research that certain substances which were generally supposed to excite the secretion of the gastric juice have apart from psychical impressions a negative influence on the activity of the glands of the stomach. For instance, pure albumin introduced into the stomach apart from psychical influences has no stimulating effect on the secretion, indeed, it remains as an inert substance in the stomach at the mercy of putrefactive processes It has been shown, then, that psychical influences reaching the stomach by way of the pneumogastric nerve have an even greater bearing on the processes of digestion than has heretofore been believed and failure to keep animals alive after resection of both pneumogastric nerves has been proved by Professor Pavloff to be due to the cutting off of the psychical impressions. By the appreciation of this fact and by the substitution of suitable direct stimuli of the mucous membrane he has been enabled to keep animals so operated upon alive for considerable periods of time This paper is to be continued in a future number of this series and will deal with the interesting and important relationship between pancreatic and intestinal secretion in association with gastric activity Apart from the three papers referred to the contributions to this volume are of little importance and some of them are extremely dull and uninteresting

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Practical Dietetics. With Special Reference to Diet in Disease By W GILMAN THOMPSON, M D, Professor of Medicine in the Cornell University Medical College, New York. Second edition, enlarged and thoroughly revised. London Henry Kimpton. 1902. Pp 828 Price 21s

THIS is a very substantial volume devoted to the practical application of dietetic principles in health and disease. At the outset the author is disposed to complain that the dietetic treatment of disease has not received that attention in medical literature which it deserves and he expresses regret that in the curriculum of medical colleges the subject is usually either omitted or is disposed of in one or two brief lectures at the end of a course in general therapeutics To what extent these remarks apply in the United States we are not aware, but certainly in this country the subject of diet takes no subordinate position in the medical curriculum Indeed, the subject of special dietetics has received perhaps more attention in this country than elsewhere during the last ten years or so and at the present time we have a number of active workers in this field amongst us. The part that English investigators have taken is evident from the number of references that invariably occur in standard works published in other countries and the work before us is no exception, for we find ample references to the researches of Dr I Burney Yeo Dr F W Pavy Dr Roberts Sir Dyce Duckworth, Sir Henry Thompson Dr A. E. Garrod, Dr A P Luff, Dr Bence Jones, Sir Andrew Clark, and many others.

The work is divided into nine parts, of which the first is the most voluminous, consisting of over 200 pages. It deals with foods and food preparations special attention being given to those points regarding the nature and composition of food which render it either available or not available for a special purpose. There is a very interesting chapter on milk and its adulteration and impurities. There is no doubt that the United States are ahead of this country in regard to taking steps for the prevention of the adulteration and contamination of milk and for the maintenance of a high degree of purity The minimum limit for fat, for instance in the United States is 3·5 per cent, whereas in this country it is 3 per cent. The question of preservatives in milk does not, however seem to have reached a final decision, for only some weeks ago we were told that it was proposed to carry out a very practical experiment upon the subject by submitting to one set of individuals food preserved with certain

This is true, but what would its application be if it were not worked up into a spirit called whisky? The time has come, we hold, when some control should be exercised over the blending of spirits and over the labeling of the bottles containing them. The original word "whisky" had no reference at all to silent spirit but to spirit made from barley malt and why should it be different now? Speaking of whisky generally, the author states that whatever may be the cause of certain physiological effects resulting from the consumption of new or unmatured spirit it is a matter of ordinary experience that proper maturing does away with them and there can be no question that this is due either to change of objectionable substances into non objectionable or to their removal by absorption into the wood of the cask. We have given some attention to this subject and we are not able to affirm that any artificial maturing process can claim to do what time does. The author's remarks on the differences between the keeping powers of English brewed beer and lager beer are of interest. Lager beer, he states, is more prone to adverse changes from bacteria and "wild" yeast than is English beer under similar conditions of storage. By the pasteurising process, however, we have known lager beer to keep in excellent condition for years The author writes from Burton on Trent, so that it may be safely assumed that he has practical acquaintance with the great brewing processes In the work before us he has written a very instructive account of the alcoholic industrial processes, which is all the more valuable because it is presented in the light of modern knowledge.

The Testing of Chemical Reagents for Purity By Dr C KRAUCH Authorised translation of the third edition. By J A WILLIAMSON, F C S, and L W DUPRÉ. London Maclaren and Son 1902 Pp 350 Price 12s 6d—A schedule of the common impurities of those reagents which used in analyses and research is of the utmost value. Frequently in the work of chemical investigation puzzling results are obtained which are ultimately explained by the presence of impurities in the reagents used. The information as to the kind of impurity to which a certain chemical reagent is liable is not always to be found in ordinary text-books and therefore chemists, analysts, and others will welcome the publication of this book which deals with the impurities commonly found in reagents and with the means of recognising them Curiously enough the reagent that happened to suggest itself first to our mind was glycerine, especially in regard to the detection in it of arsenic in small amount as an impurity, but by some oversight glycerine is not even mentioned, although we find described many other organic compounds, such as cane sugar, carbolic acid, gallic acid, benzene, picric acid, and acetone. The plan of the work is simple enough, the various reagents and substances being arranged in alphabetical order We observe that in addition to references being given to original communications in foreign literature mention is also made where possible of the appearance of any abstract of the original in English journals So far as we have examined the sections the methods of testing described and those laid down for the quantitative estimation of the chemical agent under consideration are satisfactory As regards sulphuric acid, it is suggested that the Marsh test should be employed for the detection of arsenic We know no method that is simpler for rapidly differentiating an arsenical acid from a non arsenical acid than that of adding a few drops of sodium sulphide solution directly to the acid. In the presence of even a small amount of arsenic a yellow curd of arsenious sulphide at once separates which it is impossible to confound with sulphur The test was suggested by Mr Vincent Edwards, F I C, F C S, chemist to the Lawes Chemical Manure Company, and if it had been adopted in the case of the acid which was afterwards proved to contaminate beer with arsenic there would have been no beer poisoning epidemic. We commend this book because its chapters serve as a warning against certain possible pitfalls in chemical analysis arising from the impurities in the reagents employed.

JOURNALS AND MAGAZINES

The Quarterly Journal of Microscopical Science Edited by E. RAY LANKESTER, F R S, with the coöperation of ADAM SEDGWICK, F R S, W F R. WELDON, F R S., and SYDNEY J HICKSON, F R S With Lithographic Plates and Engravings on wood. London J and A. Churchill Vol. XVI., Part 4 (New Series, No. 184) Pp. 274. February, 1903. Price 10s—The articles contained in this part are the following —1. The Movements and Reactions of Fresh Water Planarians a Study in Animal Behaviour, by Raymond Pearl, Ph D, instructor in zoology in the University of Michigan, U S A. The author first studied all the normal movements of the ordinary planariæ, especially planaria doroto-cephala and planaria maculata, their food reactions and their reactions to chemicals in general, their electrotaxis, thigmotaxis, and rheotaxis, the righting reaction, the reaction of cut and regenerating pieces and hydrotaxis and the reactions during desiccation, but no work was done on the phototaxis or thermotaxis He shows that the planariæ are highly sensitive to slight mechanical shocks They secrete mucus threads of various form, they have periods of activity and rest, they have a disposition to collect together and to form groups, they are carnivorous A description is given of the cilia and of the mode in which they effect locomotion, a very full account is also given of the various movements of locomotion and of the movements consequent on the application of feeble and of strong stimuli. The article is a very interesting one. 2. On the Diplochorda, by A. T Masterman, M A., D Sc., lecturer on zoology, School of Medicine, Edinburgh. This constitutes Part 4 of Dr Masterman's researches on this group of Diplochorda and is devoted to Cephalodiscus dodecalophus It is illustrated by two plates. 3. On Hypurgon Skeati, a New Genus and Species of Compound Ascidians, by Igerna B J Sollas, B Sc. Lond, Bathurst student of Newnham College, with two plates. 4. The Anatomy of Arenicola Assimilis, Ehlers, and of a New Variety of the Species, with some observations on the post-larval stages, by J H. Ashworth, D Sc., lecturer on invertebrate zoology in the University of Edinburgh, with two plates. This number of the Journal contains the index to Vol. XVI

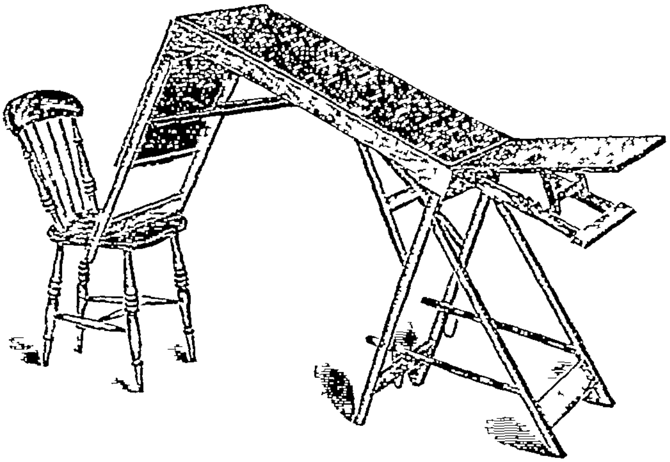
The Journal of Physiology Edited by Sir MICHAEL FOSTER, F R S and J N LANGLEY, F R S Vol. XXIX, No I Feb 23rd, 1902 London C J Clay and Sons. Pp 96 Price 6s—The present number of this journal contains the following articles —1 The Sugars of Muscle, by W A. Osborne and S Zobel. Amongst other conclusions at which the authors arrive the more important are that the diastatic action of pancreatic juice and malt diastase at a temperature of 37° C ends with the formation of maltose, and that the carbohydrates of muscle, exclusive of glycogen, are dextrins, dextrose, and maltose, the latter sugar preponderating 2. Further Observations of the Sequence of Changes produced in the Urine as a Result of Exercise, by G O Garratt. The exercise taken by the author was 45 miles per diem on a cycle with regulated diet at an average speed of 15 5 miles per hour, no rest or refreshment was taken. The urea was found to be very low during the ride but it rose abruptly after, reaching its maximum in eight hours The increased excretion of nitrogen fell almost entirely on the urea component. The excretion of ammonia was unaltered. The quantities of sulphuric acid and potassium were considerably increased in the urine, the maximum output occurring several hours before that of total nitrogen

Phosphoric acid was also discharged in larger quantities 3 Cortex Cerebri and Iris, by N Mislawski, professor of physiology in the University of Kazan This observer finds that dilatation of the pupil follows excitation of the cortex cerebri after section of the cervical sympathetic, after extirpation of the superior cervical ganglion, after section of the spinal cord at the first vertebra, and even after section of the medulla oblongata behind the corpora quadrigemina. 4. The Effect of Hæmorrhage upon the Composition of the Normal Blood, compared to its Effect during the Administration of Iron and Arsenic, by E. P, Baumann, M.D 5 On the Physiological Action of the Kenyak Dart Poison Ipoh and its Active Principle Antiarin, by C G Seligman, M.B Lond., with three figures in the text Ipoh is obtained from the crude sap of antiaris toxicaria indigenous in the Baram district of Borneo 6. Observations on Some Spinal Reflexes and the Interconnexion of Spinal Segments, by C S. Sherrington, F R.S , and E. E. Laslett, M.D Vict The number also contains the proceedings of the Physiological Society on Dec. 13th, 1902, and Jan 17th, 1903.

New Inventions.

A PORTABLE TABLE ALLOWING OF PATIENTS BEING READILY PLACED IN THE TRENDELENBURG POSITION

THE portable operating table shown in the accompanying illustration is a modification of that suggested by Mr Jordan Lloyd. Two legs are added under the head which are united to the upper ends of the ordinary legs by strong hinges and to one another below by a cross piece These can be fixed at the required angle to the ordinary legs by means of an adjustable support, one on each side. All that is necessary to place a patient in the Trendelenburg position is—first, to fix the extra legs at the necessary angle, secondly, to slide in the support for the foot flap and to drop it, and thirdly to tilt the table backwards and place an ordinary wooden chair under the cross piece connecting the legs at its foot.



It will really be found simpler to place a patient in the necessary position with this little table than with many of the operating tables in hospital theatres and I hope that it will supply a want which I personally have long felt existed.

The table as described above has been strongly and neatly made for me by Messrs. Maw Son, and Sons of Aldersgate street, London, E C

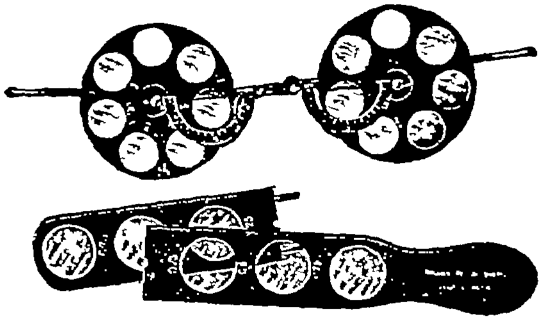
ARTHUR H. BUCK, F R.C S Edin.,
Brighton. Assistant Surgeon Sussex County Hospital &c.

A PORTABLE REFRACTOMETER.

FROM a model of a refractometer which I showed recently before the Ophthalmological Society Messrs. S Maw, Son and Sons, of Aldersgate-street, London, E.C , have made a standard pattern which is figured below

The instrument was designed to save the time and labour expended in changing the lens during retinoscopy, but it will doubtless prove of value to surgeons in the country and abroad for subjective examinations when the larger test cases may be impracticable, for the whole—face-piece, "rule," and eight complementary lenses and stops—packed in its case measures nine by three and a quarter by one and quarter inches and weighs 11 ounces, a less bulk and weight than the common yellow backed novel.

The plan of the instrument is simple. To each outer extremity of the face piece of a skeleton trial-frame is affixed a pivot, upon each pivot there rotates a disc. The discs (three inches in diameter) are perforated by seven holes (three-quarters of an inch in diameter), one is open and six are glazed with lenses from 1 D to 6 D the disc of one side with + lenses, the other with − lenses By rotating the discs the lenses come in succession before the eye hole, and since the instrument is reversible either disc may be placed before the eye to be examined. If a higher sphere than 6 D is desired a 7 D , or, if necessary, 14 D , lens is placed in the "cell" hanging in front of the eye-hole, so that by rotating the disc as before from 1 D to 20 D are obtained. For fractions of a dioptre an independent flat rule carrying six lenses + and − 0 25 0 5, and 0 75, with a space, is provided , this 'fraction rule ' is held vertically before the eye first at the central space, then raised or lowered as + or − fractions may be desired. The "cells ' in front of the discs for the reception of additional lenses are held in such a manner that on reversing the instrument each "cell" automatically retains the pendent position and so is ready to receive the lenses They bear the usual degree markings The frame is adjustable for binocular inter pupillary distance from two and a quarter inches to two and three quarters inches by a sliding bar bridge and thumb screw, for monocular use from two inches to three inches I P D can be obtained by simply displacing the bar bridge from right to left, or reversely, as needed The lenses provide all values from 0 25 D to 20 D + and − spheres, for monocular purposes , and for binocular vision all values from 0 25 D to 14 D , both + and − spheres. For the determination of astigmatism by retinoscopy the value of each meridian is determined by its spherical correction. In cases where subjective correction alone is sought, it is best estimated by the use of the stenopœic slit, the method to which Donders in his classical work accords premier position (retinoscopy was then unknown)



I believe that the arrangements of the instrument so far follow natural habit in procuring handiness of those lenses most commonly required under 6 D that it will be useful to these frequently practising retinoscopy Its value to surgeons away from their normal base or in the services will, I think, be unquestioned It is neatly and strongly made, there is nothing likely to get out of order, and its price is low

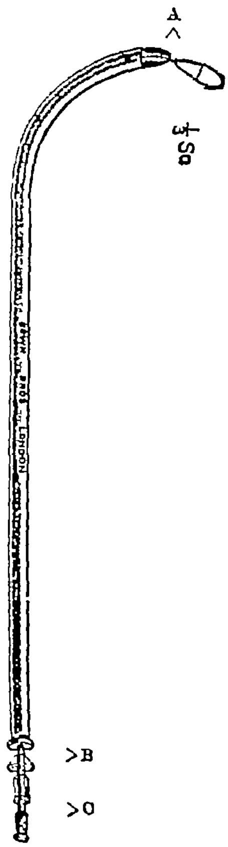
N BISHOP HARMAN M A , M.B Cantab , F R.C S Eng
Queen Anne-street W

A NEW SILVER CATHETER.

HAVING frequently met with difficulty in withdrawing urine from the bladder of patients suffering from retention due to stricture, enlarged prostate, &c., owing to the eyes of the ordinary silver catheters becoming blocked with blood clot during their passage through the urethra, I have devised a new instrument to cope with this difficulty, whilst at the same time it possesses a great advantage over the ordinary catheter in that the inside of the instrument can be properly cleaned and rendered absolutely aseptic.

The principle of the instrument can be at once seen from the accompanying illustration and, briefly, its construction differs from the ordinary catheter in that the last half inch of the instrument is continuous with the stilette and not with the catheter itself By this means it can be moved in or out of position by pulling or pushing the end of the stilette and thus there is no necessity for any opening in the side of the instrument

To use the catheter the stilette is pulled upon until the distal end is in position and the instrument is then passed into the bladder By pushing on the end of the stilette the end of the catheter is now displaced and the urine is drawn off, the end of the instrument is then replaced and the catheter is withdrawn



The advantages claimed for this new instrument over the present type are —1 The absolute impossibility of the catheter becoming obstructed with blood clot or other foreign material during its passage into the bladder, for during this manipulation there is no opening whatever in the instrument. 2. The ease with which the flow can be regulated according to the distance the stilette is moved. 3 The rapidity with which the bladder can be emptied owing to the larger opening when the end is thoroughly displaced. (N B —In testing this instrument I found that a No 12 ordinary silver catheter occupied 41 seconds in emptying one pint of water, whilst with this instrument (also a No. 12) it was done in 30 seconds) 4 Supposing the eyes of the ordinary instrument to become obstructed with blood clot in the bladder there is no way of removing it excepting by taking out the instrument altogether, whilst if the open end of this instrument becomes so blocked the clot can be broken up by alternately shutting and opening the end by means of the stilette and without taking the catheter out. 5 Its greater adaptability to asepsis, for when the instrument has been used the end is unscrewed and the small button (B) is taken off the stilette. The stilette is then withdrawn by means of the end A and the inside of the catheter is thoroughly washed by a stream of water The stilette is then replaced and the end O is screwed on A piece of gauze is afterwards passed through O and the stilette is again withdrawn, carrying the gauze with it which thoroughly dries the inside.

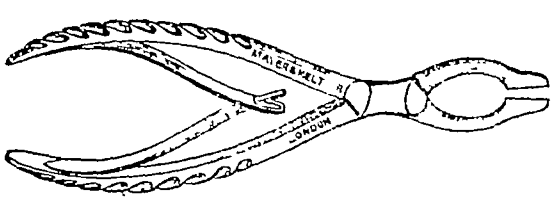
As yet I have only had the opportunity of using the instrument in a small number of cases, but in all of these it has answered admirably and has quite fulfilled all my expectations

In conclusion I have to say that the drawing has been prepared and the instrument has been made by Messrs. Down Bros, Limited, of St. Thomas's street, Borough, London, S.E., from whom it can be obtained

STANLEY RAW,
Senior Resident Medical Officer Sunderland Infirmary

A SEPTOTOME FOR USE IN MOURE'S AND OTHER OPERATIONS FOR DEFLECTION OF THE TRIANGULAR CARTILAGE.

THIS instrument is a pair of detachable cutting forceps adapted from existing patterns, but specially devised to amplify the applicability of Moure's valuable operation for the rectification of the various forms of deflection or deviation of the nasal septum. The blades are modified from those of Moure's scissors from which they differ in being narrower and symmetrical, their cutting edges are but slightly divergent above and they are obtuse—somewhat probe pointed—at the extremity The consequence is that these blades can enter contracted fossæ and be insinuated to the required depth without endangering the folds of the limen vestibuli or the inferior turbinals, whilst the heels are sufficiently apart to clear the septum mobile. The shanks are much less curved or bowed, and at their junction with the blades there is no bending on the flat, in fact the remainder of the instrument closely follows the straight cutting forceps of Asch, but there is an addition of two powerful springs, and the result of the combination is a simple and handy septotome which works well in practice. The springs insure the disengagement of the blades after closure upon the septum, an action which greatly facilitates an extension of the primary incision, especially of the maxillary one towards the naso-pharynx, upon which, I think, so much of the success of the operation often depends. Strength is secured by the Asch form of handles, whereas the absence of an angle in the shanks, combined with symmetry in the blades, helps to maintain precision in keeping the line. For better adaptation to different requirements—such as the age of the patient, the fancy of the operator, and other conditions—the septotome can be had in three sizes, varying only in the length of the blades, No 1 measuring half an inch, No. 2 three-quarters of an inch, and No 3 seven eighths of an inch (1 3, 1 8, and 2 3 centimetres respectively) Of these No. 1 has, perhaps, the widest application, but the medium size answers in nearly every case, and the length from pivot to point of blade is the same in all. The septotome was made for me by Messrs Mayer and Meltzer



Henrietta-street, W L HEMINGTON PEGLER.

Looking Back.

FROM

THE LANCET, *SATURDAY*, MARCH 5, 1825.

REVIEW[1]

A Treatise on Moxa as applicable more particularly to Stiff Joints By JAMES BOYLE Esq, Surgeon of the Middlesex Infirmary, &c. 8vo pp 168. *London, 1825* Callow and Wilson

THE use of this species of cautery appears to have originated with the Japanese, by whom, and other Oriental nations, it has been much employed. The origin of the term *Moxa* has been a frequent subject of dispute among etymologists, but if it be not immediately derived from a word in the Japanese, nothing more than ingenious conjecture can establish its origin from other tongues. In France, the publication of Baron Larry's work on the subject procured it the sanction of many members of the profession, but, in England, little encouragement has yet been given to a practice which, to say the least of it, is decidedly unpopular, and opposed to the feelings and opinions of our countrymen.

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[1] A portion only has been transcribed

We shall now extract from the author's book a part of the History of Moxa, which will show well enough the progress it has made and the class of practitioners by whom it has been most employed.

"The word moxa, according to the inhabitants of China and Japan, designates a cylinder formed of a cottonous species of mugwort (*Artemisia Chinensis*). The date of its first introduction into notice, as a therapeutical agent, is not to be found amongst the records of its history; but at the earliest period to which it can be traced, it was considered an infallible remedy in the cure of many diseases, particularly gout, chronic rheumatism, and nervous disorders.

From China and Japan moxa was introduced into the western part of the continent of Asia; thence amongst the Chaldeans and Egyptians, by whom, in progress of time, its use was in some degree modified. From these ancient nations this heroic remedy was conveyed into Europe, where, occasionally, or rather in proportion to the success of the practitioner who employed it, its virtues have been recognised or discredited. Its efficacy however has been acknowledged by almost every nation; yet the mode of preparing it for use, as well as the manner of applying it, have much varied.

The Chinese formed a small pyramid, by rubbing the dried leaves of the mugwort between the hands, for the purpose of obtaining the cotton from the fibrous part; a little very fine tow being made to project from its summit, which latter being lighted, the material was allowed to burn down gently. The Indians were accustomed to form theirs of a species of rush, which was permitted to burn down in the same manner. The Persians employed goat's dung dried and rolled into cylinders. The Armenians, the agaric of the oak. The Thessalonians made use of a particular moss. The Laplanders employed birch wood, in a rotten and phosphorescent state. The Egyptians, we have reason to believe, were the first who had recourse to cotton, and the civilised nations of Europe have successively adopted this material, with some modifications."

'Thevenot and Belloni inform us, that the Turks and Armenians attach the greatest importance to moxa; and the first historians, upon describing America, after the discovery of the New World by Christopher Columbus, attest that the employment of fire was not less known to the inhabitants of that vast continent than to those of the old world.'

In the year 1755 the Academy of Surgeons in France, with a view of ascertaining the real advantages of fire in the healing art, the cases in which it was most likely to be successful, and the most efficient mode of applying it, instituted certain inquiries for the purpose. Professor Percy was elected to report from experiment and practice. Various modes of applying heat, from the concentrated rays of the sun to the actual cautery were put into requisition; but as a full detail of the measures adopted would be rather tedious than useful, it may suffice to state here, that the investigation was favourable to the reputation and revival of this ancient remedy. Thus was again brought forward the most powerful and successful agent which we possess in the treatment of chronic disease.

To those persons who may wish to make trial of the moxa, and to whom the work of BARON LARREY is inaccessible, Mr. BOYLE'S book may be of service. We think, however that the whole might have been embodied in a communication or two to any respectable journal. It is obvious enough that the remedy is of too painful a nature to be much employed in private practice, and the trials which have been made of it in our public hospitals have not demonstrated its superiority to many other modes of procedure.

CRIMINAL STATISTICS.

THE first part of the "Criminal Statistics of England and Wales in 1901" has been issued prefaced with an introduction by Mr. H. B. Simpson, one of the chief clerks of the Home Office. This gentleman observes that the figures for 1901, as compared with those for 1900, point to an increase of crime which is unmistakeable but not of serious magnitude, and, further, that this has taken place both in the case of indictable offences, which have of late years shown a marked tendency to diminish, and also in the case of non-indictable offences—that is to say, those dealt with at police-courts which since 1886 have more or less steadily increased. In one class of offence this increase is attributed in part to the creation of the new charge of habitual drunkenness and also to the steady growth in the number of attempted suicides which are brought to the cognisance of the courts. Charges of habitual drunkenness were made in 176 cases, against 36 males and 140 females. Of these one was withdrawn, 156 resulted in summary conviction, and 19 of the persons accused were committed for trial and convicted. Turning to the tables which deal with coroners' inquests we find that the total number of inquests in 1901 was 37,184, held upon the bodies of 24,072 males and 13,112 females. This appears to be a pretty constant figure, for comparison with the corresponding tables for 1900 and 1899 shows that the totals in those years were 37,076 and 37,026 respectively, while the males and females were divided in practically corresponding proportions. The slight increase observable in 1901 is more than accounted for by an appreciably larger number of murders and suicides. In that year coroners' juries returned verdicts of murder in 208 cases, as against 145 in 1900 and 142 in 1899, and of suicide (omitting cases of *felo-de-se*) in 3057 cases, as against 2806 in 1900 and 2780 in 1899. In 37 of the cases of murder the person whom the coroner's jury found guilty of the crime had taken his own life at the time of the murder. It would be interesting to know, if the information were obtainable, in how many of these cases of murder and suicide committed simultaneously the cheap revolver was responsible for the double tragedy and also the part which it played in the suicides unaccompanied by murder and in the accidental deaths. A table which gives the number of inquests upon the bodies of children suffocated whilst in bed with their parents or others informs us that 1538 of these inquiries were held in 1901, a smaller number than in either of the two preceding years, and that in 1434 instances the verdict was "accidental death." A verdict of murder was, however, found in one instance, a verdict of manslaughter in four, and an open verdict in 99. The increasing accommodation provided for habitual inebriates and the increasing extent to which advantage is taken of the law with regard to them are shown by the figures relating to their reception in inebriate reformatories. In 1899, the first year of these institutions, only 88 persons were received into them; in 1900, 144; and in 1901, 204. A small increase is observable in the number of criminal lunatics in detention. At the end of 1901 there were 791 of these; at the end of 1900, 770; and at the end of 1899, 766. Most of these are persons ordered by the court trying them to be detained during His Majesty's pleasure. In 88 cases, however, out of the total of 791 the prisoner was certified insane before trial and in 73 after trial, so that it will be seen that the interest of the State in the criminal's mental condition is not limited to the inquiry held or omitted to be held when he is charged with an offence. The total given it will be observed includes those previously confined at Broadmoor and elsewhere, as well as those committed to asylums in the year under discussion. The number of those confined as of unsound mind on the last day of 1901, who had been so confined for one year or less was 109; on the corresponding day of 1900 it was 89; and on that of 1899 it was 77. With regard, however, to the apparent increase in the number of criminal lunatics as shown by such returns as those before us, Mr. John Macdonell, C.B., LL.D., who wrote the introduction to the Criminal Statistics of 1899, thus recorded his opinion: "It is often alleged that insanity is increasing; that juries are more and more disposed, at all events in the case of grave crimes, to find the accused insane; and that consequently an increased proportion of insanity among criminals is to be expected. These statements are not borne out by the available statistics on the subject. No doubt there are several reasons why they should be read with caution, one being the fact that there is no record of persons who are tried summarily and found insane—that is to say, no information as to nine-tenths of the persons convicted. But so far as the available figures go they show no increase of insanity in the criminal classes, or, to be more accurate, in the disposition to find insanity as a concomitant of crime.

Royal Medical Benevolent College

Patron—HIS MOST GRACIOUS MAJESTY THE KING
President—THE RIGHT HON THE EARL OF ROSEBERY, K G
Treasurer—CONSTANTINE HOLMAN, M D

JUBILEE SPECIAL APPEAL

The Council has the pleasure to announce that HIS ROYAL HIGHNESS THE PRINCE OF WALES has graciously consented to take the Chair at a FESTIVAL DINNER on the 10th June, in aid of the funds of the Charity, and it is the earnest wish of His Royal Highness and of the Council that a sum of £10,000 should be collected on that occasion, which amount would relieve the Institution of its financial embarrassment.

From time to time the Council has been compelled to make special appeals for Funds, and in spite of the assistance derived from one issued late last year, a sum of £2,900 was owing to the Bankers at the end of 1902 Since then the Council has had to remedy defective structures at Epsom College, which will cost a considerable sum of money, and they feel that a serious effort ought to be made to put the finances of the Institution on a sound basis

The 6th of July will be the 50th Anniversary of the laying of the foundation stone of the College, and the present appears to be a fitting occasion to raise a fund to enable the Council to repay money due to the Bankers, to pay all current liabilities, which are very heavy, to repurchase stock which was recently sold, and to leave a balance in hand for contingencies

The Royal Medical Benevolent College provides pensions for Aged Medical Men, and the Widows of Medical Men, in reduced circumstances, and a School, open to all classes, but offering special advantages to the Sons of Medical Men, fifty of whom are Foundation Scholars

There are Fifty Pensioners who receive £30 a year each They must be legally qualified Medical Men, who have been registered Medical Practitioners for five years, or the Widows of such

Fifty Foundation Scholars receive an education of the highest class, and are boarded, clothed, and maintained at the expense of the College They must be elected, after approval by the Council, from among the necessitous Sons of such Medical Men as would be professionally qualified for Pensionerships

A sum of over £6,000 is required annually for the benevolent side of the Institution, and the greater part of this amount is derived from voluntary contributions In recent years considerable sums of money have been spent in remedying structural and sanitary defects at the College, the buildings being close upon 50 years old

The Council has sought for many years to keep the numbers of both Pensioners and Foundation Scholars at 50, but this cannot be continued unless the income of the Charity be maintained

Donors of Ten Guineas, in not more than two payments, and Collectors of Twenty Guineas are Life Governors of the College, Subscribers of One Guinea annually are Governors during the continuance of their Subscriptions Contributions of a less amount than One Guinea are welcome

The Council trusts that Medical Men will do all in their power to make this Jubilee Special Appeal a financial success Gentlemen willing to act as Stewards on the occasion of the Festival Dinner should send their names to the Secretary as soon as possible The office does not involve any pecuniary responsibility

GEORGE P FIELD, Chairman of the Dinner Committee
J BERNARD LAMB, Secretary

Office 37, Soho Square, W

THE LANCET.

LONDON SATURDAY MARCH 7, 1903

The Limitations of the General Medical Council

WE have upon a previous occasion pointed out that both among the general public and also among members of the medical profession a great amount of ignorance exists as to the powers and duties of the General Medical Council.[1] The minutes of a meeting of the Executive Committee which was held on Feb 23rd are now before us and the questions submitted to this committee show very well what we mean by the above-mentioned ignorance. Mr EDWARD DENNIS VINRACE asked for ' an authoritative ruling " upon the question whether or not members of the staffs of hospitals should sign school board certificates for children under their care. To this question a resolution of the committee stated that "the question raised is not one which comes within the scope of the committee s functions and the Executive Committee are therefore not in a position to give the authoritative ruling which Mr VINRACE desires" Another question submitted by Dr. W H. BROOK asked whether a registered practitioner was allowed to administer anæsthetics for a dentist who was on the Dental Register, but who was acting as extractor to a dental company duly registered under the Companies Act but the members of which company were not on the Dental Register To this the Executive Committee replied in the terms of the deliverance on the subject already given by the General Medical Council. This deliverance was to the effect that any registered medical practitioner who knowingly and wilfully assisted a person who was not registered as a dentist in performing any operation in dental surgery was liable on proof of the facts to be dealt with by the General Medical Council as having been guilty of infamous conduct in a professional respect. The Executive Committee confessed that it could give Dr BROOK no further answer Another question submitted by Mr RUSSELL RUBENS asked whether a medical man who attended a child after he had been circumcised by a Jewish 'mohel" and unskilfully treated, or who gave a certificate after death (of such child) would be considered guilty of covering To this the committee replied that it had no jurisdiction over unqualified practitioners but that it is prepared to consider any complaint as to any unprofessional conduct on the part of any medical practitioner

Now these questions and the replies thereto show very well the limitations of the General Medical Council. It is unfortunate that the full title of the General Medical Council is somewhat cumbrous for daily use, for it shows what that body is. It is the General Council of Medical Education and Registration of the United Kingdom. It was created by the Medical Act of 1858 to enable persons requiring medical aid to distinguish qualified from unqualified practitioners. Its statutory duties are to look after the education of medical students and the registration of qualified medical men. It is not a medical protection society, or a medical trade-union, or a medical trade guild, or a medical defence union. It deals with one offence only—namely, 'infamous conduct in a professional respect"—and under this head come such varying offences as advertising or the commission of adultery with a patient The Council can only inflict one penalty—the removal of the offender's name from the Register—and such removal in no way precludes him from practising provided that he does not use any name or title implying that he is still registered. It will thus be seen that the General Medical Council has no power, however much it may have the desire, to answer or to deal with such questions as those which we have set out above They are mainly questions with which we have dealt again and again in our columns. Mr VINRACE mentioned in his question that some hospital medical men refused to sign school board certificates because they considered that to do so was injurious to the general interests of the profession. Although this point has not hitherto come before us yet we have always insisted that a medical practitioner should not give a school board certificate if such certificate is liable to be "revised ' by an unqualified person. Dr BROOK S question involves a conflict between the letter and the spirit of the law Technically speaking there is no reason why a medical man should not administer an anæsthetic for a registered dentist, and there was no question as to the registration of the dentist to whom Dr BROOK referred. But, as Mr. C S TOMES pointed out in a letter to the registrar, a medical man giving an anæsthetic for a registered dentist who is acting for a company of unqualified men is indirectly encouraging "a state of things of which he must disapprove." The question as to circumcision, again, is practically one which raises the whole matter of unqualified practice. In our opinion no medical man should refuse to treat a child who is suffering in consequence of the negligence or ignorance of a "mohel,' but in case of the child s death the medical man should refuse to give a certificate and should at once inform the coroner of the facts

As the law at present stands unqualified practice is absolutely legal Any person however ignorant, however dirty in his methods, may treat any patient, may prescribe any poison, may give away any poison, may administer an anæsthetic, or may perform or try to perform any operation on anyone who is fool enough to submit himself or herself for treatment So long as the unqualified practitioner does not imply that he is registered or refrains from *selling* a scheduled poison, and provided that the victim whom he treats does not die, the law itself *to say* nothing of the General Medical Council, is absolutely powerless That this state of things should exist is neither more *nor less than a scandal and the* only possible reason why the law allows it is that it considers that a man has a right to do as he pleases with his own body so long as he does not interfere with the health of his neighbour's body But it is useless to blame the General Medical Council for not interfering in a state of matters over which it has no control

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[1] THE LANCET August 30th, 1902, p 574

A solicitor who is struck off the rolls by the High Court at the instance of the Incorporated Law Society, or who even fails to pay for his annual certificate, or a barrister who is disbarred is thereby precluded from practising A medical man who is struck off the Register can still practise. His only disabilities are that he is unable to sign a death certificate, to sue for fees, and to hold certain public appointments

In order that the General Medical Council should have more power it is necessary that the law as to unqualified practice should be amended. Unqualified practice should either be made illegal or, if that be considered impracticable, a licence should be made obligatory and such licence should be made to cost a very large sum. It need not be any guarantee of knowledge or skill any more than a licence to sell beer or tobacco is any guarantee of the purity of the goods sold But if such licence were made to cost, say, £500 per annum the being struck off the Medical Register would be a punishment in reality instead of being, as at present in the case of the gross offender, little more than nominal.

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The Relation of Dyspepsia to Eye-strain

FEW terms are more familiar to the ear of the physician than that of "biliousness." By the laity it is held to constitute an altogether satisfactory explanation of a multitude of symptoms which, whilst collectively they produce much discomfort, are so inconstant in their seat and manifestation as to prevent their rising to the dignity of a definite disease Has a man some swimming in his head on rising he is "bilious", does he suffer from flatulence, nausea and want of appetite, from low spirits, and from inability to read without headache, he is "bilious." He proceeds to dose himself with salts and feeds himself on articles of diet which the advertisements assure him will promptly remove every ill At length, failing to obtain relief by these means, he betakes himself to some prudent and experienced practitioner who, casting about for the hidden cause of his patient's troubles, minutely inquires into his habits of life, his diet, the state of his alimentary canal, his allowance of tobacco and of alcohol, and the time he can devote to exercise Sometimes the answers to all these questions are atisfactory, while sometimes modifications can be suggested and some degree of improvement generally follows, if not, then mental worry or, it may be, uterine trouble is diagnosed and rest, change of air and scene, or a system of topical treatment is advised and adopted. Then again a partial or complete restoration to health is effected and the ordinary avocation is resumed But the cure is soon found to have been, like the former, only temporary The dyspeptic symptoms and the disposition to look at the dark rather than at the bright side of things in general recur and with all this there are headache and incapacity to work or even to try to work. After a time the victim becomes inured to his troubles, ceases to apply remedies, finds out what is best for him, and rests satisfied that his disease is alike inscrutable and incurable.

Such is the life history of many distinguished literary and scientific men. In a highly suggestive volume[1] that has just been published Dr GEORGE GOULD of Philadelphia has selected as examples five well known men—DE QUINCEY, CARLYLE, DARWIN, HUXLEY, and BROWNING—all of whom, whilst daily performing a prodigious amount of work, were constantly complaining of dyspepsia, inability to read or to work, and headache. He endeavours to show that in all these cases the primary defect, the starting point of the whole train of symptoms, has hitherto been strangely over looked and is to be really found in some error of refraction in the eyes—such, for example, as hypermetropic or mixed astigmatism or some defect in the innervation of the extrinsic muscles of the globes. With this clue every thing, he maintains, becomes clear and the symptoms range themselves with those that are very familiar to the ophthalmic surgeon They are persistent because the cause is persistent. They disappear or are greatly relieved when work is given up and long walks or rides are taken in the open country and in the gloaming for the eyes are then no longer strained, they are increased on the resumption of literary or scientific work, for the efforts to obviate the defects are recommenced, the head ache, anorexia, and depression of spirits are all reflex phenomena well known in ophthalmic practice Lastly, they entirely disappear when the error of refraction is duly corrected by appropriate glasses. The conditions required for the recognition of a *vera causa* are fulfilled—*praesens morbum facit, sublata tollit*

It may, indeed, be said that the view here advanced proceeds naturally from the ophthalmic specialist and we are irresistibly reminded of the shoemaker who declared to the citizens of the beleaguered city that there was nothing like leather, but Dr GOULD is an accomplished physician and supports his opinion with so much ingenuity that our first disposition to smile gives place to the feeling that there is much to be said in its favour It is to be remembered that the healthy eye can bear an enormous amount of work without harm either to its own structure and functions or to those of the body at large, it is only the ill formed astigmatic or otherwise defective eyes which are compulsorily brought into play that are instrumental in inducing the long chain of symptoms that constitute the troublesome and obscure affections dyspepsia and hypochondria Our knowledge of the etiology of these conditions has been masked by the circumstance that the efforts of the patients to use their eyes are not made apparent by any marked symptoms of inflammation in these organs them selves, but are apt to excite a train of neuroses which have hitherto distracted the attention of physicians from the eyes and concentrated it upon the stomach, brain, or other organ to the distress of the patient and the opprobrium of medicine. Dr GOULD sometimes takes for granted what a Scotch jury would return as "Not proven." But it is clear that in every case in which the various symptoms commonly included under the terms chronic dyspepsia and 'bilious ness" are present and prove resistant to ordinary treatment it would be well to obtain the advice and opinion of an ophthalmic surgeon, for this can certainly do no harm and may quickly abolish the trouble and restore the patient to health

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[1] Biographic Clinics: The Origin of the Ill health of De Quincey Carlyle Darwin Huxley, and Browning By George M Gould, M.D London: Rebman 1903.

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"Run Down"

THE claims of medicine to be ranked as one of the exact sciences meet no more formidable reproach than the undeniable one that certain ill-defined terms are used by some or all of its followers to cloak a multitude of vague disorders The most familiar perhaps of these is the universal "rheumatism," a term which even in these enlightened days is commonly employed to designate a number of disorders the pathology of which, if still to a large extent unknown, is at any rate, almost certainly of very diverse kinds Our ideas of rheumatic fever appear certainly, thanks to recent bacteriological researches, to have gained a foundation of exact knowledge, but he would be a rash physician who ventured to define the limits or the pathological essentiality of muscular rheumatism or of rheumatoid arthritis. We shall be told, no doubt, and confidently told, that the latter is, of course, a microbic affection When we ask for even a vestige of actual proof it will not be so easy to satisfy our demands.

Among the many conditions the circumstances of which are so familiar and the actual nature of which is so obscure, there is none perhaps more commonly met with than that which is known as the state of being "run down" The expression is a good one to describe a certain physical and mental state in our present ignorance of its pathogenesis. To say that a man is 'run down' conveys quite plainly to our minds that there is a general depression in the vitality of the organism, a depression that is widespread, embracing the purely physical as well as the intellectual functions, while at the same time the term gives no hint whatever as to the anatomical site or the pathological nature of the underlying cause. This negative nature of the name for a condition with which we are all only too familiar is unfortunately completely justified by an entire absence of exact pathological knowledge with reference to the condition itself Certain experiments and observations upon fatigue in school-children may bear definitely upon the point in question. Except these we can recall no positive knowledge bearing upon the state which we may suppose to be present in a person who is, as we say "run down. We cannot get much nearer to a definition of this condition than to describe it in wide terms as one of fatigue. We possess certainly a fair sum of chemico-physiological knowledge relating to fatigue so far as muscle tissue is concerned. As regards the fatigue of mental functions and of digestive, secretory, and absorptive functions we still know remarkably little This little we would probably express by saying that in the condition to which we are alluding there is a general depression of innervation, that the higher centres of the brain are depressed, and that there is a lowered condition also of all the organic functions resulting in an incomplete performance of digestion and assimilation, consequently in impoverished nutrition and also in impoverished power of muscular action. The resulting impoverished blood reacts upon the nervous system which is imperfectly fed and thus a vicious circle is completed

In the production of this condition, as it is most commonly seen, monotony of action—whether physical or mental—seems to play a very important part The typical case of a man who is "run down" is that of the business man who, with the regularity of a timepiece, goes from his breakfast table to his office chair, from his office chair to the luncheon-room, from luncheon to the office chair, and from the office home again in the evening This process repeated day after day, accompanied by an occasional attack of dyspepsia or of insomnia, or of extra business worry, tends to depress even an ordinarily healthy constitution. On the nervous or delicate the condition of being "run down" is frequently imposed before the machine-like existence has been many years, or even many months, in play Man is not meant for monotony A constant recurrence of the same activities, the same thoughts and the same associations appears to produce a dead level of mere weariness, even though the daily round is of itself made up of varying details. Thus, in the instance we have taken it might be thought that in the short railway journey, in the meeting of daily companions and in the little interval at luncheon enough variety would be imposed upon the city man's existence to save him from monotony But the variety is itself monotonous. He cannot vary his railway journey, he cannot vary his daily meetings, or even, in many cases, his place of luncheon, and so the daily round becomes wearisome, and the excursions for luncheon become as trying as the monotony of a sandwich in the office.

We have glanced at the pathology of the state of the man who is 'run down" and we have briefly alluded to one potent factor in the production of this condition. We may therefore in a few words suggest a remedy The nature of this will be obvious from what has just been said The first step towards saving us from getting run down will be taken if we can save ourselves from monotony At will a man cannot change his main daily occupation. As a business man, he must attend to his office work, as a professional man, he must execute the daily duties of his calling, and for most men the greater part of every 24 hours is thus absorbed. Even then, however there are little intervals and there are gaps before and after the actual working hours. It is here that a variety of pursuits should save the mind from the dulling effects of monotony The brain should be trained, so to speak, to switch itself off directly the opportunity occurs and instead of continuing to weary itself with the contemplation of business or professional complexities should revel as soon as active work is stopped in other intellectual fields. The pleasures and distractions of the society of one's fellow creatures, to some temperaments the most complete of all alleviations of worry, are not always at hand. But a hobby may be constantly accessible and it behoves all men who find themselves "run down' to make an attempt towards the enjoyment of some intellectual activity different from that constantly demanded by their daily occupation.

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Regulations in regard to Cremation.

LEGISLATIVE sanction[1] has recently been accorded to cremation as a means of disposing of human remains in this country and consequently the practice is likely in future to supplant, to a greater or less extent, the ordinary custom of burial It is in its relation to the public health more especially that cremation has a peculiar interest for our profession, and if we regard it from this point of view exclusively, apart from religious sentiment, it will generally be admitted that the practice has very much to commend it. With an urban population increasing at even its present rate and with the consequent rapid disappearance of available cemetery land it is obvious that not many years can elapse before it will be simply impossible, with due regard to the safety of the living, to find ground for interment in the usual way, and this difficulty will, of course, be greatest in the neighbourhood of our great centres of population, such as London, Lancashire, parts of Yorkshire, and the Potteries, in none of which districts has the problem of the safe disposal of the dead even approximately been solved. Considerations of this kind have evidently weighed with the Government which only last year succeeded in placing upon the statute book an Act for legalising and regulating the practice of cremation in England. It is important to note that Section 7 of the Cremation Act imposes upon the Home Secretary the duty of framing regulations for the inspection and maintenance of crematoriums and also of prescribing the conditions under which the burning of human remains may take place Accordingly, in October last Mr AKERS-DOUGLAS appointed a departmental committee consisting of Mr TROUP and Mr BYRNE of the Home Office and Dr H FRANKLIN PARSONS of the Local Government Board, and their report, which has evidently been prepared with great ability and care, has been issued as a Blue book during the past week.

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[1] Cremation Act, 1902 (2 Ed. VII., c. 8) Sec. 7

As regards the proposed regulations for the general management of crematoriums the committee has been largely guided by the experience of the English Cremation Society and by the rules drawn up for that society by its President, Sir HENRY THOMPSON But, as we should have expected, the portion of the subject which the committee has discussed with particular minuteness is that relating to the conditions in which, for the future, cremation ought to be permitted. Under this head the committee says "The point which we have considered of prime importance has been to frame regulations which, while avoiding unnecessary restrictions such as might discourage cremation or involve unnecessary delay in the disposal of the body, would reduce to a minimum the risk of cremation being used to destroy the evidence of murder by violence or poison." With the object of avoiding as far as practicable this risk the committee has carefully studied the records of past cases of murder and has directed special attention to the question of what certificates or other evidence of the cause of death had been produced before burial took place In some of these cases the committee found that the bodies of murdered persons had been buried without any certificate of the cause of death and it pointedly draws attention on more than one occasion, in the course of its report, to what we consider a scandalous fact, namely, that "the existing law permits the burial of a human body without medical testimony as to cause of death and even previous to registration of the death. Unless, therefore, some definite ground of suspicion arises there is no investigation of those cases where the cause of death is obscure and where the ambiguity of the symptoms can be slurred over in a certificate which it is no one's business to question or criticise."

In framing regulations having for their object the minimising of the danger of cremation being used to destroy evidence of crime, the committee had first to decide to whom should be intrusted the responsibility of authorising or of forbidding cremation in every individual case. After discussing certain alternatives, the committee advises that the person to decide this point should be a medical referee specially qualified for the work and appointed by the cremation authority The latter part of this recommendation appears to us, however, to be open to serious objection The person to whom such high responsibility is to be intrusted should be absolutely independent of the authority whose operations he is appointed to control The committee insists on the production in each case of two certificates of the cause of death, one from the medical attendant of the deceased and a second from an independent practitioner The trustworthiness and sufficiency of these certificates are to be decided upon by the medical referees, whose duty it is to require a post mortem examination by a pathological expert or a coroner's inquest as a condition precedent to cremation in any case in which the slightest suspicion attaches to the manner in which the death took place. The committee appends to its report the draft of a very complete and apparently satisfactory series of regulations with regard to the inspection and maintenance of crematoriums and also a schedule of forms of medical and other certificates to be used in cases of cremation. Incidentally the committee refers to matters of importance concerning the certification and registration of death which will, we trust, receive that attention which they undoubtedly deserve from the Registrar General and his staff. Most valuable evidence which has been published in its report, was given to the committee by Sir HENRY THOMPSON, Dr THOMAS STEVENSON, Dr G DANFORD THOMAS, and Dr H T HERRING The last-mentioned gentleman was unquestionably justified in expressing the opinion that the registrars of death ought to be "a little more literate" than they frequently are and this is especially desirable because at the present time they are the only men who have power to question certificates of death in cases that are not reported to the coroner

Annotations.

' Ne quid nimis

THE MEDICAL MAN, THE CORONER, AND THE PATHOLOGIST

THE Public Control Committee of the London County Council has made a report to the Council upon the subject of post-mortem examinations in inquest cases of a special nature, and the Council has adopted its recommendations The committee, as was announced in our columns, recently received deputations from the South West London Medical Society and from the medical and surgical staff of St. Thomas's Hospital, when representations were made as to the manner in which Mr Troutbeck interpreted the view of the Council that post-mortem examinations in cases of a special nature should be entrusted to a specially skilled pathologist. The members of the committee, having given full consideration to the matter, and having seen Mr Troutbeck and learned the number of inquests which he had held in his double capacity as coroner for the South-Western District of London and for Westminster, make suggestions which show that they are desirous of removing the grievances that are complained of ' We think,' the report runs, "that in cases where a medical practitioner had been in attendance, if it is intimated to coroners that whenever they are of opinion that the evidence of the medical attendance is material to the proper elucidation of the case he should be invited to be present at the post-mortem and summoned to give evidence at the inquest, although a pathologist may have been employed." This course, they add, has been suggested to them by Mr Troutbeck, and we are glad to learn this, for it implies that we shall hear no more of the coroner's officer being sent to get medical information from the professional adviser When medical evidence is required it will be given upon *subpœna* and the witness will, of course, be paid the statutory fee for his evidence. The report acknowledges the correctness of the view taken by THE LANCET that in the present state of the law the appointment of a salaried pathologist cannot be made by the London County Council but the committee recommends that it be authorised "to obtain the names of several competent pathologists who will be prepared to make post-mortem examinations and give evidence in special inquest cases at the fee of £2 2*s* per case." The line taken by the committee is evidently one of conciliation. When medical evidence is required it will be given upon *subpœna* and be duly paid for When a special pathologist is required—and nobody doubts that this contingency arises—it will be attempted to provide coroners with a list of medical men of recognised standing in the profession, from whom the expert witness may be chosen. Discretion must remain with the coroner to decide when medical evidence is essential to the finding of an incontrovertible verdict and when a case presents pathological features. In both cases a non medical coroner is placed at a disadvantage, but we trust that the medical men in Mr Troutbeck's districts will do him the justice of believing that he will try to act fairly towards them Their action in refusing to give medical evidence save upon *subpœna* has now been endorsed by the Control Committee of the London County Council and cannot again be impeached by anyone as childish or greedy Their feeling that a reflection on their competency is intended should be removed by finding that the expert witness is only to be called in special cases and will be chosen from men of standing in the medical profession.

WHICH IS THE GREATER OFFENCE?

WITH regard to several cases of fraud which were recorded in the papers last week it is interesting to consider the nature of the offences and the degree of punishment that was inflicted. Karl Frederick Kramer was convicted of committing a fraud against the excise. He was ingenious enough to import saccharin into this country under the name of sulphate of aniline. As a matter of fact the substance was a loose compound of saccharin and aniline from which the saccharin could easily be separated. The defendant managed to evade the duties and customs in this way for about a year He was ultimately found guilty and the penalties amounted to as much as £9300 The offence was clearly that of fraud against the excise, there was no question of this trick having any prejudicial influence upon health The following cases however illustrate the utter indifference of some persons as to whether or not they poison the public. A farmer and dairyman from Exeter was fined at the Guildhall Police-court £20, with £4 4*s* costs, for sending to the Central Meat Market, London, the carcasses of two pigs which were diseased and unfit for human food. Again, a dealer from Leicestershire was summoned at the Guildhall for being the owner of certain diseased meat that was deposited in the Central Meat Market for the purpose of sale. The carcasses all showed signs of a wasting disease. The fine in this case was £100 and the costs were £3 3*s* In another instance a firm of shopkeepers in Regent-street, London, were summoned for selling cocoa containing 40 per cent. of sugar, 27 per cent. of starch, and 0 15 per cent. of red oxide of iron. The defendants were fined £3, with 12*s* 6*d* costs. It is evident that the heinousness of an offence is not represented by the amount of a fine, for surely a fraud calculated to cause injury to health is of a worse description than a fraud which cheats the excise. Yet in the latter instance the fine is generally enormous, and in the former it is, comparatively speaking, microscopic Morally the offence which is calculated to prejudice health is greater than the offence against the excise laws of the country Legally, however, it is obviously not so In short, the fines inflicted on persons who knowingly send diseased meat for sale into the market are altogether inadequate.

INSTANCES OF EXTREME OLD AGE

THE *Daily Chronicle* reports "the Royal College of Surgeons —a synonym in this case for the whole of the medical profession—as "mightily concerned" with what the Russian newspapers are supposed to have published regarding an alleged "bi-centenarian" now lying bedridden in a hospital at Tomsk. John Hunter might have sent an emissary to report on this reputed marvel—indeed, he once despatched a man on a Polar expedition—but the College does not encourage such quests as these at present It is not probable that a greatly moved College is sending officially for the old man's papers, though of course it would not refuse his likeness or any properly authenticated account of him. The difficulty is to prove the authenticity of centenarians' claims. The Methuselah of Tomsk bases his on an ancient passport, dated 1763, in which someone is described as being aged 60 in that year Supposing such a paper to exist it would only prove that a man of the same name as the bi centenarian was alive in 1763 Peasants or small farmers, to which class this old man belongs, have often accumulations of ancient papers and, when not illiterate, often sign the same Christian names from father to son for centuries A portrait of the old man would not help us either, it would only prove him to be looking very old The interest in centenarians is always great and indeed to some people fascinating As recently as 1878 a certain Michael Solis, of semi-Spanish origin, resided in Bogota, Colombia, and was alleged to be 184 years old.[1] *La Epoca*, a New Granada journal, wrote at the time of one Miguel Lollo, whom we take to be identical with Michael Solis —"The signature of this venerable *anciano* [ancient] is affixed to a deed relating to the foundation of a convent, and is dated 1712. Dr. Hernandez who had heard about this Miguel Lollo, was desirous of making his acquaintance and found him busy gardening His skin is like parchment, and his hair as white as snow It militates against the genuineness of both Michael Solis and the old man of Tomsk that during the last 60 years or so previous to what we may describe as their discovery no one had ever seen or heard of them. They are apparently unknown to such well known writers on centenarians as Easton of Salisbury and Sharon Turner Mr Redding Ware, who mentions Lollo with caution in 1885, knows nothing of the Tomsk man Surely a bicentenarian should have been famous for years, as was Henry Jenkins, the old English peasant who died in 1670 but had been visited by various witnesses from 1650 onwards. Moreover, Jenkins had specific recollections, such as that of taking a horse load of arrows in the direction of Flodden Field in 1513, whereas the Russian peasant above discussed seems only to refer vaguely to remote persons and events

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[1] THE LANCET Feb 14th p 487

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To propitious fortune

The Archons and the city of the Amphissians to the Archons and to the city of the Scarphians greeting We have forwarded to your town a copy of the decree engrossed by our city in honor of the doctor Menophantos son of Artemidorus a Macedonian of Hyrcania as Menophantos has requested us to do

In the month of Amon the day Proposition of the nonarchs Take *notice that Menophantos son of* Artemidorus Macedonian *of* Hyrcania doctor having been invited by our city has established himself therein and has on his sole account accepted the responsibility *of the medical duties* Behold when *most serious* diseases *manifested* themselves he ably cared for us and next to the gods it is to him thanks to his exertions and personal energy that our attacked citizens were rescued

Take notice he has been attested as irreproachable for having lavished his cares upon all without distinction with constant honesty and perfect equality and for having watched over all things (or cases) with benevolence.

Take notice that he has conducted himself during all the period of his sojourn among us with modesty and wisdom and has manifested a deportment of perfect dignity worthy of the city and his profession Also and moreover notwithstanding [his advanced] age and [accidents] which have befallen him he has acted in departing from our city

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curing all the assembled sick and giving public consultations? [this rendering is doubtful] We grant Menophantos the Proxenia and give him permission We present to him because of his great attention and for his benevolence In order that there shall exist a visible monument of this Proxenia accorded to Menophantos we have forwarded a copy of this decree to the city of the Scarphians and we make the following proclamation The Amphissians have presented to Menophantos son of Artemidorus to him and to his descendants the Proxenia the right to acquire property the rights of pasturage protection in war time as in times of peace and all the other privileges which the laws grant equally to the other proxenies

It is not necessary here to set forth M Vollgraff s reasons for dating the inscription in the second century B C but they are sufficient. Scarphia, the city which for some reason the Amphissians and Menophantos desired should also exhibit a copy of this decree in honour of their medical resident, was close to Thermopylæ. It was but a short distance from Amphissa, which latter was close to Delphi. The medical man was evidently a descendent of some Macedonian who was a colonist of Hyrcania in Lydia, and who possibly emigrated there under Alexander or his successors, but as we are told that one of the Seleucid princes settled Macedonians in the Hyrcanian plain, which was in the Hermus Valley in the neighbourhood of Magnesia, his ancestors may be considered as coming from Macedonia at that time. The name of Menophantos is not a Macedonian one but evidently commences with the title of the deity Men who was a god of healing Many Greek medical men assumed names formed of compounds with the name Men, such as Menodotus, Menodoros, and Menophilos. Moreover, close to the Hyrcania from which Menophantos came, Strabo tells us there was a temple of the god Men and at this sanctuary there was a school of medicine. It is quite possible this school existed in the youth of Menophantos and that he studied there. There are some 20 honorary decrees, or notices, of medical men in the various collections of ancient inscriptions, showing that the members of the profession were in many cases worthy citizens and virtuous and kindly men and, further, that their efforts for the amelioration of the bodily ailments of their fellow creatures were fully appreciated. Two of these texts may be found in Newton's "Greek Inscriptions in the British Museum," vol ii., pp 143 and 258, and others in Messrs. Paton and Hicks's "Inscriptions of Cos," Nos 5 and 344

THE NATURE OF A JELLY

IT is a remarkable fact that water may be made to assume apparently the solid form by adding 1 per cent. only of gelatin to it. The more or less stiff jellies used as table delicacies contain probably over 95 per cent of water The jelly fish similarly contains only a small percentage of solid matter This remarkable property of gelatin of rendering water, so to speak, solid has been a problem to physicists. It is generally maintained, however that after all the water in a jelly is in a fluid condition and that therefore it retains its properties unchanged. According to this view the solid condition of a jelly is a property of the gelatin itself At any rate it has been established that a jelly behaves under certain physical experiments very little differently from water Thus jelly offers little more resistance to the passage of diffusing substances than does pure water The condition of water in a jelly, therefore, resembles its state when absorbed by a highly porous substance such as pumice stone or sponge. In other words, the gelatin on setting forms a sort of fine spongy network in which the liquid water is held captive by capillary forces Gelatin is, in short, a very capacious carrier of water, and it is not unreasonable to suggest that in those cases in which the conveyance of some liquids is found to be inconvenient the use of gelatin might afford an easy way out of the difficulty Thus, by dissolving a very little gelatin in milk the milk could be carried in solid blocks Moreover, the milk would gain rather than lose nutrient value by the process

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A MEETING of the Hospitals Association was held at Caxton Hall, Westminster, on March 3rd, when a full attendance was present to hear an address by Sir Henry Burdett entitled, "The Hospital Sites and Population in London" Sir Henry Burdett discussed in an interesting and practical way the problem as to whether any, and if so which, of the large hospitals ought to be moved from their present sites to new ones situated in less congested districts or, alternatively, into the country He gave figures to show that the accepted ideas with regard to the ratio of general hospital beds to population was very far from accurate It is common to speak of the deplorably inadequate supply of hospital accommodation, but Sir Henry Burdett showed that the population within the whole of the postal district of London was, in his opinion, well supplied with general hospital beds, although certain districts were not so fortunate. Among many pregnant suggestions, he alluded to the possibility of certain amalgamations of existing hospitals as being likely to result in a more uniform supply of hospital accommodation in different districts. Mr Sydney Holland pointed out that one difficulty of procuring the combination of hospitals would be the objection raised by the medical staffs, and other speakers alluded to different manifest objections to the transporting of hospitals from their original sites. Various speakers touched upon the powers and duties of the London County Council and the London Boroughs in respect of municipalising hospitals, and Sir Edmund Hay Currie probably expressed the feeling of most of us who have deliberated over this difficult question when he said that the transplantation of ancient charities must be approached in the most gentle manner possible. The address and subsequent speeches formed an interesting contribution to one of the most urgent questions of modern London sociology, and we hope in a later issue to give a fuller report of the meeting and to comment upon some of the suggestions that were made.

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[1] Bulletin de Correspondance Hellenique 1901 pp. 234-240.

THE PREVALENCE OF SMALL-POX

CASES of small pox continue to occur at various places in the north of England. Thus 2 cases have occurred in Altrincham and 5 cases from Dunham Massey are under treatment in the isolation hospital at Baguley In addition we regret to state that Mr T W H. Garstang, the medical officer of health of the Bucklow Union, has been attacked by the disease, but fortunately in a very mild form. At Wrexham 3 cases have recently been notified, while at Liverpool 105 cases had occurred in the week ending Feb. 27th, as against 54 in the previous week. Swansea, it will be seen in the letter from our Welsh correspondent, which appears at p. 689, has been free from small pox for some weeks. The Local Government Board for Scotland intimate that during the period from Feb. 15th to 28th inclusive one case only of small pox has been notified to them—viz., the case of a fireman on board a ship which arrived at Glasgow on Feb 8th.

HYDATID CYST OF THE HEART RUPTURE INTO THE LEFT AURICLE

IN the *Intercolonial Journal of Australasia* of Dec. 20th, 1902, Dr C A. Altmann has published a rare case of hydatid disease. A servant girl, whilst gathering chips to light a fire, suddenly fell down in a fit. In about ten minutes she was seen by Dr Altmann who found her dead. She had been apparently in good health except for a slight headache on the previous day About three weeks previously her life had been insured as a first-class one. The necropsy showed that the posterior wall of the left auricle was occupied by a hydatid cyst, of about the size of an orange when full, which had ruptured into the auricle The heart was enlarged and with the empty cyst weighed 13 ounces The left external carotid artery was blocked by a daughter cyst at its point of entrance into the cranium. Permission could not be obtained for making a thorough dissection of the vessels of the neck.

HYGIENE FOR OUR GIRLS

A WORK on the subject of personal hygiene for women emanating from a French source and written by a French woman could hardly be expected to be taken seriously in this country at least, where considerations of personal hygiene for women and children present fewer features of novelty The reader however, who takes up Madame Augusta Moll-Weiss's little book of advice for "The Mothers of To-morrow,"[1] with the expectation of deriving amusement or of finding material for superior criticism will be infinitely disappointed, for not only is the subject matter handled in a thoroughly sound and scientific manner, but such delicate subjects as come under review are treated with so much appreciation of modesty that it would be difficult for a translator to find an equivalent *finesse* of expression in the English rendering When the author takes up her parable it is to preach the gospel of plain living and high thinking, cold water baths, hygienic costuming, and muscular exercise, and on what better text would it be possible to enlarge? The programme for physical recreation appears, however, lamentably uninteresting and limited in comparison with the possibilities which are open to girls in this country for healthy exercise There are certain points touched upon in Madame Moll-Weiss's little book in respect of which those of our countrywomen who are interested in "l'éducation de la jeune fille d'après sa physiologie" may certainly study with advantage, and not the least of these is the question of appropriate dressing The words of advice which Madame Moll Weiss has to offer on this subject are so strictly sensible, hygienic, and practical that we imagine that they will appeal not only to "les mères de demain" for whose benefit they are written, but even to the "*mere male*" who takes up this little book out of curiosity The young women of to-day will perhaps hardly sympathise with, or indeed believe in, the statement that "le vêtement est fait pour le corps et non le corps pour le vêtement."

SIR ERNEST CASSEL'S GIFT FOR THE RELIEF OF OPHTHALMIA IN EGYPT

THE recent generous gift of £40,000 intrusted to Lord Cromer and his successors in office by Sir Ernest Cassel for the relief of ophthalmia and diseases of the eye and for the training of qualified men for such work in Egypt was the direct outcome of the Khedive expressing interest in the subject. The Khedive saw the proposal for an ophthalmic research hospital which had been submitted by Mr Kenneth Scott of London in the hope that the funds required for starting it might be provided The officials of the Sanitary Department of the Egyptian Government, into whose hands the expenditure of the sum has virtually passed, have decided to employ it in establishing a tent in the form of a "travelling dispensary," to suffice for all purposes of operation and treatment and to work solely in the provinces. They will appoint an additional English inspector for a temporary period to travel with it, accompanied by a native Egyptian medical man, a post-graduate local medical student, two male hospital attendants and two servants. Beyond the initial cost of about £250, its annual maintenance, inclusive of salaries, is estimated at £900

THE QUESTION OF FORECASTING LONDON FOGS

WE mentioned in an annotation in THE LANCET of Oct 26th, 1901, p 1139, that electric and gas lighting companies had approached the Meteorological Office upon the question as to whether a system could be established by which special forecasts or warnings of the onset of fogs could be issued. Subsequently the Meteorological Office communicated with the London County Council upon the subject with the result that the General Purposes Committee practically agreed to coöperate with the Meteorological Office in setting on foot an inquiry into the conditions of formation of fog in and around London, and £250 were voted for the purpose. The report has recently been laid before the council and although some interesting observations have been made the results on the whole are, it must be confessed, disappointing It was ascertained that elevated stations are less visited by fogs than other stations, but the real locality of fog at any particular time would appear to depend upon local atmospheric conditions. The beginning of a fog is a widespread process depending upon general atmospheric conditions. It does not appear that fogs which form outside drift into London. That is practically all that the inquiry has shown, but it is pointed out that a regular system of observations of temperature might indicate the possibility of predicting fogs locally The report certainly suggests further investigation upon certain points, but the London County Council decided at its last meeting not for the present to centenarians as Easton of Salisbury and Sharon Turner Mr Redding Ware, who mentions Lollo with caution in 1885, knows nothing of the Tomsk man Surely a bi centenarian should have been famous for years, as was Henry Jenkins, the old English peasant who died in 1670 but had been visited by various witnesses from 1650 onwards Moreover, Jenkins had specific recollections, such as that of taking a horse load of arrows in the direction of Flodden Field in 1513, whereas the Russian peasant above discussed seems only to refer vaguely to remote persons and events

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[1] Les Mères de Demain by Madame Augusta Moll Weiss. Paris: Vigot Frères.

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[1] Bulletin de Correspondance Hellénique, 1901, pp. 234-240.

THE SUPPLY OF MIDWIVES.

A CONFERENCE convened by Mrs. Heywood Johnstone was held at the Grosvenor crescent Club, Hyde Park Corner London, on March 3rd, under the chairmanship of Sir MICHAEL FOSTER, K.C.B., to discuss schemes for the supply of midwives to the rural and provincial poor in accordance with the Midwives Act of 1902.

Sir MICHAEL FOSTER said that those who supported that Bill were largely influenced by the consideration that at the present time the supply of trained midwives was not adequate for the wants of the poor. They must act promptly and efficiently, so that by the time the Midwives Bill became a compulsory measure there would be a sufficient number of trained midwives. The truly representative character of the meeting that they were holding was shown by the fact that they had present amongst them representatives from no less than 26 counties of England.

Mrs. HEYWOOD JOHNSTONE said that as a result of her inquiries into the provision of midwives and maternity nurses for the poor throughout England and Wales it appeared that if the untrained midwife was suppressed and no one was put in her place in many districts the condition of affairs would be much worse than it had been. The speaker then entered into the details of the statistics she had compiled and mentioned that in Leicester, for a population of 212,000 only two trained midwives were to be discovered. In Cardiff, with a population of 65,000, there was a great need for properly trained women, and the result of the want of them had been in every way most disastrous. In country districts the want was more serious; in Dorset, for instance, a certain locality containing many scattered villages afforded for the attendance of all the cases one old woman, 88 years of age, and the villagers said that when she died they did not know what they would do. On inquiry from the local medical man a verification was obtained of these facts. Mrs. Johnstone's object was to discuss a plan which would not involve large outlay. She considered that every parish should start an association for the supply of trained midwives and maternity nurses. Labourers should subscribe a small sum and the big houses in the neighbourhood should subscribe a guinea; very small parishes should combine. A great point was that such associations should be self supporting. To start these associations a very moderate outlay was sufficient—in fact, a few shillings from all who know the luxury of good nursing would be enough.

Dr. ROBERT BOXALL said that the object of the meeting was to provide for the wants of the rural districts; the needs of those in towns were generally well known and provided for but the necessities of the country districts were not so fully appreciated. Unless the needs of their poorer sisters were put forward by those who knew the conditions there was a chance that their claims might be ignored. The question was how to secure competent and skilled assistance in rural districts. Dr. Boxall gave a description of the conditions prevailing in the Scilly Islands, in the rural districts of Sussex, and in Sutherlandshire. It was in the country that the necessity for the midwives was mostly felt, where locomotion was slow and time in complicated cases was an important matter. In those districts the midwife would be welcomed by the medical man. The fact was, however, that of the midwives who were trained the majority only intended to work as nurses under medical men. It was very rarely indeed that a midwife could be induced to take up work in country districts. A selection might be made from among the women in the country practising midwifery without training, and the problem which called for solution was how to provide these people with a proper training.

Mrs. RICKMAN said that the class of woman they wanted for midwives was unable to pay for the necessary training. She advised taking married women in the villages to be trained and then guaranteeing them a sufficient sum so that they could do the work. These women could not move away from the district and would therefore be available.

Mrs. SOWDON of Hackney detailed to the meeting how the poor people in her neighbourhood maintained a self supporting association for the supply of midwives.

Nurse GREGORY, from the Winchester Lying in Charity, explained the principle adopted at Winchester of sending out pupil nurses with the midwives, so that they should learn village work and make themselves of use in the cottages when the mother was confined.

Mr. HEYWOOD JOHNSTONE, M.P., said that the Midwives Act of 1902 would not be a blessing but the reverse if the large number of women who preferred to be attended by their own sex were deprived of the assistance of untrained women and no one else was supplied to take their place. He considered that Mrs. Rickman's suggestion to train suitable women in small country villages was very helpful. He thought they should particularly emphasise the point that if the training of midwives was made too protracted the supply would be limited. Limitation would also occur if the training unfitted the women for cottage life. He concluded by moving a motion to the effect that it was desirable to form an association to carry into operation suitable plans for the supply of midwives to the rural and provincial poor.

Lady CAMOYS seconded the motion, which was put to the meeting and declared carried with one dissentient.

Lord CAMOYS, in moving a vote of thanks to the chairman, urged that too high a standard of efficiency to begin with should not be demanded of the midwives.—The vote was seconded by Mrs. HEYWOOD JOHNSTONE and duly carried and acknowledged by the Sir MICHAEL FOSTER.

Before the meeting closed Mr. F. R. HUMPHREYS asked those present to urge on the attention of Poor law guardians the advisability of removing the technical difficulties in the way of training being afforded to midwives at the Poor law infirmaries.

THE IRISH DISPENSARY MEDICAL OFFICER.

THERE is, we think, no department of the profession in such a deplorable condition at present as the Poor law medical service in Ireland; and, notwithstanding the praiseworthy efforts of various organisations—and notably the Irish Medical Association—the state of that service shows little sign of improvement. It is a common jibe to throw at Irishmen that they are never without a grievance, but even admitting that there may be, perhaps, at times some truth in such an accusation we believe that no one will deny after reading our article that the dispensary medical officers of Ireland have just grounds of complaint.

Grievances of Irish Dispensary Medical Officers.

1. There is no promotion in the Irish Poor law medical service. 2. The salary is totally inadequate. The average annual salary of a dispensary medical officer in Ireland varies from about £100 to £150. He has charge of a district from ten to 20 miles in area and he has often in a day to travel 40 miles, so that when he deducts from his salary the cost of his horse (and one is often not enough to work his district) and car and man servant he has literally and practically no pay at all; and yet he is always on duty and must be prepared at any time of the day or night to operate for strangulated hernia, to deal with a placenta prævia, or to treat a complicated case of typhoid fever. 3. He has no holiday as of right. We admit that the Local Government Board authorised the boards of guardians to give their dispensary medical officers a month's vacation but unfortunately it made it *permissive*, not *mandatory*, and there are so much trouble in fixing the salary of a locum tenent, such an amount of red tape in nominating a substitute and finally, so much difficulty in procuring one at the poor pay so frequently offered, that in the end many a jaded dispensary medical officer is obliged to do without any holiday at all—an arrangement which, in the interests of the poor, is a very bad one. 4. There is no increase in salary, for neither length of service nor efficiency in the discharge of duty brings the slightest pecuniary reward. 5. There is no pension guaranteed as a right, as in civil service. The result is that it is too often the case that men rendered inefficient by age and hard work are obliged, in order to live and to keep out of the workhouse, to continue far too long at duty until, as in one notable example, after a service of 40 years, a dispensary medical officer died from exhaustion on the roadside worn out by advancing years and continuous strain of body and mind.

Causes of the Present Deplorable Position of Irish Dispensary Medical Officers.

1. There can be no doubt that the most potent cause of the great dissatisfaction existing at present amongst Irish

vote any further sum of money towards a continued prosecution of the subject. We come back thus to a conclusion, long ago arrived at by ourselves, that it is impossible to prevent the formation of fog but that it is possible to prevent its defilement with soot, as the Coal Smoke Abatement Society has shown.

ST BARTHOLOMEW'S HOSPITAL

THE committee which was formed, as we announced in THE LANCET of Jan 24th, p 254, for the purpose of inquiring into various matters concerning St. Bartholomew's Hospital has decided at least one point of the *terms* of reference—namely that the hospital shall remain upon its present site. This decision was arrived at by 14 votes to one Sub-committees have been appointed to inquire into the question of cost and other matters. We learn that it is not intended to enlarge the hospital but to make such alterations as shall bring the hospital buildings into accord with modern ideas. The determination to remain upon the existing site is, we think, a just and right one We have already[1] given our reasons for thinking that the present site should be retained, while at the same time we pointed out the difficulties in the way of such a decision. We need not repeat what we have said upon this matter, but we await with interest the reports of the sub-committees which have been appointed to consider the financial side of the question

THE DISTRIBUTION OF PLAGUE

As regards the Mauritius a telegram from the Governor received at the Colonial Office on Feb 27th states that for the week ending Feb 26th there were 3 cases of bubonic plague and 1 death from the disease As regards the Cape Colony the medical officer of health of the colony states that for the week ending Feb 7th 2 cases of bubonic plague, both in male natives, were discovered at Port Elizabeth. The one case was admitted to hospital on Feb 4th and died on the 6th, the other case, admitted on Feb 6th, remained in hospital at the date of the statement, Feb 9th, being the only case in the plague hospital at the end of the week under review No case of plague had occurred at any other place in the colony, but rats were reported from Graaf Reinet on Jan. 31st to be dying in a suspicious manner An investigation was made and the disease from which the rats were suffering was found to be plague As regards Hong Kong a telegram from the Governor received at the Colonial Office on March 3rd states that for the week ending Feb 28th there were 12 cases of plague and 12 deaths from the disease. As regards Egypt no cases of, or deaths from, plague have occurred during the week ending Feb 22nd.

THE CARDIFF AND COUNTY PUBLIC HEALTH LABORATORY

THE third annual report of the bacteriologist of the above laboratory, Dr William G Savage, illustrates again the usefulness and importance of such an institution and we hope in the interests of public health that municipal laboratories will be the rule before long throughout the country This hope is amply justified by the following examples of the work carried out in the Cardiff and County Public Health Laboratory Many waters from suspected supplies and proposed new sources have been investigated Data of value for determining the purity of water supplies were thus obtained which proved of much practical utility in enabling opinions to be *formed* as to the purity of any given supply Moreover, samples of food have been bacteriologically examined and as a result a large proportion of the samples of diseased meat found to be from animals suffering from tuberculosis half the samples of so-called sterilised milk proved contain organisms. A large number of specimens sent in medical men were examined during the year and as pointed out the identification of doubtful cases of typhoid fever, and other diseases is very greatly aided bacteriological examination Other work done in the tory has dealt with methods of disinfection, the tion of vermin, and the condition of sewage effluents waste waters discharged into streams from industrial works

HORSED AMBULANCES FOR LONDON

WE are glad to learn that the London County Council considering in committee the formation of a service of ambulances for London Such ambulances have existed Liverpool for some 20 years, while Blackpool, and Wolverhampton also possess them. The ambulances, ho ever, do not belong to the aforesaid municipalities but to local hospitals. Here in London we have neither munic nor, we think, hospital horsed ambulances, excluding possessed by the Metropolitan Asylums Board. The Amb Corps of the Order of St. John of Jerusalem possesses some, but these, so far as we know, are the only horsed ambulance available in the case of a street accident The very horses of the two great omnibus companies are in better case is the casual citizen, for these hard working and animals are conveyed home in an ambulance should fall in the street, provided that they are not so badly that the merciful bullet has to be called into requisition Every surgeon on the staff of a London hospital, and most house surgeons, can recall cases of street accidents where injuries have been gravely increased by the methods of conveying the patients to the hospital. The surest way of rendering a simple fracture of the leg compound is by crowding the patient into a hansom, yet this is not uncommonly the course pursued by the good Samaritan who assists at a street accident It is proposed, we believe, that the ambulance service should be in connexion with the fire brigade If this means throwing extra duties upon the fire brigade we hope that this part of the scheme will fall through and, moreover, we trust that a special ambulance stud will be provided, for a fire-engine horse is not the most fitting motive power for conveying a case of severe accident to the hospital, although the fire-engine horses are used for the purpose in some cities

Mr Thomas Wilson, M.D Lond, F R C S. Eng, who has held the office of assistant obstetric officer at the General Hospital, Birmingham, for the past ten years, has been unanimously elected honorary obstetric officer in place of Dr Edward Malins, the President of the Obstetrical Society of London, who has resigned that post

A CONVERSAZIONE will be given at the West London Hospital by the Post-graduate College on Wednesday, March 18th, at 8.30 P M All past residents and past and present post-graduates are invited to be present.

WE are asked to announce that the meeting of the Medical Society of London on March 23rd will be a "clinical evening" and that the papers on Diseases of Children set down for that date are unavoidably postponed.

THE existing Vaccination Act is to be renewed for one year, further legislation on the subject being deferred until a future session.

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[1] THE LANCET Jan 17th 1903 p 180.

excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 9 3 in Perth and 10 5 in Leith to 18 8 in Glasgow and 22 0 in Aberdeen. The 581 deaths in these towns last week included 23 which were referred to whooping-cough, 13 to diarrhœa, nine to measles, six to diphtheria five to scarlet fever, two to "fever," and one to small-pox. In all, 59 deaths resulted from these principal infectious diseases last week, against 80, 85, and 76 in the three preceding weeks. These 59 deaths were equal to an annual rate of 1 8 per 1000, which was 0 2 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping cough, which had been 32 and 26 in the two preceding weeks, further declined last week to 23, of which 16 occurred in Glasgow, three in Edinburgh, and two in Dundee. The deaths from diarrhœa, which had been 16 and 18 in the two preceding weeks, declined again to 13 last week, and included six in Glasgow, three in Dundee, and two in Aberdeen The fatal cases of measles, which had declined from 20 to 12 in the four preceding weeks, further decreased last week to nine, of which four were registered in Aberdeen and four in Leith. The deaths from diphtheria, which had been three and five in the two preceding weeks, further rose to six last week, and included two in Glasgow and two in Aberdeen. The fatal cases of scarlet fever, which had been eight and seven in the two preceding weeks, declined again last week to five, of which two occurred in Paisley The two deaths from "fever" and the fatal case of small pox were registered in Glasgow The deaths referred to diseases of the respiratory organs in these towns, which had been 134, 112, and 109 in the three preceding weeks, further declined last week to 92, and were 122 below the number in the corresponding period of last year The causes of 20, or more than 3 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN

The death rate in Dublin, which had been 26 4 25 0, and 20 6 per 1000 in the three preceding weeks, rose again to 25 9 per 1000 during the week ending Feb 28th During the past four weeks the death rate has averaged 24 5 per 1000, the rates during the same period being 17 1 in London and 15 9 in Edinburgh. The 188 deaths of persons belonging to Dublin registered during the week under notice showed an excess of 38 over the number in the preceding week, and included 14 which were referred to the principal infectious diseases, against nine, 14, and 18 in the three preceding weeks, of these five resulted from whooping-cough, four from diarrhœa, two from scarlet fever one from measles, one from diphtheria, and one from "fever" These 14 deaths were equal to an annual rate of 1 9 per 1000, the death rates last week from the same diseases being 1 7 in London and 1 1 in Edinburgh. The fatal cases of whooping cough, which had been three in each of the three preceding weeks, rose last week to five. The deaths from diarrhœa, which had been four and one in the two preceding weeks, rose again to four last week. The fatal cases of scarlet fever, which had been two three, and four in the three preceding weeks, declined again last week to two The 188 deaths in Dublin last week included 31 of children under one year of age and 47 of persons aged 60 years and upwards, the deaths both of infants and of elderly persons showed an excess of 10 over the respective numbers recorded in the preceding week. Seven inquest cases and seven deaths from violence were registered, and 65 or more than a third, of the deaths occurred in public institutions The causes of 12, or more than 6 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES

Royal Navy Medical Service.

The following appointments are notified —Staff Surgeons A. Cropley to the *Pembroke* to be lent to the *Mersey*, W G Axford to the *Duke of Wellington*, for Haslar Hospital temporary Surgeons B Ley to the *Spartiate*, for medical charge on voyage out, and to the *Algerine* undated. Robert Robertson Fasson has been appointed medical officer at Keyham Dockyard, Devonport.

The undermentioned Staff Surgeons have been promoted to the rank of Fleet Surgeon in His Majesty's Fleet — Timothy Joseph Crowley, Donald Templeton Hoskyn, Robert Howard Nicholson, and John Leslie Barrington.

Royal Army Medical Corps.

Major W T Mould, on arrival at Southampton, in relief of Captain E W Slayter, takes over the duties of Embarking Medical Officer Colonel J C Harwood is appointed to the medical charge of the Station Hospital, Poona Lieutenant-Colonel W G Birrel is appointed to the medical charge of the Station Hospital, Colaba, and Major J R Stuart to the medical charge of the Station Hospital, Aden Captain A L. Webb is posted to the Poona District and Captain J Matthews to the Deesa District Lieutenant-Colonel W O Wolseley is posted to Edinburgh Castle for duty Major G F Moffet assumes medical charge of the troops, Station Hospital, &c., Maryhill, Glasgow Major G Scott assumes medical charge of the troops, Station Hospital, Fort George, vice Major D Stiell, who is under orders for India. Major H M Sloggett has arrived at Dover for duty, and is posted to the Station Hospital, Dover Castle. Major A P H. Griffiths is transferred from the Deesa to the Aden District, and Lieutenant F M Parry from the Bombay to the Nagpur District.

Volunteer Corps.

Royal Garrison Artillery (Volunteers) 2nd Durham (Seaham) Surgeon Major L. G Dillon resigns his commission, with permission to retain his rank and to wear the uniform of the corps on retirement. Dated March 4th, 1903.

Royal Engineers (Volunteers) 2nd Cheshire (Railway) Surgeon Captain J R. Atkinson resigns his commission Dated March 4th, 1903

Rifle 1st Volunteer Battalion the Queen's (Royal West Surrey Regiment), Surgeon Lieutenant T F Devane to be Surgeon Captain. Dated Feb 17th, 1903. 1st Cadet Battalion the King's (Liverpool Regiment) Acting Surgeon W Evans resigns his appointment. Dated March 4th, 1903 2nd (Prince of Wales's) Volunteer Battalion the Devonshire Regiment Surgeon Lieutenant William Edward Manderson Corbett resigns his commission and is appointed Captain. Dated March 4th, 1903.

Correspondence.

Audi alteram partem."

THE TREATMENT OF INCIPIENT AND UNCONFIRMED MENTAL DISORDER

To the Editors of The Lancet

Sirs,—I trust that in view of the considerable interest I have taken in this matter you will grant me a portion of your valuable space. This subject was first raised in a discussion opened by me at the Carlisle meeting of the British Medical Association, when I proposed a motion (which was carried) recommending the council to support legislation in this direction. Subsequently, as chairman of a conjoint committee of the British Medical Association and Medico-Psychological Association, I had the honour of heading a deputation to the Lord Chancellor who thereafter adopted into his Lunacy Bill a clause drawn up by the conjoint committee. This clause provided for the treatment of such cases in private homes for six months without certification but with notification to the Commissioners in Lunacy This clause was passed by the House of Lords in two successive years and the matter appeared to have been so far settled Thus much of ancient history

It was therefore with some dismay and a feeling of "save me from my friends" that I listened to the recent paper of Sir William Gowers on this subject in which he again brought the matter under debate and advocated the accomplishment of what was almost a *fait accompli* Sir William Gowers I am sure, was unacquainted with the above facts or I am certain that with his usual high minded fairness and courtesy he would have mentioned the efforts of those who, like Dr E. W White, Dr T Outterson Wood, and myself and many others, had given no inconsiderable time and effort to obtain the above result.

At the Carlisle meeting I not only drew attention to the dispensary medical officers is the miserable remuneration which they receive for their services. Apart altogether from the increased expense of medical education, the cost of living is much higher now than it was many years ago , and, notwithstanding this fact, the salary of the dispensary medical officer in Ireland remains the same Further, owing to the gradual depletion of the country districts of Ireland of the former wealthy landlord class, and the tendency at present for dwellers in the rural districts to migrate into the cities, the dispensary medical officer has not now the same chance as formerly to supplement his miserable Poor law income by private practice. 2. The dual arrangement by which the dispensary medical officer is under the control of the Poor-law guardians and the Local Government Board does not work well. The disappearance of the *ex-officio* guardians (men of recognised social position and education) and the lowered status of the present elected guardians have made it almost impossible in many districts in Ireland for a medical man to work with any comfort or self respect He is in the hands of hard taskmasters who are ready on the slightest excuse to find fault with, or even to dismiss, him who have little sympathy with the professional classes, and whose chief aim is to keep down the rates The constant friction (no one looking at an Irish newspaper can fail any day to see examples) between these guardians and the Local Government Board arising from appeals—one day by the medical officers and the next day by the guardians—is daily increasing and is most vexatious

Means to Redress the Grievances of Irish Dispensary Medical Officers

If the Irish Poor law medical service can ever be improved it can only be done in one of two ways 1. Instead of the present method of appointment of dispensary medical officers (with all its political and sectarian intrigue) many people hold that it would be much better to select the dispensary medical officers by competitive examination and that in this way the present unsatisfactory method of canvassing for election would be done away with. 2 The only other plan for redressing the grievances of the Irish Poor law medical officers is for the rising generation of the medical profession in Ireland to combine and to refuse to offer themselves as candidates for any vacancies that may arise until the authorities, in the interests alike of the poor as well as of the profession, decide to improve the conditions of the service. So long as an Irish Chief Secretary (Mr Gerald Balfour) is able to say to a deputation from the Irish Medical Association—"How could they close their eyes to the fact that when one of these posts became vacant a large number of candidates presented themselves for it and the competition was very keen?"—it is useless to expect any reform. The members of the medical profession in Ireland must organise and combine and they have only to look for an example to the way the Army Medical Service was reformed when the War Office found that through the influence of the medical profession in the United Kingdom candidates would not apply for vacancies If the medical profession in Ireland will organise and combine in this way the authorities will quickly realise that the sooner the grievances of the dispensary medical officers in Ireland are redressed the better will it be for the public as well as the profession.

ASYLUM REPORTS

London County Asylum, Horton Manor, Epsom (Report for the year ended March 31st, 1902) —The average number of patients resident during the year was 724, comprising 110 males and 614 females. The admissions during the year amounted to 171—viz., seven males and 164 females. Of these 168 were first admissions Dr W Ireland Donaldson, the medical superintendent, states in his report that 51 patients among the admissions were transfers from other asylums, and that of the remainder about 42 per cent. were deemed irrecoverable. The number of patients discharged as recovered during the year amounted to 29, or 4 0 per cent. of the average number resident The deaths during the year amounted to 39 or 5 4 per cent. as calculated on the same basis Of the deaths one was due to colitis, six to general paralysis of the insane, six to pulmonary tuberculosis, and the rest to other causes. The general health of the institution was good, and the epidemic of influenza which occurred in February and March, 1902, was of a mild form. Three female patients admitted pregnant were safely delivered. The children were removed from the asylum to their respective unions. The Commissioners in Lunacy state in their report that the behaviour and personal condition of the patients were satisfactory that the wards and dormitories were in good condition, and that the medical case books were well kept. The committee of management states in its report that it has been decided to erect an additional block, similar to the existing buildings but separate therefrom, to accommodate 60 male patients. The cost of this block and its equipment is estimated at £9000 The expenditure on repairs of the asylum amounted to £4500, while the sum of £351 was spent on additions, alterations, and improvements

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN 76 of the largest English towns 8008 births and 4789 deaths were registered during the week ending Feb. 28th. The annual rate of mortality in these towns, which had been 17 9, 17 1, and 16 7 per 1000 in the three preceding weeks, further declined last week to 16 6 per 1000 In London the death rate was 16 3 per 1000, while it averaged 16 7 per 1000 in the 75 other large towns. The lowest death rates in these towns were 8 2 in Handsworth, 8 8 in Walthamstow, 9 3 in Hornsey, 9 3 in King's Norton, 10 4 in Reading, 10 9 in East Ham, 11 6 in Wallasey, and 11 7 in Leyton , the highest rates were 20 5 in Plymouth, 20 7 in Birkenhead and in Liverpool, 20 9 in Manchester and in Middlesbrough, 21 8 in Swansea 23 0 in Salford, 23 2 in Bury, and 24 3 in Wigan. The 4789 deaths in these towns last week included 452 which were referred to the principal infectious diseases against 512, 457, and 452 in the three preceding weeks , of these 452 deaths 108 resulted from whooping cough, 104 from measles, 81 from diphtheria, 55 from diarrhœa, 52 from scarlet fever, 35 from "fever" (principally enteric), and 17 from small pox. No death from any of these diseases was registered in Reading Handsworth, or Huddersfield , while they caused the lowest death rates in Brighton, Portsmouth, Leicester, Bolton, and Cardiff, and the highest rates in West Ham, Northampton, Hanley, Wigan, Bury, Manchester, and Oldham The greatest proportional mortality from measles occurred in Wigan, Manchester, Middlesbrough, and Swansea , from scarlet fever in West Bromwich, Bootle, St. Helens, and Oldham , from diphtheria in Northampton, Hanley, Coventry, and Bury , from whooping-cough in Hornsey, Northampton, Grimsby, and Preston, and from diarrhœa in West Ham. The mortality from "fever" showed no marked excess in any of the large towns Seven fatal cases of small pox were registered in Liverpool, four in Manchester, and one each in Aston Manor, Birkenhead, Bootle, Oldham, Burnley, and Preston The number of small pox cases under treatment in the Metropolitan Asylums hospitals, which had been six, six, and four in the three preceding weeks, had risen again to five at the end of last week , one new case were admitted during the week, against four, one, and seven in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday, Feb 28th, was 1851, against numbers declining from 2528 to 1893 on the nine preceding Saturdays , 197 new cases were admitted during last week, against 189, 246, and 205 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 315, 267, and 274 in the three preceding weeks, declined again last week to 271, and were 295 below the corrected average number The causes of 61, or 1 3 per cent., of the deaths registered in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner All the causes of death were duly certified in West Ham, Bristol Bradford, Leeds, Sunderland, Cardiff, and in 43 other smaller towns, the largest proportions of uncertified deaths were registered in Liverpool, St. Helens, Blackburn, Barrow in Furness, and South Shields.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 21 7, 18 1 and 18 1 per 1000 in the three preceding weeks, further declined to 17 7 per 1000 during the week ending Feb 28th, but was 1 1 per 1000 in miles east of Pretoria. No 3 Model School" was part of an *army* general hospital in which some of the medical officers and men of the Yeomanry Field Hospital and Bearer Company assisted for a time and did most excellent work. It was situated in the town of Pretoria.

I shall feel obliged if you would insert this explanation in justice to my colleagues on the staff of the Transvaal Imperial Yeomanry Hospitals (Pretoria, Elandsfontein, and Johannesburg)

I am, Sirs, yours faithfully,
C R. KILKELLY Surgeon Major, Grenadier Guards,
Late Principal Medical Officer Transvaal Imperial Yeomanry Hospitals.
Guards Depôt Caterham, Surrey Feb 19th 1903.

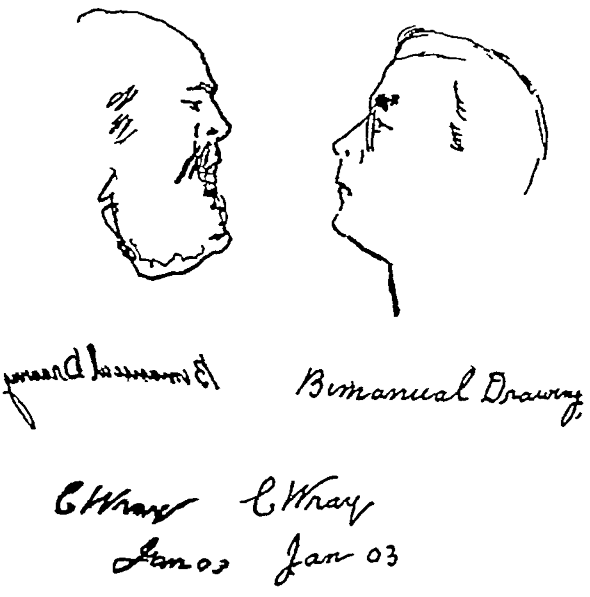
RIGHT-HANDEDNESS AND LEFT-BRAINEDNESS

To the Editors of THE LANCET

SIRS,—Left-handedness surely must not be taken as an indication of anatomical superiority of the right hemisphere of the cerebrum, for such superiority should result not only in left-handedness but in functional superiority of all the parts supplied and dominated by that half. Obviously, then, as a preliminary step it is necessary to ascertain the existence or non-existence of right- or left-footedness This your contributors do not seem to have done If left-footedness never exists then the theory of superior anatomical development of the right hemisphere falls to the ground and we may with comparative safety assume right-handedness as the result of training or unconscious imitation

I inclose drawings done with the right and left foot respectively, also several hand-drawings. None are touched up every stroke being in ink and final, the foot-drawings being done by means of a rough paper cone tied round the great toe. The drawing done by the left foot is, I think, equal to that done with the right. This is my second attempt at foot-drawing My impression is that I can control the left foot better than the right.

As regards the hands, I sharpen my pencils with the left hand and can handle a Graefe a shade better with it also In nothing else am I left-handed except in target shooting A perusal of the hand drawings shows no marked superiority in favour of either hand. I inclose also a specimen of bimanual drawing the left hand drawing the left face whilst the right draws the right face. The bimanual signatures attached afford strong evidence that I am naturally left-handed, for the right-hand writing represents a lifetime of practice, the left hand writing that of a few months only A most important matter is the fact that the right arm swings with the left leg and the left arm with the right. Is this the explanation of our ability to write backwards mirror fashion with the left hand more easily than in the opposite direction as in ordinary writing for in walking the hands move in opposite directions—i.e , there is a tendency to automatisation of movements in an opposite direction. If a person can be left-handed and left-footed and these conditions are dependent upon the superiority of the right hemisphere we ought to find a similar superiority of the left eye and ear I do not know whether other left handed people do the same or not but I have always noticed that though my hearing in both ears is perfect, yet I analyse sounds best on turning my left ear towards the source of sound. As regards the eye, though my sight is $\frac{6}{6}$ easily and my refraction E, I always retinoscopise with my left eye and for accurate as opposed to quick shooting prefer firing from the left shoulder indeed, I never fire from the right in target shooting It is common knowledge that though the vision is perfect in each eye and the refraction normal nearly every person has a "master eye", this is determined by holding a ring at arm s length with both eyes open and covering an object a few yards away A left-eyed person on shutting his left eye will find the ring too far to his left. If on the other hand he shuts his right eye he finds he is dead on" his object. This test shows that I am left-eyed. As regards experimental shooting my observations are founded on about 30 exceptionally intelligent subjects mostly professional men, each of whom fired 20 shots from each shoulder, the right eye sighting with right-shoulder shooting and the left eye with left shoulder shooting the shots being fired from the right and left shoulder alternately Left eyed men, and especially if left-handed, very frequently shoot 20 per cent. better with the left eye from the left shoulder One thing is beyond all doubt there was never what left-handed men who had always shot from the right shoulder expected—a very bad record for the left shoulder. Another point to which reference may be made is the almost invariably superior coördination of the right hand with the right eye. To show this facing $\frac{6}{24}$ of Snellen's type point promptly at the middle letter with the index finger of the right hand and shut the left eye. If right-handed the pointing is accurate. Now by pointing with the left index finger in the same way it will be found the pointing is accurate if the experimenter is left-handed, but inaccurate if he is right handed.



These remarks have been made without any knowledge of the literature of the subject, but I trust that they may prove of interest —I am, Sirs, yours faithfully,

CHAS WRAY F R C S Eng,
Surgeon Western Ophthalmic Hospital Ophthalmic Surgeon Croydon Hospital and Infirmary
Jan. 23rd 1903.

To the Editors of THE LANCET

SIRS,—The hand loom weaver mentioned by me in my communication in THE LANCET of Jan 17th, p 200 was not only ambidextrous but used both feet as well in working his machine His hands drove the pirn or bobbin, carrying the thread backwards and forwards in a groove or shuttle by means of an upright rod to form the weft of the cloth. This might be called pure automatism, but, at the same time, he could with either hand by a certain movement of a cord throw out of gear or start the mechanism when a thread broke or anything else went wrong The two hands were undoubtedly used for a common purpose but in a different direction, while either hand, left or right, could rectify any fault. In short, the left hand was as good and deft and necessary as the right, and each seemed as competent as the other In shoeing a horse the blacksmith pares out the feet with his left as deftly as with his right hand. Trimming the nails with knife or scissors, the mariner at his wheel, and the juggler tossing his brass balls in the ring are instances in point, not to mention the accoucheur whose left hand both in turning and applying the forceps has often to take on the duties of the right. The surgeon cutting down upon and tying an artery must be ambidextrous if anything His right hand must know what his left hand doeth , and the latter takes as important a position in the operation as the other

Sir William Gowers, in THE LANCET of Dec. 20th, 1902, p. 1719 in an interesting note on this subject says Every child seems to be born either handed , one handedness comes with development, partly from inherited partly from educational influences, &c. This places the whole scope and force of the discussion, as it were, in a nutshell. The child will as a rule, use the right hand first and become right handed and any tendency to left-handedness shou d be, and can be, great advantages of such temporary treatment and to the evils resulting from its abuse but also to the grievous losses entailed by certification in some cases of mental disorder of brief duration. This last argument I am assured weighed heavily with the Lord Chancellor but has been lost sight of in the present discussion

Sir William Gowers dwelt so exclusively on the advantages of single care that he has provoked Dr White and Dr Wood to write the papers recently printed in THE LANCET, principally demonstrating the evils that arise from it under the existing system

This discussion, in fact, emphasises what I have said else where—viz, that this mode of treatment demands the highest skill and experience, that it may be the best or the worst means of treatment and may mean salvation or perdition to the patient, and consequently that it is an abomination to allow it to be undertaken by any person however unfitted under any conditions however unsuited

My reason for writing to you arises from the fear that this revived discussion may suggest to the Lord Chancellor to defer the proposed clause until regulations have been framed to prevent possible abuses In this way almost indefinite delay may occur and it is this delay that I should wish to prevent. I would suggest, therefore, in order to avoid this result that there should be an addition made to the clause, requiring the Commissioners in Lunacy to report to the Lord Chancellor from time to time on the working of the clause and providing for the issue by that legal authority of regulations which should be directed to the restriction of the treatment of unconfirmed mental disorder to persons who had in some way satisfied the Commissioners of their fitness for this important and responsible work.

The existing state of the law tends to throw such cases into the hands of those who have little to lose by a prosecution, while persons of character and standing are deterred from taking them. The passing of the proposed clause would at once reverse all this. The fact of notification to the Commissioners and possible inquiry by them would encourage persons who had real qualifications for the work and would deter those who were unfitted. In this way the task of the Commissioners would be greatly simplified and a short experience should enable the necessary regulations to be framed. I am, Sirs, yours faithfully,

Queen Anne-street W Feb 28th, 1903 H. RAYNER

THE LONDON HOSPITAL

To the Editors of THE LANCET

SIRS,—I have just visited the London Hospital and I am convinced that there is a real danger of its work being cramped in every direction unless the public will respond really generously to the earnest appeal lately issued by its chairman and favourably received by the whole press.

It would be little short of a disaster if the largest hospital in England, situated as it is amongst the poorest people, could not properly carry on its beneficent work. More than that, I feel strongly that such work as is done at this hospital ought never to stand still but should progress, not only for the benefit of the sick and needy who throng its gates, but for the benefit of the whole country

The financial position of the hospital is sufficiently serious to justify me in taking the unusual step of giving a Mansion House dinner—which is fixed for May 4th—to make it more widely realised and to get for the hospital all the help I can

With a necessary expenditure of between £80,000 and £90,000 a year the income from the hospital's estate and investments is but £22 000, and even this must be seriously diminished unless £170,000 can be raised this year to meet the cost of essential improvements. The public may well be asked, I think, to help liberally those who devote so much time to working for the institution

Their Majesties the King and Queen are showing their interest in the London Hospital by having announced their intention after Easter to open the new out-patient department, which has cost £70 000 In this building are contained the new rooms for the cure of lupus by the Finsen light introduced into the hospital by the Queen herself

It would, indeed, be a gratifying result if their Majesties could be told on that occasion that the public had shown their appreciation of this gracious act by largely helping the hospital. With that view I shall be very glad to receive before then the names of those who are willing to help To commemorate this interesting visit the Lady Mayoress and I are proposing to endow a bed at a cost of £1000

I much hope that I may ask my fellow citizens and the public at large to assist in putting this great hospital into a sounder financial position and I invite your aid in bringing the matter prominently to the attention of the benevolent community

Contributions may be sent to me at the Mansion House.

I am, Sirs, your obedient servant,
MARCUS SAMUEL, Lord Mayor

The Mansion House, E C, Feb 28th, 1903

THE LARGE INTESTINE AS AN INTERMITTENT SYPHON

To the Editors of THE LANCET

SIRS,—I was glad to see in THE LANCET of Feb. 21st, p 552, a letter from Dr R. W Leftwich on the above subject which from its great physiological interest and multiform clinical bearings deserves in a high degree the notice of the profession In his original paper, published in the *Edinburgh Medical Journal* of December, 1902, the author adduced, as it seemed to many of us, several strong reasons, both theoretical and experimental, for accepting the truth of his thesis that the action of the large intestine is syphonic, not peristaltic. Although he contended that the continuous tonic contraction of the longitudinal muscular bands which he believed to exist was not essential to the truth of his doctrine he emphasised its importance, while recognising that it was largely hypothetical. In his letter to THE LANCET he now quotes a statement by Dr T G Brodie to the effect that there can be no question that the longitudinal bands of the colon are tonically contracted It seems to me that if such be the case Dr Leftwich has triumphantly proved his hypothesis and is to be credited with a striking and valuable addition to knowledge arrived at by a strictly scientific method. He has, I think, established the entirely original point that the large intestine, being, broadly speaking, a bent tube with a short ascending and a long descending limb, fairly rigid walls, and contents capable of flowing, must, of physical necessity, act as a syphon.

From a purely physiological point of view this new light thrown on the functioning of an important organ of the body is of remarkable interest But, as Dr Leftwich shows in his paper in the *Edinburgh Medical Journal*, this new explanation of the action of the large intestine has also a very practical and varied bearing on clinical medicine. Not only does the theory of syphonage interpret to us the meaning of many incidents connected with orderly and periodical defecation, but it also may help us in the scientific treatment of various disorders of intestinal action. Whether or no "appendicitis" be more frequent now than in the quite recent times when it was multi titular, the suggestions of Dr Leftwich as to its causes and treatment are not to be disregarded, and I am inclined to think that this new view of the working of the large intestine may have considerable influence in regulating or checking some forms of active treatment of intestinal and other disorders Much good may come of the practitioner's daily opportunity of quiet reflection on the function of his own internal syphon.

Although Dr Leftwich, in his letter to you, has only asked for help in the explanation of certain side issues in connexion with his theory, I have ventured to comment here on the new doctrine alone which he has so ably propounded, being of opinion that the importance and originality thereof have been hitherto but imperfectly recognised His short paper of a few pages gives more to think about than some large treatises

I am, Sirs, yours faithfully,

London W Feb 26th 1903 H B DONKIN

THE IMPERIAL YEOMANRY HOSPITALS

To the Editors of THE LANCET

SIRS,—In your review of the record of "The Imperial Yeomanry Hospitals, South Africa," in THE LANCET of Feb 14th, p 445 an error has somehow crept into the reference presumably, to the Imperial Yeomanry Hospital, Pretoria. This hospital was a *yeomanry* general hospital of some 600 beds sent out from England by the Imperial Yeomanry Hospital Committee and was situated about two

2689 per 10,000, on the other hand, no less than 7563 were passed in 1899 and 5439 in 1897 at the low measurement of 32 to 33 inches. From these details we may judge how far the average recruit conforms to those physical qualities considered necessary for weight-carrying under chest constriction, for prolonged exertion, for long marching, and for sudden calls upon the vital powers, and what relation he bears to the average of his race, assuming that a height of 5 feet 7½ inches, a weight of 150 pounds, and a chest girth of 36 inches may be taken as an index for males between 18 and 19 years of age Surely in the youthfulness and immaturity of body of the individuals subjected to army duties and requirements we have an explanation of no small part of the wastage in the early years of service quite outside that dependent on the deleterious agencies of the municipal conditions under which they have been born and brought up. From a consideration of the views of army surgeons at home and abroad the late Professor E. A. Parkes placed the lowest desirable recruitage at 20 or 21 years and from a consideration of the physiological growth of the body, and especially its osseous and muscular tissues, wrote, "These facts show how wrong it is to expect any great and long continued exercise of energy from men so young as 18 and 20, and what will be the inevitable consequences of taxing them beyond their strength" Two recent anonymous writers, one in the *Times* of Feb 4th and the other in the *Fortnightly Review* of the same month, speak the one of "the miserable weeds that form the bulk of the recruits for the British Army," and the other (in India) of "the weedy undersized recruits who figure so prominently in our ranks,' and the foregoing physical details corroborate these opinions. But as regards the subject started by Sir F Maurice recently, what we want first to ascertain is the proportion of the breakdowns from youth and immaturity of body in the three out of five wastage (and we may add also that for desertion) in order satisfactorily to settle what remains as a groundwork from which to gauge the health status of our race Be the health standard the highest attainable the age factor in the army problem will still remain.

And, secondly, in respect to the bearings of the army data on the assumed decadence of our community we have for guidance the causes of rejection in the recruiting room and the invaliding and mortality of early military life The latter information is not available but the former are as follows, taking the more important ones and giving them in the tabular form as set forth in the Army Medical Report of 1898, for example —

—	Ratio per 1000 rejected	Ratio within three months of service
Under chest measurement ..	73 88	0·05
Defective vision ...	42·64	0·09
Under weight ...	34 82	0·02
Loss or decay of many teeth	26 34	0·22
Under height	21·79	0·03
Disease of heart	17·26	0·60
Defects of lower extremity (fracture contraction, luxation	17·72	0 35
Disease of veins	15·74	0·21
Impaired constitution and debility	5 49	0·45

To these we may append the frequent official remark that the 'largest number of rejections was caused by defective development (under height, weight, and chest measurements)" and to make the rejection ratio within three months of service more complete we must add that higher than any of those enumerated stand diseases of the nervous system and weakness of intellect, the former amounting in 1897 to 0 85 per 1000 and the latter to 1 27 Now, if we are right in assuming that defective vision and loss of teeth from decay are, in part at least, to be classed also under developmental deficiencies or defects we come to this conclusion that the main causes of rejection indicate conditions bearing on the limited sections of the community from which the army draws its numbers inimical to normal development and evolution of the body, and we have to go some distance down the list of rejections before we arrive at what are properly disease states, among which figure prominently lesions of the vascular system, these lesions figuring also in the invaliding lists of early military life. And herein seems to me to reside the true bearing of army data on the national health question. The figures show beyond doubt that operating on the sections which are led to take up military life less as a voluntary matter (for to such a procedure the term "voluntary" is as much a misnomer as when applied to the process of taking food and drink into our bodies) than under the stress of economic causes, there are agencies antagonistic to normal development, producing stunted frames incapable of meeting such physical demands as military service produces and in a less degree engendering actual disease states, but in themselves they do not warrant the deduction that the recruit defects characterise the community generally From a consideration of this subject from the national side and from the army side two duties of the community stand out clearly the one of rectifying the defects of town existence by providing wholesome housing and conditions offering the chance of an attainment of a good physical and moral standard to our poorer brethren, the other of undoing the moral wrong which now rests upon us of subjecting immature lads to army conditions which by clear experience we know no small number of them to be incapable of meeting and which, while adding in no way to military efficiency or strength, do add to the physical deteriorations brought about by the prior unwholesome circumstances of town life.

I am, Sirs, yours faithfully,
FRANCIS H WELCH,
Surgeon Colonel (retired) Army Medical Service
Brandram road Lee, S.E, Feb 21st 1903.

MALARIA AND MOSQUITOES

To the Editors of THE LANCET

SIRS —In the correspondence that has been going on in the columns of the *Spectator* under the heading "English Winds" great stress has been laid by some of the writers on the fact that although ague has disappeared from certain parts of England, notably East Anglia, for a good many years, yet in the neighbouring parts of Suffolk anopheles are far from being extinct and that in the "Broad district" they are still to be found in large numbers. A statement like this so authoritatively made should be met by investigation at the hands of the supporters of the mosquito theory of malarial fevers to clear the doubt, as the place is much nearer than Sierra Leone.

I am, Sirs, yours faithfully,
P J DAMANIA
Lieutenant-Colonel late I.M.S
Whitehall-court, S W Feb 28th 1903.

⁎⁎⁎ The anopheles cannot convey the malarial poison unless it is able to feed on the blood of men or animals already suffering from malaria.—ED L

ASEPTIC AND ANTISEPTIC SURGERY

To the Editors of THE LANCET

SIRS,—It is very helpful to young surgeons to hear from such an authority as Dr James Laurie that all that is needed to carry out successfully the aseptic method *in private practice* is "a kettle of boiled and one of boiling water and plenty of freshly laundried towels." It would be interesting to me to know whether Dr Laurie uses the kettle as a steriliser and, if so, it must of necessity be a fish kettle in order to hold the necessary instruments, as the common tea kettle is not very well suited to the purpose Let us suppose the operation to be an amputation in a cottage far removed from enlightened aseptic surgeons either on this side of the border" or on the other Our steriliser is singing on the hob, there is no fish kettle, and the saucepans are at present full of porridge (and would take some hours to render aseptic), and our saws and scalpels will not go in Where do we look next for a suitable steriliser? If the surgeon has not brought his own fish kettle and freshly laundried towels he is aseptically up a tree. Being an aseptic idealist he may have a steriliser with him, of course, he is then absolutely safe and may begin work But—and it is a very big but—a steriliser means at best an extremely bulky addition to his surgical bag, which in his private practice may have to be carried many miles to the place of operation, and then, again, the ideal aseptic surgeon corrected There are still many unappropriated facts, as Mr Wallace would say, which might be brought forward in evidence to prove that right handedness is due to a great extent to influences outside the body, though inheritance and bodily idiosyncrasy cannot be overlooked. Apologising for taking up so much space in your columns on a subject though of great interest of not much practical importance,

I am, Sirs, yours faithfully,
JAMES MORE, M D Edin
Rothwell Northamptonshire, Feb 28th 1903

APPENDICITIS

To the Editors of THE LANCET

SIRS,—Without reference to Professor Bourget's plan of treatment no discussion on this very important question can be considered complete. Bourget does not hesitate to use leeches if indicated or to purge his patients with castor oil if needful, but he places his chief reliance on warm anti septic injections passed through a long tube so as to get beyond the sigmoid flexure and so wash out the hepatic flexure and even the cæcum itself Bourget declares that when this is done pain and tension cease as if by magic that the temperature falls and agony is at once replaced by repose, sleep and speedy restoration to health. He points out that even if pus be formed it may be absorbed or discharged innocuously into the bowel or come to a head on the surface, also that removal of the appendix is no guarantee against subsequent attacks and that it is only when the parts have become gangrenous or are approaching that condition that operation is indicated or is really necessary Bourget has treated a number of cases during the last ten years, he gives minute details of 26 cases and declares that he has had no operations, no accidents, and not a single death—"aucun cas de mort.[1]" Such was my experience when a student in the wards of the Royal Infirmary of Edinburgh and subsequently in the rare opportunities I have since had of seeing cases of typhlitis, perityphlitis, or appendicitis Certainly in former times such cases were rare, those afflicted did not die and as a rule were no worse off for what they had undergone. According to Chauvel's statistics of the French army the old fashioned treatment compares favourably with the present system of almost constant excision, and I must say that I cannot bring myself to believe that any portion of the human body exists only for the production of disease or removal by operation or that things have so violently changed that a disease which was rare and easily dealt with and almost never fatal 20 years ago should without obvious cause become exceedingly common, very fatal, and require operation in 80 out of a 100 cases Of course, where the peritoneum is bathed in pus and the parts are gangrenous or approaching that condition operation is imperative and we ought to be thankful indeed that we have among us so many profound clinicians and excellent surgeons who open the abdomen with so much skill and such splendid results.

I am Sirs, yours faithfully,
Nottingham Feb 28th 1903. C BELL TAYLOR, M D Edin

THE NATIONAL HEALTH AND ARMY RECRUITING STATISTICS

To the Editors of THE LANCET

SIRS,—In sequence to my letter in THE LANCET of Feb. 7th, p 397, on the above topics I would ask you to allow me a little more space further to elucidate the bearings of the army recruiting statistics on the asserted wastage of military strength, expressed as a loss of three out of five between application at the recruiting office and the end of the second year of service, and the grounds which they offer for an impeachment of the national health I base my remarks on the information given in the Army Medical Reports for the years 1897–1900, not taking these four years as specially applicable to the matter in hand but merely as being the latest and most convenient for the purpose, the period embraced being sufficient for a fair deduction—as indeed any similar period is within the last 30 years, the recruiting ground throughout remaining the same and the yearly divergencies in the major details being but fluctuations brought about by changes in the standard adopted in accord with the army needs of the time. From the figures and details to be adduced I think that the readers of THE LANCET will be in a position to form a conclusion on the question raised so far as the army data can assist thereto And first as to the recruit supply During these four years there was a total of 278 977 applicants for army employ and of these 188,061 were accepted and 90,916 were referred to civil life, the yearly average of inspected being 69 744 and the yearly ratio of rejected being 329 10 per 1000, though if the further rejections within three months of service be added this ratio is increased to 336 44 Such a large elimination of one out of every three points clearly either to a high standard of necessary qualifications or poorness of the human material available for army purposes under the conditions which exist That the latter is the true reading there is no doubt, most probably, concurring with the anonymous writer of "The Problem of the Army" in the *Times* of Feb 4th that the standard is "appallingly low" Of the divisions of the United Kingdom furnishing the applicants in each 1000 England and Wales give 762, Scotland 96, Ireland 129, and the colonies and stations abroad 13, though if we compare the numbers with the total male population of each section according to the last census we find that while each contributes a fair quotum to the sum total Ireland is somewhat in advance of the other two and Scotland gives the lowest rates, it requires, however, to be borne in mind that locality does not connote nationality and that the recruits from England and Scotland contain a fair proportion of men of Irish descent. Tested by the ratio of rejected to inspected the colonies and stations abroad give the best results, then follows Ireland, while Scotland and England and Wales closely approximate in the maximum ratio

The classifications of the previous occupations of those seeking army employ are as under, the number for the year 1898 being taken as a fair index for the whole period except in the boy class which varies considerably in years —

—	Proportion per 1000 inspected.	Ratio of rejection per 1000.
Labourers, servants husbandmen	657	351 41
Manufacturing artisans (clothmakers weavers lace-makers) ..	139	395·05
Mechanics (favourable to physical development)	92	334 36
Shopmen and clerks	72	370·09
Professional occupations students &c.	9	320·40
Boys under 17 years of age	31	169·37

These figures indicate how limited as to social strata the army mass is and how vastly the sons of manual toil predominate, they show also the better physical status of the boys. As might be anticipated the indoor workers head the rejection ratio, while the too high ratio of the outdoor workers shows the existence among them of causes antagonistic to physical well being

Passing now from those inspected to those received into the service we have figures dealing with the age and physical qualities. The ages are arranged in years, mainly between 17 and 25, and the most numerous group in the whole period is between 18 and 19—about 4400 in every 10 000. That between 19 and 20 comes next with about half this number and these two groups constitute three-fifths of the whole mass, on the other hand, the 17 to 18 group varies considerably in some years and the group 24 to 25 is a very small one—about one-fortieth of the whole It is apparent that youthfulness is a marked characteristic of those entering the military service and this potent factor must correspondingly influence the results. In respect to height the most numerous group is 5 feet 5 inches to 5 feet 6 inches, corresponding to 18 to 19 age group, and next 5 feet 6 inches to 5 feet 7 inches group, on the other hand, group 5 feet 8 inches to 5 feet 9 inches gives a considerable decline and group 5 feet 4 inches to 5 feet 5 inches marked fluctuations, in 1900 giving a ratio almost as high as the maximum group In respect to weight, those between 120 and 130 pounds are most numerous, then follows those between 110 and 120 pounds and at a lower ratio those between 130 and 140 pounds. In respect to chest girth, from 33 to 34 inches constitute the largest group—about 3019 in each 10,000, 34 to 35 inches group gives about of its management, but it is undoubtedly contrary to the laws of the hospital applying to the medical staff and in that sense illegal Law 40 provides "that no medical officer shall be removeable except by the vote of a general or special court on the report of the committee of management", but the committee made no report that I have heard of or seen, hence a serious step has been taken against me and I have suffered injury unheard and without sufficient or any cause being assigned. As this is a matter which affects the position of the medical and surgical staffs of all hospitals it is one which, I venture to think, will attract the attention of medical journals and through them of the profession at large I am, Sirs, yours faithfully,

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[1] Traitement Médical des Inflammations du Cæcum Par le Docteur Bourget Professor de Clinique Médicale à la Faculté de Médecine de Lausanne. Eggiman

Grosvenor-street, W March 2nd, 1903. H. A. REEVES.

[COPY OF LETTER FROM SECRETARY]

ROYAL ORTHOPÆDIC HOSPITAL, Feb 27th 1903

DEAR SIR,—I have to inform you that at the annual court of governors held yesterday you were not re-elected upon the committee of management from which you some time ago gave notice of your intention to retire.

The governors did not re-elect you either as one of the honorary surgeons, but thinking you would prefer to finish the treatment of certain of your patients no immediate steps have been taken regarding the appointment of a successor

I am, dear Sir yours faithfully

H. A. Reeves, Esqre. TATE S MANSFORD

THE VALUE OF CHLORETONE IN SEA-SICKNESS

To the Editors of THE LANCET

SIRS,—I can confirm the good opinion expressed by Dr L. Wheeler in THE LANCET of Feb 28th, p. 615, as to the value of chloretone in sea sickness. Last June, when about to cross the North Sea, I was, by the courtesy of Messrs. Parke, Davis, and Co, furnished with a supply of the drug in five-grain capsules. I may say that I am a very bad sailor and that, rough or smooth, a sea voyage has for many years meant at least 48 hours of abject misery, the North Sea having especial terrors. On this occasion before leaving the Humber I took one capsule and on retiring to my berth I took two capsules more. During the night and all next day it blew hard, with a nasty cross sea, yet I was perfectly comfortable and did not miss a meal Early in the morning of the first day at sea I met the stewardess, she was looking very ill, and she told me that all the lady passengers were sea sick and that she herself was in the same plight and was hardly able to attend to her duties I administered two capsules to her at once and put my stock at her disposal for the ladies On inquiring the result the stewardess told me that she got speedy relief and could take food and go about her work comfortably and that every lady who had taken a dose said that she felt very much better On the return journey sailing from Christiania, we had a lovely run down the fiord and I went to bed while the ship lay by the quay side at Christiansand and quite forgot both sea sickness and my remedy The night was a very rough one and next morning no breakfast could be served in the saloon, the few who could eat being supplied in their cabins. I was very bad and could take neither food nor stimulant. Somehow I managed to dress—or rather put on my clothes—and make my way to a saloon where, lying on my back athwart ship, I slid backwards and forwards for an hour or two. Then I bethought me of chloretone and sending a steward for my bottle I took two capsules. For an hour afterwards I rested comfortably and at luncheon time took my place at table and ate a good meal. I am, Sirs, yours faithfully,

J W FAWCITT, L.R C P & S Edin

Broughton-in Furness, March 2nd, 1903.

THE "FRICTION" TONGUE

To the Editors of THE LANCET

SIRS,—The above term may very fitly be applied, I think, to an appearance of the tongue which is very commonly seen in people who have worn an upper teeth plate for some time. In extreme cases the whole upper surface shows a smooth dry, polished, and bright red surface, the raphe becoming shallow and indistinct and in some cases entirely obliterated.

Dr W A. Wills in writing of chronic glossitis in Allbutt's "System of Medicine" says that "if general it is often called glossy tongue and is usually the result of chronic dyspepsia or alcoholism." In the "friction" tongue—a true glossy tongue—we have neither of the two above causes at work. People who use an upper teeth plate may be the subjects of dyspepsia or alcoholism and in them the friction effect may be seen in its most typical form. But neither chronic dyspepsia nor alcoholism, or both combined, produce such a well marked condition of glossy tongue as that found from the use of an upper teeth-plate. There is no pain or tenderness or any inconvenience accompanying this appearance of the tongue, indeed, the possessors of such never make any complaint of it or know that there is anything unusual in the appearance of it. In itself, therefore, it is a matter of no importance and its only claim to be recorded is simply to have attached to it its proper causation and nothing more. It is thus that I have termed it a friction tongue—a mechanical result.

I am Sirs, yours faithfully,

Boyson road S.E. March 2nd WM ECKLIN, M B Glasg

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT)

A Crematorium for Calcutta.—The Census of Calcutta —The Plague Epidemic —A Magnificent Donation to India.

THE movement which was started at the end of last year with the object of establishing a crematorium for Calcutta has rapidly progressed The Cremation Society of Bengal is to be enrolled as a company and has succeeded in getting the corporation of the city to purchase two bighas of land (about two-thirds of an acre) adjoining the large Christian cemetery and to allot in the coming year's Budget Rs. 15,000 (£1000) for the erection of a crematorium. This, I understand, is everything that was asked for and it now merely remains for the society to obtain funds in order to build a chapel. In a year's time the crematorium should be built and in working order

The Resolution of the Government on the census of Calcutta has just been issued This city, with its suburbs, has a population of 949,144, and if Howrah, on the opposite side of the river (the position of which corresponds with that of Southwark in London), were included the combined aggregation of people numbers nearly 1,107,000 The municipality of Calcutta, however, controls an area having but 847,796 persons, as the suburbs have their own little governing bodies. The population has increased during the past decade 24 per cent.—chiefly by immigration, especially from Behar and the United Provinces. One curious feature exists in the large predominance of males—the proportion of the sexes being as 19 to 10 Of the total, 65 per cent. are Hindus, about 30 per cent. are Mahomedans, and about 4 per cent. are Christians, the small remainder being constituted of members of various nationalities. There are no less than 59 languages spoken in Calcutta, of which the chief two are Bengali and Hindustani, Uriya and English following a long distance after It will hardly surprise anyone to learn that three-fourths of the population are illiterate.

The mortality from plague throughout India mounts up higher and higher There were no less than 24,500 deaths from this disease alone during the past week. These figures compare with 23,632 deaths during the previous seven days and 12,192 during the corresponding week of last year The details published are Bombay Presidency, 11,708 deaths, the Punjab, 2882, Bengal Presidency, 2757, the United Provinces, 2510, the Madras Presidency, 793, the Central Provinces, 1173, the Mysore State, 829, Hyderabad State, 622, Berar, 595, Calcutta, 97, Bombay City, 498, and Karachi, 20 Poona is not mentioned, but the daily records show over 100 deaths a day from plague alone, which with a population of only about 100,000 indicates the frightful ravages which the disease is making once more in that city

Mr Henty Phipps has placed at the disposal of the Viceroy the munificent donation of £20,000 to be devoted by the Government of India to some object of practical benefit by scientific or industrial research which will promise enduring good to India Mr Phipps is a partner of Mr Andrew Carnegie. He has also given £2000 to the Victoria Memorial Scholarship Fund which has for its chief object the training of native women as midwives and nurses. This fund has already reached something like six and a half lakhs of rupees and is presided over by Lady Curzon.

Feb. 5th.

will, of course, have his aseptic gauze in metal sterilisers—perhaps two or more

How can anyone state that it is as sure of success, and therefore as suitable to the conditions of private practice, to attempt to carry out an operation aseptically as with the aid of antiseptics when the operator must cart an array of tin boxes and an unwieldy steriliser to his patient's house when he is more certain of getting a good result by taking a bottle of pure carbolic or a few soloids, let us say, in his waistcoat pocket? The surgeon in private practice may have to obtain the assistance of a nurse who has had little or no training, does Dr Laurie mean to say that he would hope for a better result with no antiseptics than with them if he and his anæsthetist were the only medical men attending at the operation? I am speaking of the thousands of cases where the theatre is a small bedroom, the nurse a district nurse or even a trained surgical nurse, the patient most likely a working man with a strangulated hernia, and the only way of procuring instruments, anæsthetic, dressings, and all the various items required being to bring them yourself, knowing that it is better to take a little "trouble" over preparations even if you do happen to be a believer in antiseptics than to risk leaving everything to an assistant who apologises and remarks that he has forgotten the needles when you are ready to sew up the wound. It is simply delightful to hear Dr Laurie twitting Mr Watson Cheyne on his antiseptic theatres. One would think that men from all points of the civilised world flocked to Glasgow to see Surgery, with a capital S, stopping on their way to have a look round London and get lunch before going on in fevered haste to the home of aseptic surgery I wonder why Lord Lister could not see that he was ruining his career by coming to "Mr Watson Cheyne's side of the border"

By the way, I can call witnesses to prove my statements when I say that on one occasion I watched a beautiful ideal aseptic operation performed in what is perhaps the most aseptic theatre in the kingdom The operator wore rubber boots and rubber gloves, but, alas, the nurse dragged the ribbon of sterile gauze along the beautiful tiled floor and the surgeon stuffed it into the wound and turned round to talk to the crowd of distinguished foreigners on the ideal method of surgical procedure There were no antiseptics there, the tape had been sterile and it would remain in the wound with the dust off the floor undisturbed by any antiseptic which *might* counteract the effects of the carelessness displayed in a theatre given up to aseptic surgery Would a patient have a better chance in a little country cottage with a "kettle of boiled and one of boiling water and plenty of freshly laundried towels"? I might say that I have operated without the above-mentioned kettles many times and, thanks to antiseptics, despite the absence of aseptic theatres, nurses, and other ideal surgical luxuries, have had good results. Perhaps Dr Laurie may say I am no judge of good results because I acted as house surgeon to Mr Rose and Mr Carless who used, and still use, antiseptics and, I believe, still have cases that recover, and even do well, under their old world treatment.

In conclusion, I should like to say that I am not bigoted. I have acted as house surgeon to aseptic surgeons as well as antiseptic surgeons and have found that with the usual amount of "trouble" one can get and can expect better results *with antiseptics* in private practice I do not mean the practices of a few dozen men in our great cities but the practices of hundreds of thousands of men scattered over both sides of "the border" Asepsis may be the ideal method, but surely everyone who has tried both methods must find that ideals are difficult to obtain in the general run of private practices and therefore the practical, convenient, and far less expensive well tried "antiseptic method" will hold its own except under such conditions as may be obtained in aseptic theatres, preferably of course, not on "Mr Watson Cheyne's side of the border"

I am, Sirs yours faithfully,
IAIN JEFFERISS, M.R.C S Eng, L.R.C P Lond.

London Feb 28th 1903

"RELAPSES" IN SCARLET FEVER

To the Editors of THE LANCET

SIRS,—If Dr A B Sloan's article in THE LANCET of Feb 14th, p 436, should require corroboration I give two cases which occurred in the Biggleswade Isolation Hospital

A girl, aged three years, was admitted on Nov 5th, 1902, with a scarlatinal rash and a temperature of 101° F She peeled as usual On Nov 29th she came out in a universal scarlatinal rash and again desquamated freely

A girl, aged 13¼ years, was admitted on Dec. 16th, 1902, with a scarlatinal rash and a temperature of 100 4° F She desquamated in due course. On Jan. 24th, 1903, she came out freely in a scarlatinal rash and again peeled freely

These two cases occurred out of 60 scarlatinal admissions during 1902–03. I am Sirs, yours faithfully,

Biggleswade, Feb 17th 1902. J B EMMERSON.

THE DISPOSAL OF THE SEWAGE OF LONDON AND THE CONTAMINATION OF SHELL-FISH

To the Editors of THE LANCET

SIRS,—It is interesting to one who, from the first, condemned the method of disposal of the sewage of London (which was adopted by the Metropolitan Board of Works in defiance of the recommendations of the Royal Commission on Metropolitan Sewage Discharge and has been continued since) to find that the Conservators of the rivers Thames and Medway and also a joint committee of the Port Sanitary and Sanitary Committee of the City Corporation have adopted a resolution, stated in the *Times* of Feb 26th —

> That the present system of discharging sewage into the Thames estuary is dangerous to health and detrimental to an important food-supply and that representations be made to the *Local Government* Board with a view tolegislation being initiated to effectually deal with the matter

In my presidential address to the Society of Medical Officers of Health in October, 1888, after stating the recommendations of the Royal Commission and pointing out that the Metropolitan Board of Works and its advisers were flouting them, I concluded as follows —"I protest in the name of the Society of Medical Officers of Health of this country against such a state of things and against the further carrying out of a scheme which, while being enormously costly, will not only not settle the question, but will rather increase the difficulties of settling it effectually and will be pointed out by succeeding generations as a disgrace to the sanitary work of the nineteenth century" And in the *discussion on papers* by Mr Worth and Mr Santo Crimp on the Main Drainage of London and by Mr Dibdin on the Purification of the Thames before the Institution of Civil Engineers in February, 1897, I stated that ' I could not help thinking that if the money which had been spent in trying to purify the sewage of London by means of precipitation and filtration had been spent in taking it out further, as had been proposed, to the Maplin Sands or some other suitable place, and disposing of it by irrigation, that money would have been very much better spent, and I thought that would be resorted to in the end, however much money might be spent on experiments."

On that occasion Dr Dupré, one of the former chemical advisers of the Metropolitan Board of Works, "expressed sympathy with Professor Corfield, who had predicted that the river would be more foul after the scheme had been in operation than before' This statement was not strictly correct, but that may pass, and it is now my turn to sympathise sincerely with Dr Dupré on the condemnation of the scheme he defended by the most important sanitary authorities connected with the river Thames

I am, Sirs, yours faithfully,
W H. CORFIELD, M.A. M D Oxon. F R.C P Lond.,
Consulting Sanitary Adviser to His Majesty's
Office of Works

Savile-row W March 2nd 1903

ROYAL ORTHOPÆDIC HOSPITAL

To the Editors of THE LANCET

SIRS,—I inclose a copy of a letter which the secretary of the Royal Orthopædic Hospital was directed to address to me and which sets forth that at the recent annual meeting of the governors I was not re-elected. I was not present at this meeting, nor were any of the governors who were opposed to the sale of the site, several of them having resigned disapproving of that policy I am not aware that any reason was given for my non election, nor have I received any complaint about my work. It remains to be seen if this unprecedented action will be in the interest of the hospital or to the credit increased degree to suggestions made in various parts of the country that hospitals should be placed entirely under the care of the municipality, so that the burden of their support should fall equally upon all classes of the community able to help The Lord Mayor expressed his private opinion that hospital patients who could afford to pay for their own food ought to do so and in regard to those who could not afford payment for that purpose it would be reasonable that the Poor-law authorities should pay for their food. He made that suggestion to the committee of the hospitals. I fear that his lordship's suggestion will meet with scant favour from the public, as if it were adopted the better class of hospital patients would be placed on the same footing as the inmates of a workhouse hospital.

Small-pox in Liverpool Proposed Opening of Vaccination Stations The Overcrowding of Electric Cars Proposed Quarantine for Ships

105 fresh cases of small-pox were reported to the health authorities during the week ending Feb 26th, as against 54 during the preceding week. 77 patients are isolated for observation. There had been five deaths from the disease during the week. 310 patients were under treatment in the corporation infectious hospitals at the above date. Considerable discussion took place at the recent meeting of the Toxteth board of guardians as to the best means of coping with the alarming spread of the disease in the Toxteth Park township. A resolution was carried to the effect that application should be made to the Local Government Board to reopen the vaccination stations. In spite of the protests from many quarters, including that in THE LANCET of Jan. 10th, p 135, the electric cars are still disgracefully overcrowded and thereby have become a positive danger to public health. At the ensuing meeting of the city council Councillor Byrne has given notice that he will propose the following motion —

> That the Parliamentary Committee be instructed to apply for powers to enable the port sanitary authority to deal with ships arriving in the Mersey infected with small pox in the following manner To detain the ship in the river for a period not exceeding 48 hours during which time the ship and crew shall be thoroughly disinfected and the crew vaccinated before entering dock also that a special steam launch be provided fitted with all necessary appliances for dealing with such cases.

Liverpool Infirmary for Children Donations towards the Cost of a New Building

£22,000 have been already promised in aid of the erection and furnishing of a new infirmary and the out-patient department (recently opened), the total cost of which is estimated at £60,000

Liverpool Abattoirs Question

An influential deputation representing the Royal Infirmary, University College, and the medical profession of the city relative to the renewal of the leases of the abattoirs in Trowbridge-street, waited on the estate committee of the City Council recently Mr John Lawrence, the vice-chairman of the finance committee of the city council, in introducing the deputation stated that it was understood that the estate committee was contemplating the renewal of some leases in connexion with the Liverpool abattoirs and referred to various reports and resolutions of the council disapproving of the neighbourhood of Trowbridge-street as a site for abattoirs Sir William Banks quoted from reports by Dr Trench and Dr T Stopford Taylor, former medical officers of health of Liverpool, and also by Dr E W Hope, the present medical officer, tending to show that the existence of an abattoir, however well conducted, was injurious to the health of the neighbourhood, besides being offensive to the senses The chairman of the committee (Mr R A. Hampson) thanked the members of the deputation for their attendance and stated that the committee and the council were in sympathy with their views and were concerned as to the best way of dealing with the question The deputation could take it as settled that the corporation would never seek to continue the abattoirs in the centre of the city after the expiration of the leases The committee had recently successfully negotiated with the Abattoir Company to arrange the termination of the various leases affecting the Abattoir Company's premises at the end of 1911. The chairman assured the deputation that they had no intention of renewing any of the Abattoir Company's leases but that recently some lessees of the corporation had assigned a timber yard adjoining the Abattoir Company's premises to the company for lairage purposes. The corporation was unable to prevent this assignment being made, but had been able to arrange with the Abattoir Company that the assigned leases should terminate on the date fixed in respect of the remainder of the Abattoir Company's premises and that the premises should not be used for the purpose of slaughtering cattle. Mr. J Kewley, the chairman of the committee of the Royal Infirmary, Mr Robert Gladstone, Principal Dale of University College, Dr William Carter, and others also addressed the committee in opposition to the renewal of the leases.

The New Liverpool University

Mr. John Lawrence, the vice-chairman of the finance committee of the city council, announced at the last meeting of the committee that a letter had been received from the Clerk to the Privy Council stating the decision of the Privy Council to grant a charter to the new university conditionally

Work of the Police Force Ambulance and other Police Services during 1902

The annual report of the head constable of Liverpool states that there are now six fully equipped horse ambulances stationed as follows in the city Royal Infirmary, Royal Southern Hospital, David Lewis Northern Hospital, Stanley Hospital, Central Fire Station (for night service), and Old Swan Police Station (for outlying districts). The number of turns-out during the year was 2759 1729 constables and others hold certificates from the St. John Ambulance Association and 1288 constables hold medallions. The number of cases of first-aid rendered by the police was 699 Out of this number 498 were adjudged by medical men to be worthy of special commendation 66 lunatics were found wandering in the city and taken charge of by the police One sergeant received a silver medal and a vote of thanks from the Liverpool Shipwreck and Humane Society for saving life from poisonous fumes, whilst another constable was awarded the bronze medal by the same society for saving life from drowning

March 4th.

WALES AND WESTERN COUNTIES NOTES

(FROM OUR OWN CORRESPONDENTS.)

Cardiff Infirmary

THE inhabitants of Cardiff and of the surrounding districts appear at last to have realised their responsibilities and to have determined that the Cardiff Infirmary shall no longer be starved for want of funds Since 1893 the yearly expenditure has always exceeded the income until in 1899 there was a deficiency on the year's working of over £2000 and an accumulated debt of £12,000. The mayor who came into office in 1900 inaugurated a fund for the purpose of liquidating this debt and his efforts were seconded by the proprietors of the *Western Mail*, who besides subscribing generously themselves initiated a shilling fund which was so well supported that within a few months the entire debt was cleared off. Although in each succeeding year the income has not been sufficient to meet the expenditure the financial report presented at the annual meeting of the governors held on Feb 25th showed an adverse balance for last year of only £155 notwithstanding that the expenditure amounted to £10,690, the largest sum which has been spent in any one year since the establishment of the infirmary The number of in patients treated during the year was 1878 Ten years ago the yearly expenditure was £6010 and there were 1339 in-patients treated. The most gratifying portion of the report for 1902 is the statement that the workpeople's contributions have increased by £1221 and have reached the creditable sum of £3540. In the ordinary subscriptions there was an increase of only £76. This substantial support by the workmen may in great part be due to the admission to the board of management of some of their number and these representatives have no doubt satisfied themselves that the adverse criticism to which the institution was subjected a few years ago was in no way warranted. In a supplementary report issued by the managers there are set out in some detail several building additions and improvements which are considered to be necessary for the efficient working of the hospital and the separate cost of these works as ascertained by public tender is appended. They amount altogether to £5329 and include fire hydrants to cost £450 laundry improvements £200 terrazzo flooring £236, and intercommunicating telephones £106. It is

BIRMINGHAM

(FROM OUR OWN CORRESPONDENT)

The University of Birmingham

THE annual meeting of the court of governors was held on Feb 18th In the absence of the Chancellor, the Right Hon. Joseph Chamberlain, M P , the chair was taken by the Vice-Chancellor, Alderman Beale. The report and balance sheet were taken as read, copies of the same having been distributed. The Vice-Chancellor then sketched the progress which had been made during the past year Four new chairs had been established, two in connexion with subjects which had not been dealt with before—namely, history and metallurgy—and two with subjects in connexion with the faculty of commerce which had been dealt with in a more or less perfunctory manner—viz., mining and accounting The council had resolved to establish a chair of education, but had not yet been able to arrange to fill it to their satisfaction The difficulty of carrying out the work of the University in the present buildings was dwelt upon and it was stated that the arrangements for the new buildings at Bournbrook were progressing satisfactorily Sir Oliver Lodge gave an address upon the requirements of teaching in relation to science and to the new school of modern languages and made some emphatic remarks upon the training of secondary teachers. He urged that training colleges should not be detached from places of learning in general. A memorial was presented by the students in favour of some rearrangement of the course so as to leave every Wednesday afternoon free. A similar memorial was presented last year and was referred to the Senate. The undergraduates are now willing to sacrifice Saturday mornings if they can succeed in obtaining Wednesday afternoons for athletics and recreation or for independent studies The curriculum of the medical students entails many difficulties in the way of the adoption of this suggestion. The matter has been referred again to the Senate which, it is hoped, may concede the request.

The Eyesight of the Poor

About a year ago the board of guardians appointed an ophthalmic surgeon to test periodically the eyesight of the inmates of the workhouse and of the Marston Green Homes in connexion with that institution It has been found that the inmates have often made the excuse of going to the eye hospital in order to obtain permission to go out, though many of them are made more comfortable by the use of glasses. Among the children many cases of defective eyesight were due to malnutrition The guardians in this respect are more progressive than the school board, which has not so far made a permanent appointment of an ophthalmic surgeon to be responsible for the testing of the eyesight of children in the elementary schools under its control.

The Hospitals

The forty second annual meeting of the supporters of the Children's Hospital was held on Feb 23rd The report showed that the number of patients during the year 1902 had been 16,761 There had been an increase in the number of operations performed to the extent of 37½ per cent. more than in the previous year As usual an adverse balance was reported and an urgent appeal was made for more funds. It was stated that one method of raising more money was started last year in the form of a fund called the "Public and Private Schools' Children's Hospital Cot Fund" in order to increase the interest taken in the work of the hospital and to add to its facilities for dealing with the many children who are brought for treatment.—The annual meeting of the subscribers to the Birmingham and Midland Skin Hospital was held on Feb 26th. The committee reported, that there were 124 in patients as compared with 157 in the previous year, the out-patients numbered 6503. An average stay of 54 days in the hospital was shown for the in patients and was taken to be an indication of the serious nature of the cases under treatment The medical report expressed satisfaction at the treatment of 103 patients suffering from lupus, cancer and cognate diseases by means of the x rays and the Finsen light, a fact which has been commented on in the public press.—The Birmingham and Midland Counties Sanatorium displayed a favourable report at the annual meeting of its supporters on Feb 27th. One suggestion of importance affecting the patients and the profession was adopted by the committee on the advice of its consulting physician—namely, the exclusion in future of consumptive patients. It was affirmed that a short stay by a consumptive patient at the sanatorium in the earlier stages of the disease did not benefit him individually, while there was a danger of other patients being infected. The decision of the committee is a matter for regret, but the committee has no doubt acted with the intention to afford the greatest good to the greatest number and has wisely supported its decision by the authority of an eminent physician.

March 3rd

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT)

University College, Liverpool The Opening of the Johnston Laboratory, the Unveiling of Dr Richard Caton's Portrait, Complimentary Dinner

THE Right Hon Walter H. Long, M.P , the President of the Local Government Board, has accepted an invitation to open the Johnston Laboratory at University College on May 9th The laboratory, which has been built and equipped by Mr William Johnston, a Liverpool shipowner, includes the following departments bio-chemistry, tropical medicine, directed by Major R. Ross, C B , F R.S , one of the Nobel prizemen of this year , and experimental medicine and comparative pathology, together with cancer research, to be conducted by Dr A. S F Grünbaum. Mr William Johnston has also endowed the professorship of bio-chemistry and three fellowships in various branches of medical research. Mr Johnston is father in law of Dr Rubert W Boyce, F R.S , the professor of pathology at University College.—On March 4th the ceremony of unveiling Dr Richard Caton's portrait took place in the Arts Theatre The portrait was painted by Mr R. E Morrison of Liverpool and was exhibited at the Liverpool autumn exhibition It is a gift to the College from Dr Caton's late colleagues on the occasion of his retirement from the medical faculty which took place in July, 1902 A replica of the portrait was presented at the same time to Dr Caton. In the evening Sir William Mitchell Banks and Dr Caton were entertained at dinner by their late colleagues and friends at the Adelphi Hotel —The annual dinner of the University College Old Students' Association will be held at the Adelphi Hotel on Saturday, March 7th, when the chair will be taken by Professor Edward Carey, the president for the year It is expected that a large gathering of former students will take advantage of the occasion to renew old friendships.

Liverpool Stanley Hospital Improved Financial Condition.

At the annual meeting of the subscribers to the Stanley Hospital, held on Feb 27th, the treasurer, in his annual report, made the satisfactory announcement that the special appeal to the generosity of the public on behalf of the heavy debit balance at the end of 1901, had met with a generous response, amounting to £5098. By means of the strictest economy the ordinary expenditure had been reduced by £400 as compared with the year 1901. There was an increase also in the subscriptions and donations of £380, but in spite of this the ordinary expenditure had exceeded the income by £820, which, coupled with provision for extraordinary expenditure, left a debit balance at the end of the year 1902 of £1068 18*s* 5*d* Corporate help was again advocated in similar terms to those expressed at the annual meetings of kindred charities.

Hospital for Women, Shaw street Critical Condition of the Finances

The support of the medical charities of Liverpool is fast becoming a burning question and if the hospitals are to be maintained in an efficient state the subscription lists will have to be considerably augmented. The reports of the treasurers of the various hospitals, the annual meetings of which have been held this year, are all gloomy in the extreme. A further wail came from the treasurer of the Hospital for Women, Shaw street. At the annual meeting of that charity on Feb 18th the accounts at the end of December, 1902, showed a deficiency of £1416 6*s* 11*d* The treasurer, in commenting on the diminishing income and increased expenditure, said that the committee would have seriously to consider the question of carrying on the hospital under present conditions Public attention was being drawn in an

There was a very large attendance. The chair was occupied by the Earl of Bandon who, as Lord Lieutenant of the county had convened the meeting Sir R. Douglas Powell (London) and Sir John William Moore (Dublin) in the most generous manner came purposely to Cork to support the movement. Both gentlemen in very powerful and impressive speeches, alluded to the terrible ravages caused by pulmonary tuberculosis, owing to which homes were made desolate and the community was robbed of some of its most useful members by a disease largely preventable. The Most Reverend Dr. Browne, Bishop of Cloyne, then proposed that a branch should be established, and in the course of his speech astonished the medical portion of the audience by showing that he had such a thorough grasp of the subject The Right Reverend Dr Meade, Bishop of Cork, proposed the formation of a general committee in a very sympathetic speech, showing his well known interest in the whole community Amongst the other speakers were Sir George Colthurst Bart , Mr Maurice Healy, ex M P , the Chairman of the Cork District Asylum , the Chairman of the Cork County Council, and Mr J Cremin. On the motion of the City High Sheriff a warm vote of thanks was passed to the Earl of Bandon for presiding His lordship in responding, referred to the pleasure which it gave him to be able to forward such a meritorious work. In the evening the medical profession of the city entertained Sir R. Douglas Powell and Sir John William Moore at dinner at the Imperial Hotel. 120 sat down to dinner, including a number of medical men from the city and county, the toasts being proposed by the chairman

Cancer in Ireland

A most important report—at least, from a statistical point of view—has just been published by the Registrar General for Ireland on cancer in that country During the year 1901 2893 deaths in Ireland were caused by cancer an increase of 176 over the previous year In Ireland in 1864 the rate of mortality from cancer was 2 7 per 10 000 living , it has steadily risen until in 1901 it reached 6 5. In 1891 the death rate from cancer in Ireland was 4 6 per 10 000 , in 1900 it had risen to 6 1 per 10,000 As to age, the period 75 years and upwards yields the highest proportion of deaths from cancer per 10 000—namely, 38 16. By far the greatest number of deaths from cancer in 1891 occurred amongst farmers and labourers. The recorded mortality varies considerably in the various counties of Ireland. It is lowest in the county of Kerry with 2 54 per 10 000, while the highest death rate is 10 47 in county Armagh. Examining more closely county Armagh it appears that the districts in which there is the highest death rate from cancer are without mountains. The two highest death rates yielded by the mortality for cancer in county Armagh occur upon quite different geological formations. To enable him to accomplish his work satisfactorily the Registrar General issued a memorandum to the local registrars throughout Ireland asking them to give particulars of any cases of death from cancer registered in their districts with the history of which they might be acquainted and which might tend to throw light on the origin of the disease and the means by which it is spread. He also invited the aid of medical practitioners in charge of several public hospitals and of several private medical friends. His request met with a most courteous response and from a close analysis of the replies received, the Registrar General states that the following are the general deductions which can be drawn —

> 1. That in many cases cancer occurs in the same family grand parents parents and other relatives of the person affected having suffered from that disease. 2. That frequently where a member of a family is afflicted with cancer other members of the family suffer from tuberculosis. 3. That in a number of instances where members of a family are afflicted with cancer other members of the family suffer from lunacy idiocy or epilepsy 4 That in some cases the disease has occurred in persons who have been in direct contact with cancer patients 5 That the disease has manifested itself in individuals who have used the tobacco pipes of persons suffering from cancer of the lip 6. That in some instances more than one case of cancer has occurred amongst different families living in the same house or amongst successive occupants of the same house 7 That in a few cases the disease has appeared in different houses in the same locality about the same time 8 That cancer not infrequently appears after wounds and injuries. 9 That in some cases cancer has supervened where there has been irritation of the lip consequent on smoking clay pipes. 10 That cancer frequently shows itself where unfavourable conditions as to residence food &c. exist.

The main practical point to be deduced from these conclusions is that something seems to be gained for the opinion that cancer is directly contagious

Death of Samuel Alexander, M.D R.U I

The death is announced at his residence, Crumlin road Belfast, after a rather prolonged illness, on Feb 25th, of Dr Samuel Alexander A native of Templepatrick, co Antrim, Dr Alexander studied at Queen's College, Belfast, and graduated M.D of the Royal University in 1885 For a time he was in practice in England, but returning to Belfast he was elected dispensary medical officer of No 5 district A careful observer an experienced accoucheur and a kind friend, Dr Alexander was greatly liked by his patients His illness was of considerable duration, and although drainage of an emphysema seemed to have relieved him he had a serious relapse, with hæmatemesis, which proved fatal He was buried on Feb 27th at the old graveyard, Templepatrick, a large concourse of friends and patients attending his funeral

Medical Men and Emergency Calls

At an inquest held in Belfast on Feb 25th as to the death of a woman suddenly from hæmorrhage from a varicose vein in the left leg it came out in evidence that the woman was dead when a medical man arrived and that another medical man who was first summoned by the husband of the deceased declined to attend as he did not go out at night. A juror was anxious to know why the medical man did not come, when the coroner pointed out that a medical man is not bound to come, but that his experience was that even if they themselves were on a sick bed they would get up and come out in an urgent case. He thought the man had not explained that his wife was in danger or else the medical man would have attended. He expressed wonder that the facilities provided in the way of ambulance were not thought of in a case where medical assistance was urgently needed.

March 3rd

PARIS

(FROM OUR OWN CORRESPONDENT.)

The New Public Health Act

As I mentioned in my last letter the new Public Health Act came into force on Feb 19th. The Act is divided into five sections Of these, Section I contains two clauses and deals with sanitary matters in general Of the two clauses the first contains ten paragraphs dealing with general sanitary measures and the second 20 paragraphs dealing with sanitary measures applicable to buildings and the like. The points of the paragraphs dealing with sanitary matters in general are as follows. In every commune the mayor is charged with responsibility for the public health and with the duty of promulgating measures (after consultation with the municipal council and in the form of municipal by laws) for preventing or for arresting outbreaks of infectious disease. He is specially charged with the looking after of measures for the disinfection, or even the destruction, of articles used by the sick and in general terms of any article which may serve as a vehicle for the transmission of infection. These measures of destruction or of disinfection are compulsory In the same way mayors of communes are charged with drawing up regulations for the hygienic condition of houses and their outbuildings, of private roads whether thoroughfares or not, of furnished apartments, and in fact, of any mass of buildings (agglomerations) or of real property of whatever nature They are also specially charged with the care of regulations for the supply of drinking water and with the disposal of refuse of any kind. As regards these duties they will be under the authority of the prefect who, with the consent of the Departmental Council, will approve the municipal by laws or may even make them himself, *ex officio*, if the mayor will not carry out the law In cases of urgency—that is to say, in face of an epidemic or other pressing danger to public health—the prefect can order measures of disinfection or destruction to be put into being at once, and this order may apply to one person, to many or to the whole inhabitants of the commune. The list of diseases to which the sanitary regulations prescribed by the Public Health Act of February, 1902, are to be applied by means of an official schedule is still under discussion. I have previously spoken of debates upon this subject at the Academy of Medicine and also of another official regulation making it incumbent upon doctors of medicine, *officiers de santé*, and midwifes to hoped by the managers that these requirements will be supplied by the generosity of one person or by a group of subscribers The issue of a similar statement last year resulted in the presentation of a mortuary chapel by Dr O T Vachell, of a padded room for delirious patients by Mrs Mackintosh of Mackintosh, of new accident receiving wards by Mr Thomas Webb, the donor of the operating theatre, and in the installation of electric light throughout the building by the Marquis of Bute

Weston-super Mare Hospital and Dispensary

The Weston super-Mare Hospital and Dispensary was established in 1857 and has accommodation for 31 patients. The annual report of the governors states that during 1902 there were treated as in patients 260 persons and in addition to the 684 out-patients treated there were 722 accident and emergency cases attended to The financial position of the institution is said to be satisfactory

Small-pox

Swansea has been free from small-pox for several weeks and there has not been any case of the disease notified in Merthyr since the first week in January Three sailors have been removed to the Cardiff small pox hospital from a ship trading between Liverpool and Cardiff and one of the patients has since died During the past month there have been two cases at the Swansea waterworks now being constructed at Cray in Breconshire and five cases have occurred in the town of Brecon. In the Wigmore rural district there have been two cases, in Leominster four cases (one fatal), and in the city of Hereford one case. In all of the Breconshire and Herefordshire cases the source of the infection was traced to tramps. In the administrative county of Glamorgan during 1902 there were notified 172 cases of small pox distributed over 17 of the 28 urban and rural districts in the county but excluding Cardiff and Swansea. More than one half—93 cases—were notified during the last quarter of the year and 71 of these were in the town of Merthyr

University of Wales

Mr David Davies, whose grandfather was one of the founders of the town of Barry and an extensive colliery proprietor in Glamorganshire, has intimated a desire to defray the cost of erecting and fitting up new science laboratories in connexion with the Aberystwith College of the University of Wales The estimated cost is said to be about £20,000 but no definite sum has been prescribed by Mr Davies

Anthrax

The Gloucestershire county council has decided to cremate the carcasses of all animals dying from anthrax within the county and to discontinue the practice of burying them in lime

Dorset County Hospital.

On Feb 23rd, Sir Frederick Treves formally opened the new operating theatre of the Dorset County Hospital. There was a large and influential attendance at the ceremony Replying to a vote of thanks, Sir Frederick Treves delivered a short address on the advance of operative surgery The cost of the building has been defrayed by public subscriptions, including donations of £500 from Lord Eldon, £250 from Lord Ilchester, £100 from Lord Wimborne, and £50 from Lord Portman. Sir Frederick Treves presented the operating table

Bristol Hospital Sunday Fund

At a meeting of the council of the Bristol Hospital Sunday Fund held on Feb 26th it was reported that up to that date £1464 had been received and it was decided at once to distribute £1200 amongst the medical charities. This includes £522 to the Bristol Royal Infirmary, £438 to the General Hospital, £162 to the Children's Hospital, and £78 to the Eye Hospital

March 3rd.

SCOTLAND

(From our own Correspondents.)

University of Glasgow

THE graduation ceremony will take place on Tuesday, 21st April. The senate has already published the names of those upon whom it intends to confer honorary degrees Among those mentioned who are to receive the degree of doctor of laws (LL.D) are Sir William Tennant Gairdner, K.C B , emeritus professor of medicine in the University of Glasgow, and Dr Thomas Oliver, professor of physiology in the University of Durham, author of works on medical subjects embodying, *inter alia*, the results of important investigations respecting the diseases of dangerous trades.

The Glasgow Hospitals

The governing bodies of all the important hospitals in Glasgow are representing to the public the urgent necessity of raising money for extension or rebuilding The foundations of the new dispensary at the Western Infirmary have already been laid and the directors are hopeful that before long they will be able to erect and to equip a new wing to the main building The chairman of the directors of the Royal Infirmary at a dinner of the present and past residents of that institution held last week was very sanguine when he expressed his belief that within 18 months they would see the foundation stone of a new hospital laid The directors, too, of the Samaritan Hospital at their annual meeting held on Feb 25th and presided over by the Lord Provost (Mr. John Ure Primrose) made a public appeal for assistance to build and to equip the proposed new wing towards which they had already received £7000, leaving a balance of £2000 still required They had previously urged the necessity of providing an entirely new home for the nurses and they were glad to announce that a lady, who desired that her name should not be publicly known, had intimated her intention of making a gift of £8000 for the purpose of erecting such a home in memory of her late daughter This year the Glasgow Hospital Sunday Fund amounts to £5023, being above what was collected last year by £225. This money, collected by the various churches throughout the city on a particular Sunday in the year, is distributed among the three general infirmaries—the Royal Infirmary, the Western Infirmary, and the Victoria Infirmary The Lord Provost at the annual meeting of the Samaritan Hospital suggested that this hospital should also receive a share of the fund, but this would break through a principle that has guided the committee from the outset—namely, that the fund should be reserved for the three general infirmaries. The Samaritan Hospital is only one of many special hospitals in the city and if it were to partake of the benefits of this fund it would be difficult to ignore the claims of other institutions. If they were all satisfied the money would become allocated in small amounts to many institutions and none would derive any distinct benefit

Glasgow Medical Volunteers

In spite of most inclement weather there was a very large attendance at the memorial service held in the cathedral last Saturday afternoon when a tablet was unveiled to the members of the Glasgow volunteer companies of the Royal Army Medical Corps who died in South Africa during the recent war The inscription reads This tablet is erected by the officers and men of the Royal Army Medical Corps (Volunteers), Glasgow Companies, in memory of their comrades, members of the active service section of the corps, who lost their lives during the South African campaign Corporal G G Penman, died at Bloemfontein, 12th November, 1900 , Corporal J Howat, died at Bloemfontein, 1st December, 1900 , Private W Munro drowned at Elandsfontein, 7th April, 1901 " The Director General of the Army Medical Service, Sir William Taylor, K C B., K.H.P , unveiled the tablet and delivered a brief address.

The annual dinner of the Royal Medical Society of Edinburgh was held on March 3rd, when Mr Mayo Robson was the guest of the evening Sir William Turner, Sir J Halliday Croom, Sir J Batty Tuke, M.P , Professor Chiene, and Dr William Bruce were among the 80 medical men who attended under Dr A B Ross's presidency to do honour to the guest of the evening

March 3rd.

IRELAND

(From our own Correspondents.)

Establishment of a Branch of the National Association for the Prevention of Consumption in Cork.—Complimentary Dinner to Sir R. Douglas Powell and Sir John William Moore.

ON Feb 28th a very important meeting was held in the Cork Court-house for the purpose of establishing a local branch of the Association for the Prevention of Consumption.

Coal Famine and Mortality

The *department of health in Chicago considers that the* ncreased mortality for January was due directly to the shortge of coal. Unrevised returns of mortality for the month of January, 1903, show an increase of 10 per cent, (or 344) in the actual number of deaths from all causes and at all ages, and of 11 4 per cent in proportion to population, as compared with January, 1902, when coal was abundant at one-half the price or even less than it now commands—when it can be obtained at all. These two facts are cited together because, in the judgment of the health department, the latter is the principal, if not the sole cause of the former A large proportion of the excess of deaths is due to cold and exposure caused by the coal famine which at the time of the previous report (Jan. 10th) had affected the health of fully 10 per cent., or nearly 200,000, of the population of the city Had any other one cause so seriously menaced the public health and welfare a grave emergency would have been declared to exist, authorising the exercise of the plenary power of the municipality under the warrant and law of 'overruling necessity"

Injured Seamen must be taken into Port for Surgical Treatment

A United States circuit court of appeals has held in the case of the *Iroquois* that it was the duty of the master of that vessel to bear away to some port of distress as soon as possible after one of its seamen had without fault of his own or fault of the ship sustained a fracture of two ribs and both bones of his right leg below the knee. The vessel was at the time of the accident a few miles to the southward of Cape Horn. The master whose only knowledge as to the treatment of fractures had been derived from his own experience some time previously when he had received treatment from a surgeon for a fractured leg, set the seaman's leg as well as he could, bound it, and placed it upon a cushion in order to elevate it above the body, and instructed the steward to give the injured man gruel, mush, and other light food. The broken ribs healed, but the bones of the leg failed to unite, and after the vessel reached San Francisco the leg had to be amputated a little below the knee The court held that it was no excuse that the master was ignorant or that he believed that the broken leg was healing properly and that for that reason he thought it unnecessary to bear away from his course. Nor was he excused by the fact that the injured seaman at the time made no complaint of the treatment he had received and made no demand to be taken to a port of distress The duty of the master to him was a positive one. He had been disabled while in the service of the ship and without any fault on his part. By the maritime law he was entitled to be healed at the expense of the ship His injury was a serious one and the master must be presumed to have known that it required careful and scientific treatment.

Feb 22nd

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT)

Proposed Amendment of the Poisons Act New South Wales

A PRIVATE Bill has been introduced into the Legislative Assembly of New South Wales to amend the Poisons Act, with the object of removing the present restrictions on the sale of proprietary medicines containing poisonous ingredients A deputation from the Chamber of Manufacturers waited on the Ministry to oppose the Bill It was stated that about 600 proprietary medicines were offered for sale in the State, of which the majority were innocuous, but some 14 contained active poisons, and if the Bill passed these could be sold without any restriction whatever

Faith Healing

The deputy coroner for Sydney (Dr R H. Todd) conducted an inquiry concerning the death of a married woman named Johnston who died in peculiar circumstances The deceased and her husband belonged to the Christian Catholic Churchd or the "People of Zion, a sect the members of which believe in healing by prayer and faith. She was attended in labour by a nurse and in the evening of the same day she became weak. The pastor of the church was sent for and he prayed over her On the next day she was worse and the nurse said that a medical man must be sent for Mrs. Johnston refused to see a medical man and a deacon of the church prayed over her all night. The nurse on her own responsibility took Dr Thomas to see the case but the woman refused to see him. Dr Thomas told the husband that the case was dangerous and that if anything happened to his wife he would get into trouble The husband replied that he did not think so and he added "We belong to a church which does not believe in doctors but believes God will take care of us." On the next day the husband brought Dr Wood to see his wife, but when he got to the house the woman was dead. The husband said that he wanted the medical man to see his wife so as to avoid an inquest Dr Wood was of opinion that Mrs. Johnston had died from loss of blood and shock from want of skilled treatment. Dr Sydney Jamieson made a post-mortem examination and found that the uterus was inverted and that death was due to hæmorrhage and shock, he thought that if medical assistance had been given the woman's life could probably have been saved, 'Parson" McCullagh, the pastor of the church, stated that if a person of their faith had bleeding from a divided artery the proper course would be to pray and not to take measures to stop the bleeding The jury returned a verdict to the effect that Johnston was responsible for the death of his wife in not insisting upon a medical man attending her when made aware by the nurse and Dr Thomas of her serious condition and Johnston was committed for trial on a charge of manslaughter

Infants Protection Bill

Dr Mackellar has introduced into the Legislative Council of New South Wales a Bill to make further and better provision for the protection maintenance, and care of infants to provide for the inspection, supervision, and control of places established or used for their reception and care and to constitute children's courts The Bill is intended to make provision for cases outside the scope of the State Children's Relief Act and deals chiefly with the question of illegitimacy The measure provides for fixing the paternity of the child before birth and where the paternity is fixed the court may require the putative father to find sureties for the payment of the expenses incurred by the mother at the birth In cases where the natural guardians of the woman, say the father and mother in such circumstances fail to give her the assistance which she has a right to expect she may apply to the State Children's Relief Board, which after inquiry may make a complaint to a justice, who will then summon the offender or offenders to show cause why they should not be ordered to support the woman and the child. The putative father will be required by the Bill to pay all the expenses of the mother during her confinement and also to provide for her for a period of six months afterwards. It is further provided that there shall be control over places for the reception of infants by way of inspection and the granting of licences at the discretion of the Minister. The Bill also contemplates the establishment of children's courts, apart from ordinary courts of petty sessions, in order that children may not be brought into contact with the associations of these establishments In moving the second reading of the Bill Dr Mackellar stated that the illegitimate birth rate in New South Wales was very high and that it had nearly doubled in the last 20 years. At present the illegitimate birth rate for the city of Sydney and suburbs was 10 per cent of the whole birth rate while in the country districts it was something more than 5 per cent., the rate for the State altogether being about 7 per cent. This was a much larger percentage of illegitimate births than prevailed in any of the neighbouring States while it was much larger than that of the United Kingdom, and he was sorry to say that the majority of the children were born of women who were immature, those who had not reached the age of 20 years.

A Disputed Insurance Policy Suicide by Prussic Acid or Accidental Poisoning by Coal Gas?

An action was recently tried in Melbourne which presented some interesting medical features. The executors of the late J E. Hoogkleimmer claimed £1000 from the New Zealand Accident Insurance Company the amount of an accident policy issued to him. Hoogkleimmer was found dead in his room apparently suffocated by an escape of coal gas The insurance company declined to pay on the ground that he had really committed suicide by taking cyanide of potassium and that the escape of gas was purposeful. An analysis of the stomach of the deceased man showed that it contained nearly half a grain of cyanide of potassium. Dr C J Martin, F R.S professor of physiology in the University of notify every case of infectious disease.[1] As regards sanitary measures in general Clause 1 of Section I. of the Act deals with those to be taken when an epidemic breaks out in any part of the Republic, it lays down rules for the action of the prefect in cases where for three consecutive years the death rate shall have exceeded the mean death rate for the whole of France, it provides him with a method for neutralising the carelessness (*moyen de passer outre à l'incurie*) of municipalities who have neglected to see that their communes have a proper supply of drinking water or who have omitted to supply a thorough drainage system. It also lays down rules for the protection of the gathering grounds of a water supply and establishes a zone of protection against pollution around them. Finally, the clause makes vaccination obligatory during the first year of life and revaccination during the eleventh and twenty first years Parents and guardians are personally responsible for these measures being carried out and this responsibility is a very real one, neglect of it leading to legal process with a penalty attached Clause 2 of Section I. deals with sanitary measures applicable to houses and the like Under this clause the erection of any building in a town of 20,000 inhabitants or more is forbidden unless a permit has been obtained from the mayor approving the plans from a hygienic point of view When a property, whether a building or not, and whether adjoining the public highway or not, is dangerous to the health of the occupants or the neighbours, Clause 2 lays down regulations whereby the mayor, or failing him the prefect, can order either that necessary work shall be done or that the building shall be closed By this clause also, windows or doors made in the interests of sanitation are exempt for a period of five years from paying the window and door tax Finally, the clause states the conditions upon which leases are to be cancelled or the compensation to be paid to the owner in case of the building being closed Section II. of the Act is concerned with sanitary administration. Under it is created a bureau of public health in towns having more than 20 000 inhabitants and in all communes of less than 2000 inhabitants, if they are thermal stations This public health bureau is a municipal body charged under the authority of the mayor with the application of the Public Health Act At Paris it has just been put into force by an order of M Selves As regards Paris a distinction is made between the duties appertaining to the Prefect of the Seine and those of the Prefect of Police. The first mentioned of these officials deals with everything relating (1) to the hygienic condition of dwelling houses and their appurtenances, with the exception, however, of premises let as furnished apartments, (2) to the hygienic condition of private roads, whether thoroughfares or not, (3) to the collection and distribution of water supplies, and (4) to disinfection, vaccination, and the removal of patients. In case of necessity he gives effect to requisitions made to him by the prefect of police He appoints an unhealthy dwellings commission composed of 30 members 15 of whom are nominated by the municipal council The duties assigned to the prefect of police are as follows (1) to take precautions for the prevention and arrest of epidemic diseases, (2) to receive notifications of these diseases, (3) to deal with contraventions of the statutes relating to vaccination and revaccination, (4) to undertake the sanitary inspection of premises let as furnished apartments and the protection of young infants, (5) to enforce sanitary regulations relating to domestic animals, (6) to enforce regulations relating to the practice of medicine and pharmacy, (7) to enforce the laws and enactments relating to the sale or exposure for sale of articles of food, either adulterated or putrid, (8) to exercise a certain supervision in connexion with the municipal laboratory, and (9) to enforce rules for the carrying on of dangerous or offensive occupations. He is assisted by the Conseil d'Hygiène et de Salubrité de la Seine the composition of which remains unaltered The same section defines the duties of the departmental Conseils d'Hygiène and of the Comité Consultatif d Hygiène de France Section III. provides for the expenses rendered necessary by the new Act, while Section V provides for certain temporary requirements. Section IV is a penal section dealing with contraventions of the provisions of the law and the penalties under this section vary from a fine of 16 francs to one of 1000 francs As I have already mentioned, the Prefect of the Seine has issued an order dealing with the duties imposed upon the Paris Bureaux d'Hygiène. This order concludes as follows "The public bodies appointed under the direction of the municipal authorities for the protection of the public health take the name of Bureaux d'Hygiène de la Ville de Paris (Préfecture de la Seine) in conformity with Section XIX., Clause 2, of the Act of Feb 19th, 1902."

The Question of Fœticide

On Feb 9th the Medico-Legal Society unanimously adopted the report of M Maygrier on the question of fœticide The conclusions of the report are as follows —

1 The medical man incurs no responsibility except under the terms of the Common Law (Articles 1382 and 1383 of the Civil Code)—excluding that is to say cases in which he may be reasonably accused of imprudence or of negligence altogether outside the scientific aspect of the case.

2. The medical man should never operate against the expressed wish of a patient in full possession of her faculties There may be cases, however in which owing to some unforeseen emergency the medical man will be compelled by his sense of duty to operate when the patient has not given her consent.

3 In the case of an unconscious patient the same general rules apply in so far as regards persons having authority over her cases of urgency and of unforeseen complications, which may be very numerous being excepted

4 In no case should the medical man having proposed one operation substitute another wished for either by the patient herself or by persons having legal authority over her if he considers such operation either dangerous or inopportune The refusal to accept his services under conditions laid down by himself releases him from all responsibility whatever may be the consequences Humanity alone gives him the right to interfere

March 3rd

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

New Army General Hospital.

THE Secretary of War is about to establish in the District of Columbia a hospital which shall serve as a base in time of war and shall be so situated and designed as to make immediate and temporary enlargement possible On the outbreak of war such a hospital would immediately be needed because of the gathering together of troops in the vicinity of Washington. The hospital is to be part of the equipment of the army medical school, giving to the student-officers an opportunity to become familiar with the method of administration, hospital inspection, the use of the Roentgen rays and other diagnostic apparatus, and medical and surgical procedures especially employed in the military service. It is also to be equipped for the practical training of the hospital and army nursing corps. The staff is to be made up of army medical officers specially skilled in surgery and diseases of the eye, ear, throat &c., and special facilities will be provided for the treatment of such cases. During the recent war such a hospital was established at Washington barracks but it was found to be altogether too small and it cannot be enlarged because the ground is needed for other purposes. Since 1898, when this hospital was first used, 3000 hospital corps men have been trained and sent to military posts in the United States, Porto Rico, and the Philippines. The student officers have benefited by the hospital training in its branches and the Government has been saved thousands of dollars in pensions because of the successful performance of hundreds of operations for hernia.

Spread of the Plague

It is now evident that through the failure of the authorities of San Francisco to recognise the presence of the plague in that city and to take proper precautions against its spread many of the seaport towns of Mexico have been infected and the disease is spreading to the interior During the first 15 days of January 107 deaths from plague occurred at Mazatlan, Mexico, and 106 houses have been burned California and other adjoining states have sent money for relief and to furnish food The Mexican Government is trying to get control of the disease and has held an extra session of Congress for that purpose It was rumoured that the plague was present in Mexico, Guadalajara and Sonora, and in Ensenada, Lower California, and many towns in that part of Mexico are being gone over very rigidly It was, however, very emphatically denied that there was any sign of the plague there It is probable that the spread of the bubonic plague from San Francisco to Mexican cities will raise the question of the obligation of nations to prevent the spread of contagious diseases from one to another The Mexican Government is said to be preparing a claim against the Government of the United States for damages to commerce by the transmission of the plague to its cities

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[1] THE LANCET Jan 31st 1903 p 338

Central Provinces In August, 1881, he was promoted to be brigade-surgeon On June 1st, 1883, he left India on furlough, returning to Bombay on Dec. 30th, 1884 On April 17th, 1885 he was posted as deputy-surgeon-general. In the capacity of principal medical officer at Calcutta he inspected all troops proceeding thence to Burmah for the last campaign and superintended the despatch of hospital ships and stores. In September, 1886, he retired with the rank of surgeon general after 31 years' service in India, and returning to England he lived at Brighton, Winchester, Ealing, and other places. Even in private life he retained his interest in hospital work and indulged it to some extent by acting on the committees of the Sussex County Hospital, the Hants County Hospital, and the Ealing Cottage Hospital. Surgeon General Brake was married on August 19th, 1852, to Annie, daughter of Mr John Miles Bull. He was left a widower on Dec. 23rd, 1897, and is survived by three daughters and an only son, Lieutenant-Colonel Herbert Brake, R.A., C B D S.O , at present commandant at Trinidad.

DEATHS OF EMINENT FOREIGN MEDICAL MEN —The deaths of the following eminent foreign medical men are announced —Dr Didiot, formerly Medical Inspector-General of the French army —Dr Lösch, formerly Professor of Medical Diagnosis in the University of Kieff.—Dr Dante Cervesato, Clinical Professor of Children's Diseases in the University of Bologna.—Dr Carlo Gallozzi, Rector of the University of Naples and one of the most eminent of Italian surgeons.

Medical News.

UNIVERSITY OF CAMBRIDGE —At the Congregation held on Feb 26th the following medical and surgical degrees were conferred —

Doctor of Medicine —A. E. Bodington, Gonville and Caius.
Bachelor of Medicine and Bachelor of Surgery —A. W Izard, Trinity E A. Ross Trinity H Wacher St John's and L B Aveling Christ's.
Bachelor of Medicine.—N F Ticehurst Clare.
Bachelor of Surgery —D Holroyde, Trinity

Dr Norman Moore, St. Catharine's, is to be one of the University delegates to the approaching International Historical Congress in Rome

FOREIGN UNIVERSITY INTELLIGENCE —*Bologna* Dr Calderone has been recognised as *privat-docent* of Dermatology —*Breslau* Dr Ludwig Krehl of Tübingen has been offered the chair of Clinical Medicine.—*Buenos Ayres* Dr Borda has been appointed Professor of Clinical Psychiatry, Dr L. Valle as Professor of Operative Medicine and Dr Delfino and Dr Uriarte Professors of Bacteriology —*Florence* Dr Arturo Banchi has been recognised as *privat docent* of Anatomy —*Gratz* Dr Max Stolz has been recognised as *privat docent* of Midwifery and Gynæcology —*Greifswald* Dr Paul Leopold Friedrich of Leipsic has been appointed to the chair of Clinical Surgery —*Munich* Dr Anton Bumm the Professor of Mental Diseases being in bad health, Dr Hans Gudden has been entrusted temporarily with the lectures on that subject.—*Rio de Janeiro* Dr E de Nascimento Silva has been appointed to the chair of Forensic Medicine and Toxicology —*St Petersburg (Military Medical Academy)* Dr W Oppel has been recognised as *privat docent* of Surgery and Dr S Lobanoff as *privat docent* of Ophthalmology —*Stockholm* Dr F Westermark has been appointed to the chair of Midwifery and Gynæcology —*Utrecht* Dr. Laméris has been recognised as *privat docent* of Surgical Diagnosis.—*Vienna* Dr Theodor Panzer has been recognised as *privat-docent* of Medical Chemistry

THE NEW HOSPITAL FOR WOMEN —On March 3rd the Bishop of London presided over a largely attended meeting of the supporters of the New Hospital for Women which was held in the board room of that institution. In moving the adoption of the thirty first annual report the Bishop referred to the interest which Her Majesty Queen Alexandra had taken in the institution and mentioned that a scheme had been prepared with the object of establishing a bed in the hospital in memory of the late Emperor and Empress Frederick. The report stated that the hospital now contained 52 beds and that the number of in patients during the year amounted to 619 The out-patients numbered 7443. The committee of management calls attention to the serious state of the hospital finances During each of the past three years the receipts have been considerably lower than the expenditure. In seconding the report Professor T. Clifford Allbutt said that excellent work was done by the institution which well deserved the support of the charitable public. The report was adopted

THE LATE EDMUND CLEAVER PETTIFER, M B LOND , M R C S ENG —Dr E C Pettifer, who died recently in Calcutta, received his medical education at St. Bartholomew's Hospital, where he gained two scholarships and the Harvey prize. In 1884 he became qualified as M R C S Eng and in 1885 he graduated as M. B at the University of London After holding the appointment of assistant house surgeon at Tewkesbury Hospital he proceeded to India where he did special sanitary work in connexion with plague at Fyzabad and Ajudhia. When plague broke out in Calcutta in 1897 he was employed by the Bengal Government as a plague officer with the appointment of assistant special health officer He afterwards became district medical officer, District II., Calcutta, and also acted for the special health officer He did much valuable work in tracing the relations existing between plague in the rat and in the human subject.

THE MEDICAL GUILD —The main objects of the Medical Guild are the organisation of the profession in order to secure united action and the common good. The annual report for 1902 shows that 16 meetings of the council have been held during the year In referring to club reform the council expresses a wish to have it made generally known "that the 2*s* 6*d* entrance fee in the Club Pledge has been waived ' and that there are several cases reported in which the minimum tariff of 4*s* per member has been obtained. The methods of the National Deposit Friendly Society are criticised. The guild has passed a resolution recommending that all practitioners who are willing to do so should vaccinate for the State, and that the cost should be defrayed by the State provided that the standard of efficiency is the same as that of the Local Government Board This recommendation, however, does not find favour with public vaccinators in general. The guild is strongly opposed to advertisements of lectures to practitioners and senior students when these advertisements appear in the lay press and give the names of the lecturers The *Medical Guild Quarterly* is the journal of the guild. There are 196 members. The president is Alderman F H Walmsley J P and the secretary is Mr David Owen, St Brelades, Irlams-o' th' Height, Manchester

BRITISH MEDICAL BENEVOLENT FUND —The annual general meeting of the subscribers to this fund was held on Feb 24th, the president, Sir William H. Broadbent, Bart., K.C V O , being in the chair The treasurer's financial statement and the report of the committee for the past year were presented and adopted. The latter stated that, owing to the falling off of subscriptions, the grant department had been a source of constant anxiety and that it had been necessary to spend a reserve of £200 which had been set aside from a legacy to meet any exceptional crisis Subscriptions amounting to £1026 19*s* 4*d* and donations amounting to £468 16*s* 2*d* had been received and the sum of £1503 10*s* had been distributed to 152 applicants in grants varying from £5 to £18 and payable in most cases by monthly instalments. In the annuity department the interest from investments had yielded an income of £2450 6*s* 7*d* and £2291 10*s* had been received by the annuitants, of whom there are now 115 The working expenses of the fund had been only just over 5 per cent. and the accounts had, as usual, been subjected to a strict investigation by chartered accountants, the audit this year having been most kindly undertaken by the well known firm of Messrs Deloitte, Dever, Griffiths, and Co. Hearty votes of thanks were accorded to the president and other officers who were unanimously re elected, and the meeting concluded with a warm acknowledgment of the support always given to the charity by the medical press

A MEDICAL FAMILY —The death at Litcham, Norfolk, on Feb 15th of Mr Henry Raven (M.R C S. Eng and L.S.A. 1839, F R.C S Eng , 1859) closes a remarkable chapter of local history His grandfather (who died in September, 1807, aged 67 years), his father (who was baptised at Litcham in May, 1765, and who died in March, 1849), and his elder brother (who died in February, 1854) have successively practised at Litcham since the middle of the eighteenth century Mr Henry Raven was born on

Melbourne, gave expert evidence as to the results of his examinations of Melbourne coal gas. He had made five analyses of samples taken during a period of ten days. The mean result was that there was 0 065 grain of hydrocyanic acid in every gallon of gas About a grain would be required to be inhaled to cause death and about the two hundredth part of a grain would then be found in the stomach. If half a grain were found in the stomach it must have got there through the mouth Dr Martin had made post-mortem examinations on men in two cases and on animals in 168 cases in which death had been brought about by hydrocyanic acid Evidence was also given that Hoogkleinmer had tried several times to insure his life but that he had failed as he had diabetes. It was found, too, that the gas bracket had been tampered with. The jury found that death was due to suicide and gave a verdict for the insurance company

The Asylum Difficulty Resignation of Dr S Macbirnie

Dr Macbirnie, the medical officer at the Metropolitan Lunatic Asylum, Melbourne, who was charged with misconduct and was acquitted, has resigned. No steps have yet been taken to fill the position caused by the dismissal of Mr W Beattie Smith and the resignation of Dr Macbirnie and the department will probably find some difficulty in the matter

Obituary

Great regret was felt at the death, on Dec 26th, 1902, of Dr E Fairfax Ross at his residence, Macquarie street Sydney, at the early age of 45 years Dr Ross was educated in Goulburn, New South Wales, but went to London for his medical course, being a student at University College He took the M R C S Eng and L R C P Lond. in 1884 and later the M D of Brussels. He was house physician at University College Hospital to Dr Wilson Fox. On his return to Sydney he soon took a leading position He was senior physician to St Vincent's Hospital and was also surgeon to the Lewisham Hospital for Women and Children. He had a large practice and his kindly sympathetic nature endeared him to his patients and friends. He has left a widow and three sons. —By the death of Dr Emma Constance Stone-Jones Melbourne loses the pioneer woman physician in Australia. She was born in Hobart in 1854 She early evinced scientific tastes inherited from her father who was a biological student She studied anatomy and then decided to pursue a medical course. There was at that time no opportunity of doing so in Australia—in fact, the idea was almost unheard of She went to Philadelphia and entered at the Woman's Medical College After a few years she proceeded to Toronto where she graduated as M D in 1888 In the following year she studied in London and took the L S A. In 1890 she returned to Melbourne and commenced to practise in Collins-street In spite of old fashioned prejudices she soon acquired a large practice and her success encouraged other young women to study medicine when the Melbourne University was thrown open to them. She was practically the founder of the Queen Victoria Hospital for Women Her zeal and ability enabled her to take a high position in the profession and she was held in the greatest esteem by all its members She married the Rev D Egryn Jones, M D, and had one child Her health had been failing for some years before her death from tuberculosis It is, perhaps significant that in Melbourne out of a not large number of women practitioners three already have died—Dr Castilla, Dr O'Hara, and Dr Stone-Jones—and three have given up practice after marriage.—Dr Richard James Quinnell, late brigade surgeon in the Indian Medical Service, who died recently, was 68 years of age and had practised for some years in South Yarra Victoria.—Dr Charles W Pardey died in Sydney where he was medical officer to the District Medical Institute. He graduated as M B at the University of Melbourne in 1883 and was for some time senior house surgeon at the Sydney Hospital

Jan. 14th.

EXETER DISPENSARY —The annual meeting of the subscribers to the Exeter Dispensary was held on Feb 24th. The medical report stated that 5642 patients were treated during 1902 as compared with 5638 in 1901 The financial statement showed that there was a favourable balance of £300 and that the invested capital of the institution at present amounted to £17,301.

Obituary.

JOHN BRAKE, M R C S ENG, L S A,

SURGEON-GENERAL INDIAN MEDICAL SERVICE (RETIRED)

Surgeon-General Brake, who died on Feb 8th at "San Remo," Craneswater park, Southsea, was a man of decided abilities which would, without much doubt, have enabled him to attain a good position in any branch of medicine He was born on Dec. 6th, 1827, his father being Commander William Lenthal Brake, R N His early education was received at the City of London School under Dr. Gyles and Dr Mortimer, he was an apt pupil and made such progress in the various classes that on eventually matriculating at the University of London he passed with honours in mathematics In 1850 he entered as a student at St. Thomas's Hospital, where his proficiency in anatomy and chemistry obtained for him a scholarship tenable for three years, he also gained prizes for anatomy, physiology, forensic medicine, midwifery, and clinical reports, as well as six first certificates of honour, a dressership, and a clinical clerkship In 1853 he took the diplomas of M R C S Eng and L S A. He therefore commenced professional life with every prospect of success and decided to take advantage of the opportunity which presented itself when the East India Company introduced the system of competitive examinations for admission to its medical service. The first of these examinations was held in England on Jan 24th, 1854, Mr. Brake came out high on the list of successful candidates and received a commission as assistant surgeon In selecting a presidency in which to serve he chose Bengal, he arrived in Calcutta on June 13th, 1855, and was at first appointed to H.M. 35th Regiment He afterwards served successively with the company's 3rd European Regiment 8th and 81st Regiments, and the 4th Battalion Bengal Artillery The year 1857 is memorable for the outbreak of the great mutiny of the sepoys in the company's army Mr Brake was then first garrison assistant surgeon at Lahore and was engaged in the first disarmament there at the commencement of the mutiny in May of that year He was then posted to the medical charge of the 7th Punjab Native Infantry on its formation in August, 1857, and proceeded with a wing of the regiment in additional charge of Brigadier General Nicholson's staff and No 17 Field Battery to the camp before Delhi, also in August, 1857 He afterwards had as an additional charge the detail hospital for wounded at Meerut On Dec 6th he was recalled to Lahore and posted to the newly raised 2nd Sikh Cavalry He accompanied the force by which General Sir John Lawrence, the Governor General, was escorted to Delhi, where he had the additional charge of civil surgeon and medical charge of the Mogul king and his family when prisoners He was also attached to the 8th and 9th Police Battalions, Police Rissallah headquarters 4th Irregular Cavalry, and 23rd Punjab Infantry In 1858, while in medical charge of the 2nd Sikh Cavalry he accompanied Brigadier Colin Troup's column in Oudh and Rohilcund and in pursuit of Ferozeshah He was with General Whitlock's field force from Feb 1st to April 11th, 1859, was in medical charge of Captain Wright's column, and was present at the fight at Imlipani on March 29th For his services he was now mentioned in despatches. He was with General F Wheeler's force in Bhundelkund from Oct 13th to the end of the campaign, was in medical charge of Captain Wright's column till Dec. 5th, 1859, and was mentioned in despatches (not published) by General Wheeler He received the special thanks of the Government for attending to the wounded under a heavy fire He was also awarded the Mutiny medal. In 1862 he was appointed to joint medical charge in Simla and in 1864 was appointed by the Governor General as first superintendent of vaccination in the Central Provinces. In 1867 he was promoted to be surgeon major On Oct. 31st, 1867, he was appointed superintendent-general of vaccination in the Central Provinces and Hyderabad Assigned Districts In February, 1870, he was appointed inspector general of prisons in the Central Provinces. He had several times officiated as sanitary commissioner in the Central Provinces and in November, 1877, he definitely received this appointment. In December, 1878, he became civil surgeon and principal of the medical school at Nagpur, this being the most important medical charge in the

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places affected have been visited by a medical
niversity of Bolo tment and in most of the other cases I have com
niversity of Naple sanitary authority on the subject I shall
irgeons. the course of events and to urge on the local
option of any measures which may appear to the
of the department to be desirable

TUESDAY MARCH 3RD

Mental Derangement

ASON asked the Attorney General whether the Govern
nsider proposals to legalise in England a system similar
UNIVER h was in operation in Scotland for the private care of
ing symptoms of incipient mental derangement who could
on held ed as insane.—Sir ROBERT FINLAY replied The Govern
egrees we ready assented to the *principle of such legislation* and a
ng with the subject was contained in the Lunacy Bill of
Doctor of Bill was introduced by the Lord Chancellor into the House
Bachelor the beginning of the session and was passed it came down
E. A. P se of Commons on March 8th, 1900 but had to be withdrawn
Christ th.
Bachelor
Bachelo

WEDNESDAY MARCH 4TH

Small pox in Staffordshire.

r No OGHILL asked the President of the Local Government Board if
nivers state the number of cases of small pox that had occurred in
nical *fordshire potteries during* the present outbreak what hospital
odation had been provided for them and if there had been
FO ercrowding of small pox patients.—Mr LONG replied Accord
r C the information in my possession there were during the first
onths of this year 59 cases of small-pox in the district referred,
ermang a *population of 262,500* The *local* authority for providing
as be ox hospital accommodation is the North Staffordshire Joint
yres al Board The Joint Board has only been recently constituted
has made temporary arrangements *for* accommodating small
linic ases and is treating the patients in some temporary iron
ledic ons. My attention has been called *to* statements in the local
lacte alleging overcrowding in the hospital and I have directed one of
edical inspectors of the department to visit the district and to
ogn t on the subject.
as ?

Renewal of the Vaccination Act.

olor COGHILL asked the First *Lord of* the Treasury if he would say
as t course the Government proposed to take on the expiration of the
ılu ent Vaccination Act and whether legislation would be proposed this
ion to make revaccination generally compulsory —Mr BALFOUR
eplied : My right hon. friend the President of the Local Government
ard propo es to renew the existing Act this year and to defer any
rther legislation on the subject until a future session —Mr COGHILL
ll it only be renewed for one year ?—Mr BALFOUR Without
solutely pledging *myself* that is perhaps the most convenient course.
Mr GALLOWAY : May I ask whether the Act will be included in
Expiring Laws Continuance Bill ?—Mr BALFOUR : That is a
estion I would not like to pronounce upon but it is a small matter
Ir COGHILL : Is the right hon. gentleman aware that serious out-
aks of small-pox are tak*ing place in large* towns like Manchester and
rpool ? May I ask that this should be considered ?—Mr BALFOUR
is not aware of that. Perhaps the hon gentleman will put down a
stion

BOOKS ETC RECEIVED

—

GEORGE, 156, Charing Cross road W C
he Literary Year book and Bookman's Directory 1903 *Edited by* Henry Gilbert Price 5s net

ETON D AND Co 25 Bedford street Covent Garden W C
Treatise on Diseases of the Anus Rectum and Pelvic Colon By ames P Tuttle, A.M. M.D Professor of Rectal Surgery in the w York Polyclinic Medical School and Hospital. Price 25s net.

LIERE, J B. et Fils 19 Rue Hautefeuille Paris
Cytodiagnostic Les Methodes l Examen des Serosites Pathologiques et du Liquide Cephalo-Rachidien Par Marcel Labbe. decin des Hôpitaux de Paris Chef de Laboratoire à la Faculte Médecine de Paris Price 4fr 50

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…BR, TINDALL, AND COX 8, Henrietta-street Covent Garden
A Manual of Toxicology. By Albert H. Brundage A.M M.D Phar D *Professor of Toxicology* Physiology and Hygiene in the Brooklyn College of Pharmacy Second edition revised and enlarged. Price 6s. net.
Cancer its Causation and its Curability without Operation By Robert Bell, M.D Glasg F F.P S., &c. Consulting Physician to the Glasgow Hospital for Women Price 5s net

CHURCHILL J & A 7 Great Marlborough street London
A *Manual of Family* Medicine and Hygiene for India. By Sir William Moore, K C I.E' Honorary Physician to H.M the Queen formerly Surgeon General with the Government of Bombay Published under the *authority of the Government of India* Seventh edition, revised by Major J H Tull Walsh I.M S F L.S *Price 12s*

HIRSCHWALD AUGUST Unter den Linden, 68 Berlin, N W
Bibliothek v Coler Herausgegeben von O *Schjerning* Band 3 Nichtarzneiliche Therapie innerer Krankheiten Von Dr Buttersack, *Oberstabsarzt und Regimentsarzt* 1 *Lothring* Infanterie-Regiments No 130 Zweite Auflage. Price M4 50
Band 15 Compendium der Operations und Verbandstechnik Von Dr Eduard Sonnenburg Geheimer Medicinalrat, *Professor der* Chirurgie an der Universität und Dr Richard Mühsam 1 *Assistenzarzt an der Chirur* Abteilung des Städtischen Krankenhauses Moabit in Berlin Erster Teil Allgemeine Operationstechnik Verbandstechnik Price M.4
Erste Aerztliche Hülfe bei Plötzlichen Erkrankungen und Unfällen. In Verbindung mit Wirkl Geh. Rath Dr E. v Bergmann Geh Med *Rath Dr* C Gerhardt, Geh. Med Rath Dr O Liebreich und Dr A Martin Bearbeitet und herausgegeben von *Professor* Dr George Meyer in Berlin. Price M 8 -

KEGAN PAUL, TRENCH, TRÜBNER AND CO LIMITED Paternoster House Charing Cross road W C
Variations in Animals and Plants. By H. M Vernon M.A. M D Fellow of Magdalen College Oxford Price 5s

KING P. S. AND SON Orchard House Westminster S.W
Some Food Dangers *By Sir* James Crichton Browne, M D LL.D., F R.S *Price 6d* net 100 copies 35s - 50 copies 20s

MACMILLAN AND CO LIMITED London (Published for the Asylums *Committee of the* London County Council.)
Archives of Neurology from the Pathological Laboratory of the London County Asylums Claybury Essex. Edited by Frederick Walter Mott, F R.S M D F.R.C.P Director of the Laboratory and Pathologist to the London County Asylums *Physician in* charge of Out patients Charing Cross Hospital. Vol. ii Price not stated.

NAUD C 3 rue Racine Paris
Photothérapie et Photobiologie. Par les Docteurs Leredde et *Pautrier Price* fr 4
Les Injections Mercurielles Intra musculaires dans la Syphilis. Par le Dr Alfred Levy Bing Ancien *Externe des* Hôpitaux Ancien Interne de Saint Lazare. *Price fr* 5.
Petite Chirurgie Pratique Par Th. Tuffier Professor agrege à la *Faculte de Medecine de Paris* Chirurgien de l Hôpital Beaujon, et P Desfosses Ancien Interne des Hôpitaux de Paris Price not stated

ROYAL COLLEGE OF PHYSICIANS OF LONDON Pall Mall East S W
List of the Fellows Members *Extra Licentiates* and *Licentiates* of the Royal College of Physicians of London and of Holders of the *Diploma* in Public Health granted conjointly by the Royal Colleges of Physicians and Surgeons MCMIII.

SCIENTIFIC PRESS LIMITED 28 and 29 Southampton street Strand W C
Burdett's Official Nursing Directory 1903 Compiled and edited with the assistance of a small Committee of Medical Men and Matrons *by Sir Henry* Burdett, K.C.B Fifth year Price 3s. net.

SWEDENBORG SOCIETY 1 Bloomsbury street, London
The Infinite and the Final Cause of Creation By Emanuel Swedenborg. Translated from the *Latin, with Introductory* Remarks by James John Garth Wilkinson M.D M.R C S Lond &c. With a New Introduction by *Lewis* Field Hite M.A. Harv *Price not stated.*

THACKER, SPINK AND CO., Calcutta (W THACKER AND CO 2 Creed-lane Ludgate-hill, London, E C)
The Management and Medical Treatment of Children in India By Edward A. Birch, M.D., F.R.C.P.L. late *Principal* of the Medical College. Professor of Medicine, and Physician to the Medical College Hospital, Calcutta Fourth edition revised and enlarged *Price* 10s *6d.*

TREAT E. B AND CO New York.
Clinical Treatises *on the* Pathology and Therapy *of* Disorders of Metabolism and Nutrition By Professor Dr Carl von Noorden Senior Physician to the City Hospital *in* Frankfurt a.M Authorised American Edition Translated under the Direction of Boardman Reed M D of Philadelphia. Part I. Obesity The Indications for Reduction Cures Price 50 cents Part II Nephritis. Price $1 00.

VIGOT FRÈRES 23 Place de l *École-de-Médecine* Paris.
De l Auto-representation chez les Hysteriques Par le Dr Adolphe Bain Price fr 2.

WALTER SCOTT PUBLISHING CO Limited London and Newcastle-on Tyne
The Lord of the Dark Red Star being the Story of the Supernatural Influences in the Life of an Italian Despot of the Thirteenth Century By Eugene Lee Hamilton Price 6s.

WILLIAMS AND NORGATE, 14 Henrietta street Covent garden W C.
A System of Practical Therapeutics Edited by Hobart Amory Hare M.D Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia Physician to the

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April 13th, 1817, in the same house, then recently by his father from a different family of the same st in which he spent the greater part of his long life. brothers death he gave up a London practice and returned to his native place, where he continued in the active exercise of his profession till about ten years ago greatly respected and beloved by all classes

THE LATE GEORGE CHARLES HENRY WIGAN, M D, C M ABERD, M R C S ENG, L S A—The funeral of Dr G C H. Wigan took place in the Portishead parish churchyard on Feb 21st Dr Wigan was born in Tippoo Sahib s Palace at Seringapatam, which had been converted into a military depôt his father, Colonel Wigan, being in command. He studied medicine at St George s Hospital and became qualified as M R C S Eng and L S A. in 1843 and 1841 respectively He graduated as M D and C M. at Aberdeen University in 1864 Dr Wigan at first practised in London, but his health breaking down he went to Australia and was on the honorary staff of the Maitland Hospital, New South Wales After remaining there for ten years he returned to England and commenced practice at Portishead. The deceased, who was in his eighty third year, has left three sons and four daughters, all of the former being members of the medical profession.

THE HOUSING QUESTION IN ANGEL MEADOW, MANCHESTER.—It often happens that such names as Paradise square, Angel Meadow, &c, indicate places by no means suggestive of Paradise, and certainly not occupied by angels of the better sort. Angel Meadow in Manchester, for instance, is in a ward, perhaps the poorest and most insanitary in the city, which has the angelic title of St Michael's ward It rarely happens that the dwellers in the slums complain of insanitary and unsavoury surroundings. Indeed, one of the difficulties often met with by the sanitary committee in dealing with unhealthy property has been the tenacity with which the occupants cling to their wretched tenements. But a large number of these people think that they have a grievance against the corporation, in that "while a great deal of insanitary property has been destroyed of late years nothing has been done to rehouse the dispossessed tenants," with the result that there is much overcrowding in the district They contend that the new workmen's houses at Blackley are useless to them, because "the rents are much too high for the poorly paid labourers and the distance from the centre of the city is viewed with great disfavour by the people"—i.e, they are too far from the work of the city Meetings have taken place in the ward, one was held in the St. Michael's Schools recently at which a resolution was passed condemning the corporation for destroying large numbers of houses and rendering their inhabitants homeless without providing other dwellings. The council was urged to buy the waste land in the district which, it is said, is sufficient to allow of 200 or 300 houses being built on it. It is no doubt a healthy sign for the people to wake up to what they suffer from unhealthy surroundings but the housing difficulty is not to be easily solved If the corporation is a buyer of land up goes its price The high price of bricks and all building materials, the artificial raising of the price of labour by trade-unions the prevalence of the 'ca' canny" style of labour, leading to the work done being brought down to the smallest amount that can with any pretence of decency be allowed to pass, and that work often badly done, all tend to make it almost impossible for the corporation to build houses at a rent which the lowest class of the working people can pay In the district in question a large proportion of the inhabitants are market labourers, whose wages vary from perhaps 12*s* a week in winter to 30*s* in the height of summer They cannot, therefore, live far away from their work. But beside the difficulties arising from dear materials and dear labour, there is another in the fact that the land round about Angel Meadow is very costly from the increased demand for warehouses The working classes themselves are, no doubt, in part at any rate to blame for this dilemma. One curious fact is that with regard to some of their plans for cottage building the corporation has been blamed for not coming up to the standard of its own building by laws, in order, of course, to bring down the cost. If the rents, to pay a modest return, are too high for tenants to pay, are they to be lowered and the ratepayers to be mulcted to make up the

Obituary.

JOHN BRAKE, M R C S ENG, L S A,

SURGEON-GENERAL INDIAN MEDICAL SERVICE (RETIRED).

two-
ote
the Surgeon-General Brake, who died on Feb 8th at
cently San Remo," Craneswater park, Southsea, was a man of
The meda ded abilities which would, without much doubt, have
by 2 feet
splendid s ed him to attain a good position in any branch of
the well knue. He was born on Dec. 6th, 1827, his father being
the gift of er William Lenthal Brake, R N His early educa
unveiling cere eceived at the City of London School under Dr.
numerous gathe r Mortimer, he was an apt pupil and made such
Dr Woodhouse w e various classes that on eventually matricu
member of the bo versity of London he passed with honours
ceremony
In 1850 he entered as a student at St.
where his proficiency in anatomy and
him a scholarship tenable for three

Parliamenta

izes for anatomy, physiology, forensic
clinical reports, as well as a
NOTES ON OUR dressership, and a clinical clerk
Experiments on Liv diplomas of M R C S Eng and
THERE is a Bill before the House of C ed professional life with every
Animals Bill and in connexion with the n to take advantage of the
Sir GEORGE BARTLEY has given notice of an a when the East India
ing terms — That this House while desirous mpetitive examinations
to animals even in experiments for saving The first of these
alleviating suffering as already provided for in the an 24th, 1854, Mr.
Act 1876, is anxious not to put increasing difficult ful candidates and
in the way of those scientific persons who are license In selecting a
and who are devoting their talent and their time to l, he arrived in
knowledge for the relief of suffering and the prevent nt appointed to
disease in both men and animals but recognises that in ed successively
usefully made into preventable and unnecessary sufferin 8th and 31st
inflicted as a consequence of sport especially when ry The year
brought up as domestic animals are driven in great nu eat mutiny of
slaughtered some being inevitably maimed and left slowly ke was then
suffering serving no scientific object for the relief of engaged in
cure of disease and not being necessary as a means of k nent of the
but being inflicted as a necessary consequence of the amu ted to the
enjoyment of those who cause it

HOUSE OF COMMONS

WEDNESDAY FEB 25TH

Royal Army Medical Corps Militia.

Captain JESSEL asked the Secretary of State for War whe Royal Army Medical Corps Militia was under orders for im disembodiment and if so whether employment would preferen given to officers of the Militia in cases where officers of the Roya Medical Corps were not available.—Mr BRODRICK replied Fi panies of the Royal Army Medical Corps Militia will be disen on Feb 28th and the remaining four on March 31st. Preference given to officers of the Royal Army Medical Corps Militia who and are recommended for employment in cases where officers Royal Army Medical Corps are not available

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THURSDAY, FEB 26TH

Lunacy in Ireland

Mr CLANCY asked the Chief Secretary to the Lord Lieutenant Ireland whether in view of the increase in lunatic asylum charge Ireland in recent years he would consider the expediency of app ing a select committee to inquire into the cause or causes of growth of local expenditure on lunatic asylums in that country to consider whether any means could be found of limiting or reduc the burden on Irish ratepayers which was involved —Mr WYNDH replied The statistics of insanity do most unfortunately show increase in the numbers of the registered insane This increase is confined to Ireland There has necessarily been a correspondin expansion in the contributions from local rates and from Parli mentary grants for the provision of accommodation for the insane a for their maintenance The proposal in the question has already bee dealt with in the reports of the Royal Commission on Local Taxatio and I see no reason for further investigation

The Form of Medical Certificates

Mr WEIR asked the Lord Advocate whether the Secretary fo Scotland was aware that some school boards in the Highland croftin counties insist on prescribing the precise form in which a medic officer shall make out his certificate, notwithstanding the fact th no such powers are conferred on school boards by Act of Parliament and seeing that two crofters in the Western Highlands were recentl prosecuted and fined for not sending their children to school, t medical certificates with which they had provided themselves n being accepted by the chairman of the school board on the groun that the medical officer did not subscribe the words on soul and co science after his signature would he consider the expediency of issuin a circular to school managers on the subject —The SOLICITOR GENER for SCOTLAND on behalf of the Lord Advocate, replied The honourab Member has already been in communication with the department o this subject The rejection of the certificate was by the sheriff a the honourable Member has been informed that it does not fall withi the province of the department to review the decision of a court law The suggestion contained in the latter part of the honourab

Notes, Short Comments, and Answers to Correspondents

THE NOTTINGHAM HOSPITAL FOR CHILDREN

TTERS at the Nottingham Hospital for Children *do not seem to* e in a very satisfactory condition The last two house surgeons ave resigned and the crux of the *question* would appear to e in the influence exercised by the lady superintendent In HE LANCET of Sept 13th, 1902, *p* 784 we published a letter om the then house surgeon Dr James Campbell, wherein e quoted a resolution passed a fortnight previously by the oard of management to the following effect: That the dy superintendent be given to understand in cases which she elieves the house surgeon is not properly carrying out the instructions of the honorary medical staff that it is her duty to report ach case at once to the board through the chairman." Dr ampbell resigned his post at about this date *for in the same issue* f THE LANCET appeared the announcement that the post of house urgeon to the Nottingham Hospital for Children was vacant. Mr F Gaitskell thereupon applied for the post and was elected o it He made inquiries about the above-mentioned by law nd was informed by the chairman that it had been rescinded Ir Gaitskell said that he would accept the post on condition that e was in no way interfered with by the lady superintendent To his the board of management agreed and Mr Gaitskell entered on is duties

About the end of January 1903 scarlet fever broke out in the ospital and two patients were removed to the fever hospital our or five days later Mr Gaitskell heard one nurse say to her ompanion that another nurse was ill and had been ill *for some* hree days. Mr Gaitskell mentioned this fact to one of the onorary medical staff and he mentioned it to the lady superintendent She in her *turn* asked Mr Gaitskell to see the patient and added that it was his duty to know if any nurse were ill and to apply to herself as to a time to see the patient Mr Gaitskell examined the nurse and considered her to be suffering from scarlet fever On the following day one of the honorary medical staff confirmed *this diagnosis* the case was notified and the patient was removed to the fever hospital. About a week later the chairman at a board meeting asked Mr Gaitskell *why* he *had* sent a nurse to the fever hospital who had not got scarlet *fever at all* To this Mr Gaitskell said that it was the first that he had heard of the matter and asked the chairman to tell him *from whom* he derived his information To this the chairman replied that he did not know but that he would find out Apparently the information *came* from the patient herself On Feb 11th Dr L W Marshall requested Mr Gaitskell to see the lady dispenser with a view *of* finding out whether she were *physically* fit to perform her duties Mr Gaitskell saw the dispenser (Miss Rose) and came *to* the conclusion that she was recovering from a cold that her temperature was normal and that she was fit to discharge *her duties* On Feb 12th Dr Marshall informed Mr Gaitskell that he had just seen Miss Rose who told him that she had been *dismissed by the* lady superintendent as being not well enough to perform her duties Mr Gaitskell saw the lady superintendent who said that as Miss Rose was not well she had engaged another dispenser Mr Gaitskell answered that as he had seen the dispenser and had come to the conclusion that she was physically fit he considered that the lady superintendent had interfered in a medical matter and that he should bring the question before the board That same evening Mr Gaitskell received a letter from the chairman which began:

Seeing that Miss Rose is not well I consider that Miss Ducane (the lady superintendent) is justified in finding another lady to act as dispenser " Mr Gaitskell *replied* that the chairman seemed to be under a misapprehension and that the lady was not ill, and, further that he considered it his duty to keep Miss Rose in her post until he heard from the chairman again. The chairman answered that as Miss Rose had only been appointed temporarily for ten days and had held the post for three weeks he therefore appointed Miss King *in her* place Mr Gaitskell replied that he bowed to the chairman's ruling but that he objected to the lady superintendent interfering in a medical matter On Feb. 20th a *special* meeting of the board was held in which a letter from the chairman was read stating that he had heard from several influential gentlemen in the town that Miss Ducane had been insulted by Mr Gaitskell Letters were read from sisters and nurses, with whom Mr Gaitskell allowed that he had *found fault* endorsing the complaint

Finally Mr Gaitskell was informed that a motion had been passed but not unanimously that he should apologise to the chairman for his conduct Mr Gaitskell refused *to* apologise alleging that he had only answered as he considered it his duty to that the chairman had acted in a medical matter on the authority of the lady superintendent without *consulting him* and that he then and there wished to resign

We have written the above upon Mr Gaitskell's statement fortified by letters and a copy *of* the by laws.

By law No 10 of those concerning the house surgeon states that the nursing staff and the servants shall be medically in the care of the house surgeon " It appears to us that the lady superintendent was exceeding her duties in dismissing the dispenser as ill when the house surgeon said that she was well. We have no wish to hold up house surgeons as infallible, but any house surgeon presumably knows better whether a patient is well or ill than does a lady superintendent even if she be a fully trained nurse which by law 1 of those dealing with the lady superintendent says that she shall be Mr Gaitskell was educated at Guy's Hospital and took the diploma of M.R.C S Eng L.R.C P Lond. It would be interesting to know where Miss Ducane was trained and for how long We think, more*over* that the members of the committee of management would be well advised if they took steps to remedy an obviously unsatisfactory state of things

UNFORTUNATE ADVERTISEMENT

To the Editors of THE LANCET

SIRS —Some kind friend has sent you a cutting from a paper containing an advertisement of Earl's pepsine of which article my recommendation is given I did not notice the advertisement in question but long ago I requested that my report on Earl's pepsine should be discontinued I have now stated that if it were not I should *apply for an* injunction to restrain its publication. I gave the report in question about 30 years ago before I was a Fellow of the College of Surgeons and whilst I was practising exclusively as an analytical chemist. I never got a fee for it but, on the contrary pecuniarily assisted the proprietor of the drug to manufacture it, as I felt interested in him It is the only drug I have ever made a report on for trade purposes Years after my report many of the leading physicians of Dublin gave laudatory certificates of the efficacy *of* this pepsine and I believe that their certificates are still made use of judging by the circular of which I inclose a copy and which has only just come into my possession

Your obedient servant,

Dublin, March 2nd, 1903 CHARLES A CAMERON

*** The circular inclosed by Sir Charles Cameron contains 18 so-called medical reports" from various *practitioners.* We observe among the signatories of these no less than seven ex-presidents of the Royal College of Surgeons in Ireland. We *think* that any of these gentlemen who are still alive should follow Sir Charles Cameron's example and insist *through their solicitors on the* suppression of their medical reports "—ED L

A WARNING

To the Editors of THE LANCET

SIRS —In reference to the letter published in THE LANCET of Feb *28th* p 628 headed "A Warning" it will interest Dr W K. Sibley and others to know that the German giving the name of Dr Richard Osten of Berlin and the London Hospital was arrested in my presence on Sunday evening Feb 22nd having succeeded in obtaining *further sums of money under false* pretences from two of my acquaintances He was brought up before the magistrate the following morning and remanded *one* week *for* inquiries so that by this time probably he has realised the penalty of his depredations

I am, Sirs yours faithfully

Harley-street W March 3rd 1903 J H. STOWERS

WANTED—A SANATORIUM.

To the Editors of THE LANCET

SIRS —Is there any sanatorium where a domestic servant can be sent with early tuberculous phthisis *for open-air* treatment and what is the cost?

I am Sirs yours faithfully

March 3rd 1903.

ENQUIRERS.

*** There are as yet very few institutions save those that serve local needs where such a case could be taken at any greatly reduced rates —ED L.

THE DEATH OF MISS ELLEN MARY SHARP M.B LOND

THE death of Miss Ellen Mary Sharp, *M.B Lond* a very able young member of our profession, took place at the Victoria Hospital Hull, last month in sad circumstances Miss Sharp was senior house surgeon at the hospital and was taken ill on the last day of January her symptoms pointing to influenza. In *spite of regular* and devoted attention in the hospital pneumonia supervened with fatal result on the tenth day of illness. At the close of her illness Miss Sharp was seen by Dr Cavendish Molson a homœopathic physician sent to the hospital by her father with instructions *to take entire charge of* the case which he appears to have attempted to do upon eclectic" and bio-chemical" principles of which the exhibition of *one-billionth* of a grain of common salt may be taken as an example if the newspaper report which has reached us may be taken as correct Miss Sharp's death was made the subject of a post mortem inquiry when the *father* of the deceased lady wrote a strong letter to the coroner alleging neglect and ill treatment against the staff of the hospital on several counts The allegations were categorically contradicted by many witnesses. The assistant house surgeon proved that Miss Sharp was in accordance with her own desire from the beginning of her illness under the care *of the assistant* physician to the hospital, Miss M. C Murdoch whose instructions were faithfully carried out Miss Murdoch described Miss Sharp's illness from day to day and gave an extraordinary account of Dr Molson's intervention and of his theory of treatment by bio-chemistry It appears that in his chemical practice microscopical doses of salts are administered to

Jefferson Medical College Hospital. Second edition revised and largely re-written. Vol. I. Remedial Measures other than Drugs, Prescribing, Preventive Medicine, Treatment of Diathetic and Nutritive Diseases. Vol. II. The Treatment of Fevers and of the Respiratory, Circulatory, Digestive, Renal and Nervous Systems and Skin Diseases. Vol. III. Surgical Technique, Surgery of the Genito-Urinary, Respiratory and Digestive Systems, Fractures and Dislocations, Anæsthesia. Price not stated.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

Adams, Joseph Dixon, M.D. St. And., M.R.C.S., L.S.A., has been appointed Medical Officer of Health for the Yeovil Rural District Council.

Adams, J. E., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

Barbour, J. M., M.B., C.M. Glasg., has been appointed Medical Officer of Health for Ramsey, Isle of Man.

Bevan, A., M.B., L.R.C.P. Lond., M.R.C.S., has been appointed Clinical Assistant in the Ear Department at St. Thomas's Hospital.

Bond, Francis Thomas, M.D. Lond., M.R.C.S., F.R.S. Edin., has been re-appointed Medical Officer of Health for the Chipping Sodbury (Gloucestershire) Rural District Council.

Boycott, A. E., M.A., M.B., B.Ch., B.Sc. Oxon., has been appointed House Physician to St. Thomas's Hospital.

Bradford, A. B., M.B., B.S. Durh., has been appointed House Surgeon to St. Thomas's Hospital.

Browne, H. S. D., B.A. Cantab., L.R.C.P. Lond., M.R.C.S., has been re-appointed Clinical Assistant in the Throat Department at St. Thomas's Hospital.

Carpmael, N., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

Flower, Frederick J., M.R.C.S., M.S.A. Lond., has been appointed Medical Officer of Health for the Warminster Rural District.

Fox, Ida E., M.B., B.S. Durh., has been appointed House Surgeon to the East End Branch of the Children's Hospital, Sheffield.

Gawn, Ernest King, M.B., C.M. Aberd., has been appointed Deputy Public Vaccinator for the Bristol District of the Bristol Union.

Glanville, W. M. G., B.A., M.B., B.Ch. Oxon., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

Guthrie, T., B.A. Cantab., L.R.C.P. Lond., M.R.C.S., has been appointed Clinical Assistant in the Skin Department at St. Thomas's Hospital.

Haughton, John Welby, L.R.C.P., L.R.C.S., L.M. Irel., has been appointed Honorary Medical Officer to the Falmouth Hospital and Dispensary.

Hedley, J. P., M.A., M.B., B.C. Cantab., has been appointed House Surgeon to St. Thomas's Hospital.

Henderson, T. B., M.A., M.B., B.Ch. Oxon., has been apponted House Surgeon to St. Thomas's Hospital.

Hildesheim, O., B.A., M.B., B.Ch. Oxon., has been appointed Assistant House Physician to St. Thomas's Hospital.

Hudson, A. C., M.A., M.B., B.C. Cantab., has been appointed Junior Ophthalmic House Surgeon to St. Thomas's Hospital.

Jones, B. S., L.R.C.P. Lond., M.R.C.S., has been re-appointed Clinical Assistant in the Ear Department at St. Thomas's Hospital.

Kerswill, John Bedford, M.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health for the St. Germans (Cornwall) Rural District.

Leach, R. E. H., B.A. Oxon., L.R.C.P. Lond., M.R.C.S., has been appointed Clinical Assistant in the Throat Department at St. Thomas's Hospital.

Loosely, A. E. A., B.A. Oxon., L.R.C.P. Lond., M.R.C.S., has been appointed Senior Ophthalmic House Surgeon to St. Thomas's Hospital.

Mavrogordato, A., B.A. Oxon., L.R.C.P. Lond., M.R.C.S., has been re-appointed House Physician to St. Thomas's Hospital.

Nolan, W., L.R.C.S. Irel., L.R.C.P. & L.M., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

Phillips, Arthur Robert, L.D.S. Eng., has been appointed Honorary Dentist to the Falmouth Hospital and Dispensary.

Pring, H. Reginald, L.R.C.P. Lond., L.D.S. Eng., has been appointed Honorary Dental Surgeon to the City of London Asylum.

Rob, J. W., B.A., M.B., B.C. Cantab., has been appointed House Surgeon to St. Thomas's Hospital.

Sears, C. N., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

Sexton, H. W., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Physician to St. Thomas's Hospital.

Shipman, G. A. C., M.A., M.B., B.C. Cantab., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

Small, R., L.R.C.P. Lond., M.R.C.S., has been re-appointed Clinical Assistant in the Electrical and X ray Departments at St. Thomas's Hospital.

Spriggs, E. I., M.D., M.R.C.P., has been appointed Physician to Out-patients to the Victoria Hospital for Children, Chelsea.

Strong, W. M., M.A., B.C. Cantab., has been appointed Clinical Assistant in the Skin Department and also Clinical Assistant in the Electrical and X ray Departments at St. Thomas's Hospital.

Upcott, H., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

Wheen, C., B.A. Oxon., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

Wicks, Spencer, B.A., M.R.C.S., L.R.C.P., has been appointed Medical Officer to the Premier, Bultfontein, and Dutoitspan Mines, Kimberley, South Africa.

Williams, Patrick Watson, M.D. Lond., M.R.C.S., has been appointed Lecturer on Practical Medicine at University College.

Wilson, Thomas, M.D. Lond., F.R.C.S. Eng., has been appointed Honorary Obstetric Officer to the General Hospital, Birmingham.

Yarred, W. H. Harwood, B.Sc., L.R.C.P. Lond., M.R.C.S., has been re-appointed House Physician to St. Thomas's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

Aberdeen City Lunatic Asylum, Kingseat.—Medical Superintendent. Salary £400 per annum, rising to £600.

Bracebridge Asylum, near Lincoln.—Junior Assistant Medical Officer (female), unmarried. Salary £125, with apartments, board, attendance, &c.

Derby Borough Asylum.—Assistant Medical Officer. Salary £140 per annum, with board and washing.

Dublin Trinity College.—Professor of Anatomy.

Durham County Asylum.—Assistant Medical Officer. Salary £180 per annum, rising to £220, with rooms, board, and attendance.

Gloucester General Infirmary and Gloucestershire Eye Institution.—Assistant House Surgeon for six months. Remuneration at £30 per annum, with board, residence, and washing.

London Fever Hospital, Liverpool-road, N.—Assistant Resident Medical Officer. Salary £120 per annum, with board and lodging.

Manchester Royal Infirmary Convalescent Hospital, Cheadle.—Assistant Medical Officer, unmarried, for six months. Salary at rate of £80 per annum, with board and residence.

Metropolitan Hospital, Kingsland-road, N.E.—House Physician (salary at rate of £40 per annum), House Surgeon (salary at rate of £40 per annum), Assistant House Physician (salary at rate of £20 per annum), and Assistant House Surgeon (salary at rate of £20 per annum). All tenable for six months. Also an Anæsthetist. Honorarium 25 guineas per annum.

National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury.—Junior House Physician. Salary £50, with board and apartments.

North-Eastern Hospital for Children, Hackney-road, N.E.—Resident Medical Officer. Salary £120 per annum, with board, residence, and washing.

North Riding Infirmary, Middlesborough-on-Tees.—Assistant House Surgeon, unmarried.

Port of London Sanitary Authority.—Boarding Medical Officer. Salary £5 5s. per week.

Preston Royal Infirmary.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, washing, &c.

Queen's Jubilee Hospital Extension, Earl's Court, S.W.—Honorary Physician.

Royal Albert Hospital, Devonport.—Assistant House Surgeon for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

Royal Berkshire Hospital.—Assistant House Surgeon for six months. Salary £60 per annum, with board, lodging, and washing.

Royal National Hospital for Consumption and Diseases of the Chest, Ventnor.—Assistant Resident Medical Officer, unmarried. Salary £100 per annum, with board and lodging.

Royal Hospital for Diseases of the Chest, City-road, E.C.—House Physician for six months. Salary at rate of £60 per annum, with board, lodging, and washing.

St. Mark's Hospital for Fistula and other Diseases of the Rectum, City-road, London, E.C.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

St. Peter's Hospital for Stone, &c., Henrietta-street, Covent Garden, W.C.—House Surgeon for six months. Salary at rate of £100 a year, with board, lodging, and washing.

Seamen's Hospital ("Dreadnought"), Greenwich, S.E.—House Surgeon. Salary £65 per annum. Also Junior Resident Medical Officer. Salary £40 per annum. Both with board, residence, and washing.

Sussex County Hospital.—House Physician, unmarried. Salary £50 per annum, with board and residence.

West London Hospital, Hammersmith-road, W.—House Physician and House Surgeon for six months.

West Riding Asylum, Wakefield.—Assistant Medical Officer. Salary £140, rising to £160, with apartments, board, washing, and attendance.

Wolverhampton Eye Infirmary.—House Surgeon. Salary £70 per annum, with rooms, board, and washing.

Births, Marriages, and Deaths.

BIRTHS

Dickson.—On Feb. 24th, at Scarsdale-villas, Kensington, the wife of T. Hugh Dickson, M.A., M.B. Cantab., of a daughter.

Gilmer.—On Jan. 7th, at 61, The Terrace, Wellington, New Zealand, the wife of Hamilton A. H. Gilmer, of a son.

Rimell.—On Feb. 24th, at Long Sutton, Lincolnshire, the wife of Alfred Tom Rimell, M.D. Durh., of a daughter.

MARRIAGES

Davidson—Naylor.—On March 3rd, at Christ Church, Lancaster-gate, by the Rev. K. Jameson, of Chislehurst, assisted by the Rev. H. G. Bird, vicar of St. Andrew's, Hillingdon, John Davidson, M.B. Lond., of Uxbridge, to Clarice Helen Metcalfe Naylor, daughter of the late F. A. Naylor, D.S.P., Central Provinces, India.

Sloane—Marston.—On Feb. 24th, at St. Michael's Church, Coventry, John Stretton Sloane, M.S. Lond., F.R.C.S. Eng., to Emily Hilda, youngest daughter of the late George Marston, of Enderby, Leicester.

DEATH.

Crosse.—On Feb. 24th, at his residence, Albemarle-street, W., William Henry Crosse, M.D. Durh., aged 45 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

FRIDAY (13th) —THE INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH (9, Adelphi terrace, Strand W C) —8 P.M. Paper—Dr J. M. Wilson Regulations under the Dairies Cowsheds and Milkshops Orders.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos street, W) —8 P M. Card Specimens:—Mr C. B James, Dr L. Buchanan Mr S. Mayou, Mr A. Lawson and Dr W E. Thomson. 8.30 P.M. Papers:—Mr E. T Collins and Mr J H. Parsons: Anophthalmos in a Chick.—Mr S Mayou Treatment of Trachoma by X Rays —Dr W E. Thomson and Dr L. Buchanan An Account of Certain Cases of Injury to the Eye of the Child during Labour —Mr J B Lawford Notes of a Case of Dislocation of the Eyeball.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION (11, Chandos-street, Cavendish-square W) —4 P M. Papers will be read and Cases shown by Dr J Horne Dr J E. McDougall, Dr Lodge Mr M. Collier and Dr D Grant 8 P M Annual Dinner at the Imperial Restaurant.

EDICAL SOCIETY OF LONDON (20 Hanover square W) —8.30 P.M. Papers:—Mr T S Ellis Skin Sliding Dr W H. B. Brook Spinal Caries with Total Paraplegia, Costotransversectomy with Complete Recovery —Mr S Paget: Successful Treatment of Prolapse of Bowel with Incontinence by Injection of Paraffin under the Mucous Membrane

ECTURES, ADDRESSES, DEMONSTRATIONS, &c

NDAY (9th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof W McAdam Eccles The Vermiform Appendix, Some Points in its Anatomy and Pathology

ST GRADUATE COLLEGE (West London Hospital, Hammersmith road, W) —5 P.M Dr Russell Mediastinal Disease.

SDAY (10th) —ROYAL COLLEGE OF PHYSICIANS OF LONDON (Pall Mall East) —5 P.M Dr H. T Bulstrode The Causes Prevalence and Control of Tuberculosis (Milroy Lecture.)

ST-GRADUATE COLLEGE (West London Hospital, Hammersmith road W) —5 P.M. Mr C Williams: High Frequency Electrical Currents with Treatment of Some Diseases.

NIVERSITY OF LONDON (Physiological Laboratory) —5 P.M. Dr W D Halliburton On the Chemistry of Muscle and Nerve. (Lecture on Advanced Physiology)

ATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen square, Bloomsbury) —3.30 P.M Dr A. Turner: Neuritis

DNESDAY (11th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND —5 P.M. Prof. W McAdam Eccles: The Vermiform Appendix, Some Points in its Anatomy and Pathology

OST GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W) —5 P M Dr S Taylor Diagnosis and Treatment of Valvular Disease of the Heart.

OSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton) —4 P.M Dr Schorstein Mitral and Tricuspid Stenosis.

URSDAY (12th) —ROYAL COLLEGE OF PHYSICIANS OF LONDON (Pall Mall East) —5 P.M. Dr H. T Bulstrode The Causes, Prevalence, and Control of Tuberculosis. (Milroy Lectures.)

OST-GRADUATE COLLEGE (West London Hospital Hammersmith road, W) —5 P M. Mr P Dunn: Conjunctival Affections.

HE HOSPITAL FOR SICK CHILDREN (Gt Ormond-street, W C) —4 P M. Dr Colman The Management of Growing Children

HARING CROSS HOSPITAL.—4 P M Mr Gibbs: Surgical Cases. (Post Graduate Course.)

NIVERSITY OF LONDON (Physiological Laboratory) —5 P.M Dr T. G Brodie On the Circulation. (Lecture on Advanced Physiology)

IDAY (13th) —ROYAL COLLEGE OF SURGEONS OF ENGLAND —5 P M. Prof. W McAdam Eccles: The Vermiform Appendix, Some Points in its Anatomy and Pathology

OST GRADUATE COLLEGE (West London Hospital, Hammersmith road W) —5 P.M Dr Abraham: Cases of Skin Disease.

NIVERSITY OF LONDON (Physiological Laboratory) —5 P.M. Dr A. D Waller: On the Action of Anæsthetics and Narcotics. (Lecture on Advanced Physiology)

OYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street W) —9 P.M. Dr K. Pearson: Character Reading from External Signs

EDITORIAL NOTICES

IT is most important that communications relating to the ditorial business of THE LANCET should be addressed clusively 'TO THE EDITORS,' and not in any case to any entleman who may be supposed to be connected with the ditorial staff. It is urgently necessary that attention be iven to this notice.

t is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

ectures original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

etters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor"

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES

THE INDEX TO THE LANCET

THE Index to Vol. II. of 1902, which was completed with the issue of Dec 27th, and the Title-page to the Volume, were given in THE LANCET of Jan. 3rd.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1902 are now ready Bound in cloth, gilt lettered, price 18*s*., carriage extra.

Cases for binding the half-year's numbers are also ready Cloth, gilt lettered, price 2*s*, by post 2*s* 3*d*.

To be obtained on application to the Manager, accompanied by remittance.

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W C are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect

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SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues, and Agents are authorised to collect and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER. THE LANCET OFFICES, 423, STRAND LONDON ENGLAND.

METEOROLOGICAL READINGS

(Taken daily at 8.30 a m by Steward's Instruments)

THE LANCET Office, March 5th 1903.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rain-fall.	Solar Radia in Vacuo.	Maximum Temp. Shade	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 a.m.
Feb 27	29·46	S W	0·05	64	52	45	43	51	Cloudy
28	29·35	E.	0·41	57	47	38	39	40	Overcast
Mar 1	29·67	S.W	0·05	60	49	33	42	45	Cloudy
2	29·31	S W	0·18	67	51	36	40	41	Raining
3	29·04	N W	0·29	62	48	41	40	41	Overcast
4	29·82	S.W	0·02	71	55	37	43	45	Overcast
5	29·76	W	0·03	56	60	45	47	48	Raining

During the week marked copies of the following newspapers have been received *Altrincham and Bowdon Guardian Yorkshire Post, Westminster Gazette Warrington Guardian, Sussex Daily News Colchester Gazette Belfast News Letter Birmingham Post, Aberdeen Free Press (Weekly) Brighton Gazette Surrey Advertiser Bristol Mercury Derby and County News Dublin Express Bradford Observer Morning Post Hereford Mercury Daily Graphic Sanitary Record Local Government Chronicle Mining Journal Hertfordshire Mercury Walsall Observer Halifax Evening Courier Scotsman &c*

the patient upon analogy because plants receive microscopical doses of salts from the soil Evidence was given to show that Dr Molson's treatment helped the unfortunate patient down the hill but it seems probable that when bio-chemistry was given a trial the inevitable end was near The coroner in summing up made some very strong remarks upon the attitude taken by the father in slandering the hospital He considered that Dr Molson must have told Mr Sharp that his daughter had been wrongfully treated and that Dr Molson was to be blamed The jury brought in a verdict of death from natural causes and in exonerating the hospital staff from all blame expressed their opinion that Mr Sharp and Dr Molson should have been present at the inquest and should be strongly censured

We do not want to add to Mr Sharp's grief at the loss of his accomplished daughter but we must endorse the view of the jury that his attitude was reprehensible. We presume as the coroner seems to have presumed that Dr Molson gave an unfavourable account of the treatment that Miss Sharp received before he attempted to arrest death by a display of bio-chemistry Mr Sharp certainly should have obtained genuine evidence against the hospital authorities before he committed himself to gross accusations against them in a letter to the coroner Had he made the least inquiry he would have found his belief entirely erroneous We prefer not to criticise Dr Molson's attitude as the principles and practice of bio-chemistry as far as we can understand them do not admit of serious discussion in a medical journal Miss Murdoch was in the circumstances compelled to meet Dr Molson and to allow his method of treatment to be employed for it would have been impossible to ignore the letter from Mr Sharp authorising Dr Molson to take entire charge of the patient

FAMILIAR LINES

To the Editors of THE LANCET

SIRS —In THE LANCET of Feb 14th you are good enough to say that the lines Our Doctors quoted on p 448 from the *Westminster Hospital Gazette* have a familiar ring to us The lines in question are a quotation from my Song of the General Practitioner (see p 29 of Musa Medica a Sheaf of Song and Verse) and I want to thank you for your kind reference I am Sirs yours faithfully

Feb 23rd 1903 J JOHNSTON

OZONE

To the Editors of THE LANCET

SIRS —One of the latest of the cases in my practice in which I have employed this valuable antiseptic and in which I found very decided and very rapid benefits from its administration I consider quite worthy of being recorded A patient aged 17 years was suffering from pneumonia complicated with pleurisy his temperature was 105° F with very rapid and laboured breathing, his lips were cyanotic and in fact all the symptoms were very grave I adopted the usual treatment and the symptoms not improving on the third day I introduced ozone The same evening there was a marked change for the better the pulse had fallen from 110 in the morning to 100 the breathing was less rapid and less laboured and the temperature was 104° The symptoms continued to improve gradually all the bad symptoms subsiding and the patient I am happy to say made a very favourable recovery I at first employed the ozone for a quarter of each hour gradually extending its use until it was used continuously I may mention another case of diffuse cellular erysipelas The presence of ozone produced an important change in the atmosphere of the patient's room whilst there was an obvious benefit to the patient

I am Sirs yours faithfully

J E S BARNES L R C P L R C S , L M Irel B A Dub

Bexley Heath Feb 24th 1903

THE Y FUND

SURGEON GENERAL H S MUIR begs to acknowledge subscriptions from Colonel T F McGann I M S (retired) and Captain Hefferan R.A M C. also further contributions from the officers of the Indian Medical Service in civil employment kindly collected by the Director General of the Indian Medical Service (Sir B Franklin K C I E) making a total from that source of £313 6*s* 2*d*. The gross amount collected was nearly £918 Of this sum £750 have been invested in the names of trustees (Surgeon General Muir Surgeon General A H. Keogh C B and Lieutenant-Colonel W Babtie V C C M.G) for the benefit of the infant. Of the remainder a portion has been devoted to establishing Y" in a position which gives her congenial employment, and the balance after deducting necessary legal and other expenses (which will not exceed £12) will be handed over to her She is extremely grateful and returns her sincere thanks to all who have come forward with their generous assistance

A Country Practitioner —Every patient has the right to select his or her own medical adviser and to change him at will. But when a practitioner is called upon to supersede his professional brother it is his duty to ascertain that the former medical adviser has been properly informed that his services are no longer required In this case the patient seems to have recurred to the original medical adviser We cannot judge of the conduct of the temporary medical adviser because we do not know in what terms he was invited to attend or what steps he took in reply But surely no harm has been done.

A B C —The Rensum bit is a flexible indiarubber rod passing behind the bit proper which prevents a horse from taking the bit between the molars, which is the usual prelude to bolting It is quite humane Reference has already been made in THE LANCET to the Rensum bridle.

E H A —The practice has obvious advantages but is not suitable in the case of delicate children The family medical man should be consulted before the change in the child's habit is made There is no risk of flatfoot

W A B —1 The answer depends upon the distance of the stream from the source of pollution A chemical analysis might be made of the water 2 and 3 The contingencies alluded to are impossible.

M H H is referred to THE LANCET of Jan 18th, 1902, p 183. The method was simply immersion in a strong solution of silicate of *soda (10 per cent)*

L B is thanked for his communication, but arrangements are made at this office for the regular receipt of such information.

M.B —We regret that we are unable to help our correspondent.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS

MONDAY (9th)—London (2 P.M.) St Bartholomew's (1.30 P.M.), St Thomas's (3 30 P.M.) St George's (2 P.M.) St Mary's (2.30 P.M.), Middlesex (1.30 P.M.) Westminster (2 P.M.) Chelsea (2 P.M.), Samaritan (Gynæcological by Physicians 2 P.M.) Soho-square (2 P.M.) Royal Orthopædic (2 P.M.) City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.) London Throat (9.30 A.M.) Royal Free (2 P.M.) Guy's (1.30 P.M.)

TUESDAY (10th)—London (2 P.M.) St Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.) Guy's (1 30 P.M.) Middlesex (1.30 P.M.) Westminster (2 P.M.) West London (2.30 P.M.) University College (2 P.M.) St. George's (1 P.M.), St Mary's (1 P.M.), St. Mark's (2.30 P.M.) Cancer (2 P.M.) Metropolitan (2 30 P.M.) London Throat (9 30 A.M.) Royal Ear (3 P.M.) Samaritan (9 30 A.M. and 2.30 P.M.), Throat Golden square (9 30 A.M.) Soho-square (2 P.M.)

WEDNESDAY (11th)—St. Bartholomew's (1.30 P.M.) University College (2 P.M.) Royal Free (2 P.M.), Middlesex (1 30 P.M.) Charing Cross (3 P.M.) St. Thomas's (2 P.M.), London (2 P.M.) King's College (2 P.M.), St George's (Ophthalmic, 1 P.M.) St Mary's (2 P.M.), National Orthopædic (10 A.M.) St Peter's (2 P.M.) Samaritan (9.30 A.M. and 2.30 P.M.) Gt Ormond-street (9 30 A.M.) Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.) Metropolitan (2.30 P.M.), London Throat (9.30 A.M.) Cancer (2 P.M.) Throat, Golden-square (9.30 A.M.) Guy's (1 30 P.M.)

THURSDAY (12th)—St. Bartholomew's (1.30 P.M.) St Thomas's (3.30 P.M.) University College (2 P.M.) Charing Cross (3 P.M.), St. George's (1 P.M.) London (2 P.M.) King's College (2 P.M.) Middlesex (1.30 P.M.) St. Mary's (2.30 P.M.) Soho-square (2 P.M.) North-West London (2 P.M.) Chelsea (2 P.M.) Gt Northern Central (Gynæcological 2.30 P.M.) Metropolitan (2.30 P.M.) London Throat (9.30 A.M.) St. Mark's (2 P.M.) Samaritan (9.30 A.M. and 2.30 P.M.) Throat, Golden square (9 30 A.M.) Guy's (1.30 P.M.)

FRIDAY (13th)—London (2 P.M.) St Bartholomew's (1.30 P.M.) St Thomas's (3.30 P.M.) Guy's (1 30 P.M.) Middlesex (1 30 P.M.) Charing Cross (3 P.M.) St George's (1 P.M.) King's College (2 P.M.), St. Mary's (2 P.M.) Ophthalmic (10 A.M.) Cancer (2 P.M.) Chelsea (2 P.M.) Gt. Northern Central (2 30 P.M.) West London (2.30 P.M.) London Throat (9 30 A.M.) Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.) City Orthopædic (2.30 P.M.) Soho-square (2 P.M.)

SATURDAY (14th)—Royal Free (9 A.M.) London (2 P.M.) Middlesex (1 30 P.M.) St. Thomas's (2 P.M.) University College (9.15 A.M.) Charing Cross (2 P.M.) St. George's (1 P.M.) St. Mary's (10 P.M.) Throat Golden square (9 30 A.M.), Guy's (1.30 P.M.)

At the Royal Eye Hospital (2 P.M.) the Royal London Ophthalmic (10 A.M.) the Royal Westminster Ophthalmic (1.30 P.M.) and the Central London Ophthalmic Hospitals operations are performed daily

SOCIETIES

MONDAY (9th)—MEDICAL SOCIETY OF LONDON (11 Chandos-street Cavendish-square, W)—8.30 P.M. Papers:—Mr F S Eve: Certain Conditions which may be mistaken for Appendicitis and Unusual Cases of that Affection—Dr A. H N Lewers: A Case of Abdominal Hysterectomy for Retro-peritoneal Cervical Fibroid weighing 13½ pounds

TUESDAY (10th)—ROYAL MEDICAL AND CHIRURGICAL (20, Hanover-square, W).—8.30 P.M. Paper:—Dr F P Weber A Case of Multiple Myeloma (Myelomatosis) with Proteid in the Urine (Myelopathic Albumosuria of Bradsh Kahler's Disease) and a Summary of Published Cases [With Report on the Chemical Pathology by Dr R. Hutchison and Dr J J R Macleod.]

CHELSEA CLINICAL SOCIETY (Jenner Institute of Preventive Medicine Chelsea gardens Grosvenor-road S W)—8.30 P.M. Annual Clinical Debate on Diabetic and Non Diabetic Glycosuria in which Dr H. White Dr Pavy Dr Saundby, and Dr R. Bradford will take part.

WEDNESDAY (11th)—SOUTH WEST LONDON MEDICAL SOCIETY (Bolingbroke Hospital Wandsworth Common).—8 45 P.M. Paper M. Sheild Some Recent Experiences in Diseases of the Breast.

DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W).—5.15 P.M. Demonstration of Cases of Interest.

THURSDAY (12th)—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W)—8 P.M. Specimens will be shown by Dr I Parsons and others Paper:—Mr S Bishop: Procidentia Uteri, with special Reference to an Operation upon the Sacro-Uterine Discussion continued.

ABSTRACT OF

The Hunterian Lectures

ON

SOME POINTS IN THE ANATOMY AND PATHOLOGY OF THE VERMIFORM APPENDIX

elivered before the Royal College of Surgeons of England on Feb 9th, 11th, and 13th, 1903,

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LECTURE I

Delivered on Feb 9th

Mr. President and Gentlemen,—I almost owe you an ology for bringing to your notice a few points, hardly any which, I fear, are very novel, on the subject of the vermi- rm appendix In spite of the widespread attention which as of recent years been given to this lymphoid appendage ere is still a very considerable difference of opinion on any points connected with its anatomy and physiology, to y nothing of the pathological conditions associated with it so much has our knowledge of the organ and its lesions en increased that it would seem that there is but little left be added to the sum, yet it is perhaps at just such a stage experience that it is well to gather together some of the portant facts in lectures such as these. I shall not allude detail to all the well known statements concerning its oss anatomy but only to some which, however simple and parently obvious, are sometimes lost sight of

Gross Anatomy of the Appendix.

First, let it be remembered that the vermiform appendix is olly an intra peritoneal organ, using this term in the sense which it is generally employed—that is to say, it is always spended by a fold of peritoneum—the meso-appendix—in a nner similar to a loop of intestine, while its extreme tip usually quite free. The obvious deduction from this mentary fact is that the appendix cannot be approached any route whatever which does not transgress the ritoneal cavity—in other words, one in which the parietal yer of peritoneum is always incised.

Dr R J A. Berry[1] has very carefully worked out the rieties of the attachment form, and relations of the meso- pendix Briefly he summarises the differences in the scriptions given by various authors as follows "These are, st, the shape of the meso-appendix, whether triangular or adrilateral, and secondly, its relations to the vermiform pendix, whether a complete or an incomplete investment that organ." From a careful review of the fold in 100 ses he comes to the following conclusions 'The meso- pendix is a double fold of peritoneum which entirely rounds the vermiform appendix, constituting its sentery Though generally of a triangular aspect it is ways quadrilateral in outline—that is to say, four borders n always be described, though one border may be so short to give one the impression that the structure is triangular

In most cases the mesentery can be demonstrated to naked eye extending along the whole length of the pendix, and in those cases where the meso-appendix pears only to extend midway along the appendix croscopic examination will conclusively prove that a ritoneal covering is investing the whole length of the pendix." While from a personal examination of r 50 normal appendices I can fully indorse all that Berry affirms, I think that he partly loses sight of pathological and, therefore, surgical, significance of fact that the breadth of the fold constituting the so-appendix may vary very much Thus undoubtedly in a ge number of cases the meso-appendix as a distinctly quadrilateral fold extends the whole length, or nearly the whole length, of the appendix, but, on the other hand, there is no inconsiderable minority of instances in which it does not reach as such a fold to the termination of the tube. It is because of this shortened attachment of an actual fold that the appendix is so frequently curved or bent upon itself and it is by no means unusual for a division of the meso-appendix to be required in order to straighten out the tube Away then must go all the statements of operating upon the appendix extra peritoneally

A second fact is the direct communication with the cæcum proper This connexion is merely, as it were, a safety valve against explosion and not in the vast majority of cases the entrance through which an irritant foreign body passes into the tube. It is frequently after this communicating aperture has become abnormally closed that trouble ensues rather than when it is unusually patent The calibre of this aperture, while amply sufficient in its natural state to allow the free evacuation of secretion from the mucous membrane of the tube itself, is not great enough to permit the entrance into the lumen of the appendix of bodies of considerably smaller dimensions than those which have been said to have passed through it.

The position of the aperture is interesting and so is also its relation to the axis of the tube. Too little attention has perhaps been paid to the fact that the passage from the cæcum into the appendicular canal is, as it were, hidden away under the loose folds of mucous membrane which surround it, indeed, in some instances it is difficult to determine its position. This is obviously very different from the character of the larger adjacent opening—the ileo cæcal—which guarded rather than obscured by the folds constituting the ileo-cæcal valve, is very apparent, for the ileo-cæcal junction appears prominent as if somewhat telescoped into the cavity of the large intestine, while that of the appendix is depressed and may have to be searched for As a general rule the relative position of these two apertures is that the orifice of the vermiform appendix is some 2 5 to 3 5 centimetres inferior and posterior to the ileo cæcal Then, again, in at least two of the fairly common positions of the appendix—namely when lying upwards and inwards or directly upwards—its orifice is in reality, at any rate, in the upright position, at the most dependent part of the tube, and this facilitates the exit of secretion and hinders the entrance of extraneous material. But it must be here remarked that the foregoing meets with an exception in the case of bacteria which, as it were, creep along the surface of the mucous membrane lining the entrance to the tube, and also of intestinal worms, which occasionally glide over the surface into the tube. It is wonderful how the various pointed foreign bodies found within the lumen of the tube have discovered the narrow aperture, cast around as it is with everything that would seem to block their way

A third subject of extreme interest and importance is the position of the appendix within the abdomen. To guess correctly where the tip of the appendix lies in any given case, without exposing it, is well nigh impossible To state that such and such a position is the *normal* one for the appendix is only to make oneself liable to have the statement completely overthrown by the next observer The cæcum with its vermiform appendage only reaches its common habitat in the right iliac region after a considerable route of migration and this fact is quite sufficient in itself to lead to very different relations of the organ. It is probable that in a small number of instances the cæcum has not fully reached the right iliac region even at birth and may continue its journey for some months after intra uterine life Thus there are on record instances in which the vermiform appendix has been discovered lying close beneath the liver and even behind the right lobe of the same gland (Fig 1)

With regard to what may be conveniently termed the normal positions there are three in which the appendix generally lies —1 Pointing upwards and inwards towards the region of the spleen This may be described as being the north east position 2. Pointing downwards and inwards over the brim of the true pelvis. This may be described as being the south east position. 3 Pointing directly upwards behind the cæcum. This may be described as being the due north position. Various authors state differently as to which of these three is the most usual position Personally, from the observation of nearly 200 cases in the dissecting-room and post-mortem room, I am convinced that a direction upwards and inwards behind the inner part of the cæcum

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[1] The Cæcal Folds and Fossæ, 1897, p. 25.

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hen the appendix is first fingered is indicative of a cal condition

face —The surface of the serous covering of the should normally be perfectly smooth and regular e should be no adhesions other than those of a haracter The whole length of the tube should be n circumference except for a slight tapering at the tremity Any sudden bulgings or enlargements disease.

HYSIOLOGY OF THE VERMIFORM APPENDIX.

ally little or nothing is known concerning the y of the tube and it may be that its physiological s are in reality insignificant, though they may have ring upon its pathology There are two conflicting to its primary functions, one that it is entirely an e organ, the other that it is purely an excretive Probably the real truth lies in the statement that art absorptive and in part excretive.

r, it has been thought that it has to do with the n of sulphuretted hydrogen to aid in the antisepsis arge intestine. There can be no doubt that the ymphatic character of the appendix seems to point bsorptive function. The extremely well marked d follicles and the large lymphatic spaces and both tend to make the assumption feasible that ndix is chiefly concerned with absorption. Yet, on r hand, there are some strong arguments against theory Its absorbing surface is practically infini- compared with that of the adjacent small and large . Then, again, what is it to absorb? It is a very nt fact that it is well nigh impossible even under to distend the lumen of the appendix by distending um with fluid, exactly in the same way as it is not be able to fill the lower end of the ileum from the This conclusion is also corroborated by the fact that lom or never the case that the lumen of the vermi rocess is affected in those instances in which the has given way under the strain of distension arising nstriction of the large intestine on the distal side cæcum Further, the lumen of the appendix is receptacle for meconium, so that it would not appear at the appendix often has any liquid contents, other at it has itself secreted, to absorb.

, it is a point of interest that the action of the r fibres forming one of the coats of the tube tends, ey contract, to force its contents towards and into ty of the cæcum. That the mucus is here of assist- lubricating hardened fæces and helping in their passage is past believing, for the contents of the cæcum, although designated ' fæces," are not even id and therefore require no such help I do not that there is evidence to justify the belief that endix produces sulphuretted hydrogen, in fact, the lge that the mucus contained within it is often inodorous is greatly against the theory Until, how ere is an accurate chemical analysis of the secretion possible to be sure as to whether it may not have nction in the economy

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LECTURE II

Delivered on Feb 11th

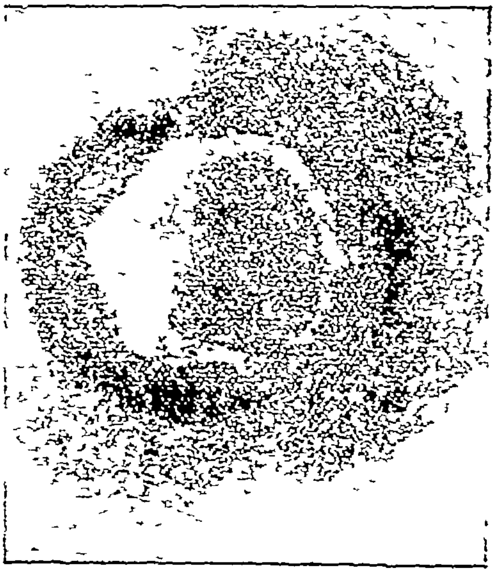
ETIOLOGY OF INFLAMMATION

PRESIDENT AND GENTLEMEN —Can an inflammation appendix sufficient to excite symptoms ever be of a cterial nature? I would venture to answer this ques- cidedly in the negative It is my firm belief that stance of so-called appendicular colic, slight appendi tarrh of the appendix, and a number of other con designated by like somewhat vague terms, is in truth lent upon an actual inflammation of the appendix and ith a bacterial origin.

perfectly willing to admit that in some, perhaps instances in which an appendix is examined after d where symptoms pointing to it have been in ce, bacteria may not be found. But it is to be bered that most of these are excised after the oms have nearly or completely disappeared—in fact, the quiescent stage. It is therefore quite possible nce the inflammation has passed, the bacteria which d it may have vanished On the other hand an ation of the increasing number of appendices removed during an attack, and some of these attacks of only a slightly greater severity than a "mild" preceding one, show not only the presence of bacteria but an abundance of infective micro-organisms. It is open for an objector to say that these organisms are present in every appendix, whether it be the site of inflammation or not, and that the bacteria must therefore play little or no part in the inflammatory process when in progress. Granted that the constant presence of bacteria in greater or fewer numbers is true, this fact only tends to strengthen further the supposition that parasites are the essential cause of the inflammation. They are present, they can incite inflammatory processes, and if some starting cause ensues they will produce the condition of distinct inflammation with symptoms

If it be conceded that all cases of inflammation of the appendix with symptoms are the outcome of bacterial infection, what deductions should be drawn therefrom? First, that it is impossible to say what will be the limits of any given attack, merely a few days' malaise with slight colicky pain referred to the right iliac fossa, or death from septic peritonitis or septicæmia. Secondly, that should the sufferer apparently recover from the attack, there will probably remain, in a now more than ever damaged appendix, bacteria always ready to light up a fresh inflammation on the least provocation. (Fig 3.)

FIG 3



Section of appendix with calculus in situ (× 25)

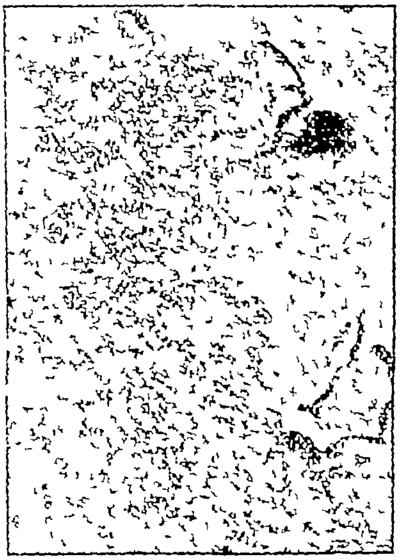
BACTERIOLOGY

Many varieties of bacteria may be found within the lumen of the appendix, in the walls of the tube, in the lymph formed on its serous surface, in the adherent portions of omentum in the peritoneal fluid, in consecutive abscess cavities in distant collections of pus and even in the blood and remote organs They may be classified as follows 1. *Bacilli.*—(*a*) Bacillus coli communis in its various forms, (*b*) bacillus pyocyaneus, (*c*) bacillus prodigiosus, and (*d*) bacillus tuberculosis. 2 *Cocci* —(*a*) Staphylococcus pyogenes aureus, (*b*) staphylococcus pyogenes albus, (*c*) streptococcus pyogenes citreus, and (*d*) diplococcus pneumoniæ. (Fig 4)

As to the frequency with which the more common individual organisms are found the following may be taken as a fairly accurate estimate based, as it is, upon the combined results of the investigations of many authorities (1) varieties of the bacillus coli communis 94 0 per cent., (2) bacillus pyocyaneus, 0 5 per cent, (3) bacillus prodigiosus 0 5 per cent., (4) bacillus tuberculosis 2 0 per cent, (5) staphylococci, 1 5 per cent., and (6) streptococci, 1 5 per cent. The bacillus coli communis is the only organism which is commonly found alone in cases of appendicitis Cocci are but rarely present by themselves, though they are more often found in association with the colon bacillus. (Figs 5 and 6.)

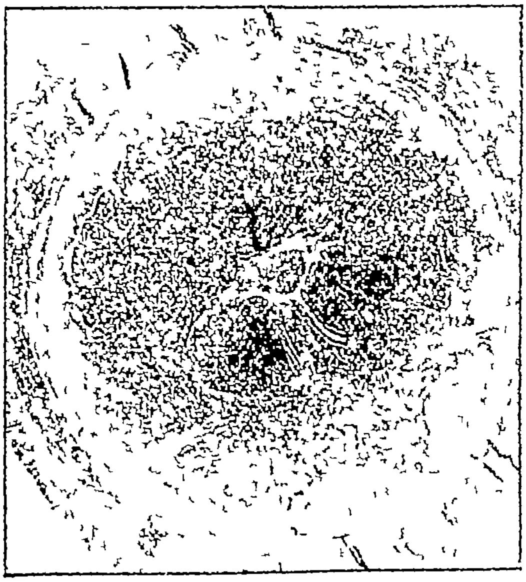
Tuberculosis of the appendix may be primary or merely part of a general infection of the alimentary tract. In its primary form, which is decidedly rare, it is apt to be very chronic, producing signs and symptoms of a chronic appendicitis In these instances the mucosa and the submucosa will ordinarily be the parts involved, the serous membrane frequently remaining free. Now and then there are seen instances in which connective tissue hyperplasia is the predominant anatomical feature of the lesion, giving rise to a mass which to the naked eye is very difficult to distinguish from a new growth. This hyperplasia is probably the outcome of a low virulence of the bacillus and a consequent disinclination to caseation and a great increase of newly formed connective tissue in place of it

Fig 4



Calculus from the same appendix as in Fig 3 showing colon bacilli ($\frac{1}{12}$ oil immersion)

Fig 5



Section of inflamed appendix showing great infiltration of the mucosa and pus in the lumen (× 25)

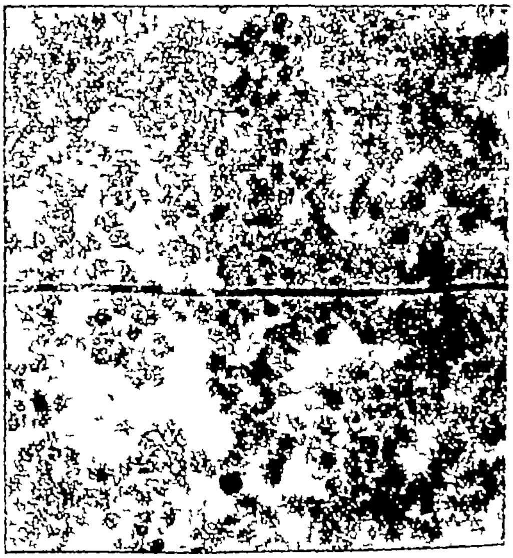
Secondary tuberculosis of the appendix is by no means rare and as a rule presents no marked signs or symptoms of its own presence, these being masked by those of the more extensive infection.

Calculi and Concretions.

It may be stated at the outset that these are always formed *in situ* within the lumen of the appendix Although it is possible that their nucleus may have found its way from t cæcum into the appendix, yet the bulk of the material the calculus has been laid down within the tube it Concretions or calculi may occur in almost any part of alimentary tract and they may produce no signs symptoms or they may give rise to most serious in the way of irritation, inflammation, ulceration, perforation, or obstruction The calculi of the appendix may behave precisely the same manner as calculi elsewhere in with the intestines The malignity of calculi, and particularl of appendicular calculi, would seem to depend on one of conditions, first the presence of virulent micro org within or upon them, and secondly their movement. If were possible to have a stationary and non septic calculus little harm would result, but as soon as such a concretion infected with organisms or changes its position, it is liable produce dire consequences.

The surface of the calculi is usually fairly smooth and th are frequently rounded or elongated in form,

Fig 6



Pus from the lumen of the same inflamed appendix as in Fig 5 showing colonies of staphylococci ($\frac{1}{12}$ oil immersion)

presenting facets These three facts would seem to me indicate that the calculi have been subjected to a amount of movement, perhaps caused by ineffectual eff on the part of the appendix to rid itself of its contents. But, on the other hand, a calculus may markedly tuberculated on the surface This latter is associated with a crystalline deposit and is observed in those calculi which are stationary and which found within a distinct cavity in the appendix

An interesting point in connexion with the formation appendicular calculi is the question as to whether they arise without the walls of the tube being separated them by a distinct space There can be no doubt, I from the observation of fresh specimens, that is before process of hardening has been employed, that the walls closely embrace the calculus and that the actual ment of the lumen of the tube has occurred in cons of the growing calculus within it, rather than that increase in size existed prior to the formation of concretion.

Actinomycosis of the Appendix.

The actinomyces may attack any portion of the tract, or the fungus may infect the adjacent distant parts through dissemination from the That actinomycosis may be a primary lesion of the is now an established fact, though the condition is sarily a rare one

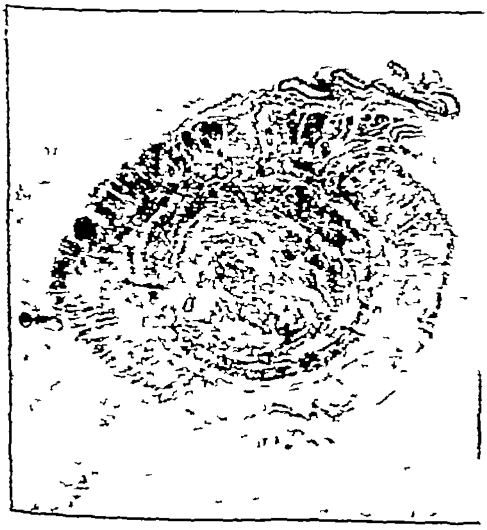
A recently recorded case[2] illustrates the condition as it is usually seen. The patient had for some time been employed as a stable-boy in a hotel and had previously been a farm labourer He had been the subject of hydrarthrosis of the right knee-joint at the age of 15 years but had made a rapid and complete recovery under treatment. He had lost three or four molar teeth during the past three years. He had long been in the habit of chewing blades of grass, grains of wheat, &c., when not quite ripe. His symptoms began with acute pain in the right iliac fossa, with recurring rigors, frequent nausea, and progressive malaise and debility On several occasions there was a rise of temperature. The symptoms at first improved under treatment by rest, careful diet, and inguinal compresses moistened with tincture of opium. This improvement was succeeded by lassitude, persistent anorexia, and slight constipation, together with some loss of flesh. On palpation there was no tenderness in the region of the appendix but a small tumour above Poupart's ligament on the right side, it was about from three to four fingers breadth in the vertical direction and was very hard to the touch The appendix was removed and on microscopical examination typical actinomycosis was revealed

One important point in the prognosis of actinomycotic inflammation of the appendix is the fact that there is a great liability for the wounds made, either to drain an abscess or even to remove a non suppurating appendix, to have a marked tendency to become the seat of secondary infection with the fungus. It is therefore well to bear in mind the possibility of this infection in those instances in which a series of sinuses form after a lesion occurring primarily in the region of the right iliac fossa. In one case under my care these sinuses tracked upwards in the sheath of the rectus abdominis muscle almost to the thorax and downwards behind Poupart's ligament into the thigh and outwards into the lumbar region

EFFECTS OF INFLAMMATION

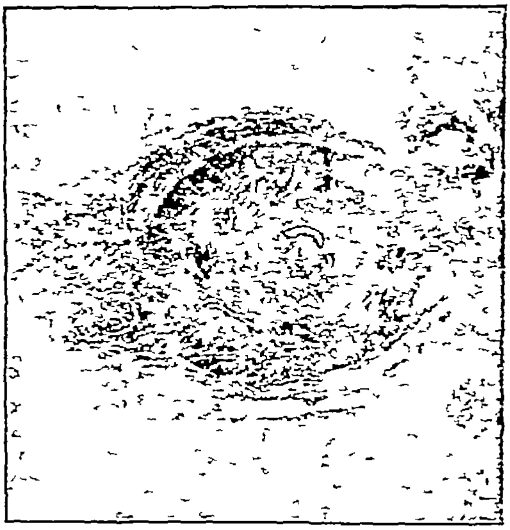
One effect of inflammation is obliteration of the lumen of the appendix. This is entirely an opposite condition to that of perforation. It is in this manner that nature may bring about what is sometimes termed a "spontaneous cure." There is also a natural tendency for the appendix to become obliterated in its lumen as age advances and it is for this reason that acute inflammations of the tube are less common in later life. In order however to bring about complete immunity to a recurrent appendicitis it is necessary that the whole of the lumen of the tube should be obliterated. (Fig 7) This result is not so very usual, for from attacks of inflammation there may be obliteration only of a small part of the tube If this is at the distal portion it leaves the proximal part still in communication with the cæcum and still liable to the invasion of bacteria. If it is at the proximal end it shuts the rest of the lumen off from that of the cæcum and opens the door for the formation of a cyst of the appendix. If bacteria are shut up in the portion of the lumen which lies on the distal side of the obliteration an empyema may result But take those instances in which, on a series of sections being cut from many parts of the length of the organ and all showing complete obliteration of its lumen it is somewhat difficult to explain the undoubted attacks of pain, and of severe pain, that some of the possessors of such an altered tube have suffered from. (Fig 8) A possible explanation exists, however, in the fact that the majority of these appendices are found when exposed to be very closely bound down by adhesions to the surrounding parts and it may be that tension on these peritoneal bands induced by peristalsis or movements of the psoas muscle gives rise to the pain and discomfort. Whatever may be the actual explanation the fact remains that a removal of the altered appendix relieves the sufferer of all his troubles

FIG 7



Section of sclerosed appendix proximal end, lumen obliterated (× 25)

FIG 8



Section of the same appendix as in Fig 7 distal end, a trace of lumen remains (× 25)

The histological appearances of these appendices in which the lumen has become completely obliterated varies considerably in different instances. In most the elements of the lympho-mucosa are to all intents destroyed and their place is taken by a mass of cicatricial tissue In some sections here and there may be seen remnants of the glands or of the lymphoid follicles. In many the muscular layers seem to be a good deal hypertrophied

SECONDARY ABSCESSES.

I only draw attention to these because I wish to emphasise the possibility of their occurrence at quite late periods after the complete removal of the appendix I have myself had one case in which no less than five years after the removal of the appendix in the usual manner a secondary abscess formed close to the cæcum at the site of the stump of the appendix. These collections may be due to several causes. One is that a few bacteria are left behind which remaining latent may at a remote period light up a fresh suppuration. Another is that a silk ligature or suture has remained and has been the source of the irritation. A third is that a small portion of gauze has been accidentally left behind in a case in which drainage was required in spite of the removal of the appendix. All these causes are quite apart from those instances in which secondary suppuration occurs as the result of an incomplete operation in which too long a stump of the appendix is left or in which a peri appendicular abscess has been drained and no attempt has been made to excise the appendix. Cullen[3] has recently described an interesting case in which a retrocæcal abscess developed three years after the complete removal of the appendix and has well illustrated the condition.

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[2] Dr Leon Thevenot: Medical Press and Circular December 1902, p. 722.

[3] New York Medical Journal, Dec. 27th 1902, p 1111

EXAMINATION OF THE BLOOD IN APPENDICITIS

Recently a considerable amount of attention has been given to the examination of the blood as an aid in the diagnosis of appendicitis While admitting that the hæmatological examination and significance may be carried too far, yet there can be no doubt of its usefulness as a help in diagnosis when employed with due consideration of other signs and symptoms There are two distinct changes in the blood associated with appendicitis, both of which are very obvious and both have a recognised bearing upon treatment and prognosis. These two alterations are (1) anæmia and (2) leucocytosis.

1 *Anæmia* —One has been often struck with the intensely anæmic appearance of some patients who have been suffering from toxæmia for many days. Not only is this anæmia apparent in the face of the person, but it is very evident when the blood is minutely examined In several instances in which poisoning was due to absorption from the products of an infective appendicitis I have found a very marked diminution both in the actual number of erythrocytes and the percentage of hæmoglobin The suddenness with which these changes may occur is a necessary factor in the importance with which they are to be viewed There are, of course, conditions causing rapid loss of blood, as ruptured ectopic gestation, which must be carefully excluded. If the lessening of the erythrocytes is very great the proportionate loss in the percentage of hæmoglobin is tremendous, for while the average decrease in the oxygen carriers in instances of appendicitis of any form is about 15 per cent, according to the most recent statistics, that of the corresponding loss of hæmoglobin is no less than 25 per cent. Supposing, then, the fall in the hæmoglobin is between 35 and 50 per cent., whether or no the red corpuscles are correspondingly diminished in number, the question of operative interference becomes an anxious one for the surgeon In some instances of the repeated attacks of the so-called catarrhal appendicitis there is a certain degree of anæmia, especially in young women and in those where there is chronic constipation. When the blood is examined there is a diminution in the red cells and hæmoglobin but without leucocytosis I consider that in these cases probably both the anæmia and the appendicitis are dependent upon a disordered state of the alimentary tract and if the condition does not rapidly improve under careful dieting and good hygienic surroundings I am convinced that the removal of the appendix is indicated, as the continued anæmia may really be due to slight toxæmia by absorption from the appendix It is remarkable how rapid is the return to health in certain of the cases after the removal of the source of poisoning is carried out. I would venture to suggest that more attention be paid to the anæmia arising in cases of chronic appendicitis or at least in those of chronic digestive trouble with suspicion of distinct local lesions of the appendix.

2. *Leucocytosis* —Of recent years the question of leucocytosis in association with appendicitis has been engaging a considerable amount of attention, and although there are very divergent views as to the degree of importance that can be placed upon the condition yet taken in conjunction with other signs and symptoms the determination of its presence may be of the greatest assistance (1) in the diagnosis of suppuration before operation, (2) in the diagnosis of secondary suppuration after operation for abscess, and (3) in the differential diagnosis of appendicitis from other affections It is often a matter of extreme difficulty to say in any given case of inflammation of the appendix whether or not a focus of suppuration has formed It is equally true that in the vast majority of instances in which pus is being produced in the tissues there is an increase in the number and an alteration in the characteristics of the white corpuscles circulating in the blood It would seem therefore that given a case of appendicitis in which leucocytosis is obvious the surgeon may safely assume that suppuration is in evidence or that the case is one that demands operative interference.

I will cite two examples as types in which a blood count taken in conjunction with a general view of the case distinctly assisted in the diagnosis, and therefore in the treatment, of the lesion Both are taken from Cabot's excellent review of the subject[4] The first case (Case 40, Cabot) is one in which the blood count showed a progressively increasing leucocytosis which in the end decided the for surgical interference. The age of the patient, a m was 19 years, and the blood count showed 4,380,000 *red* The *white cells* were as follows on March 25th, at 9 P M 15,600, with vomiting, pain, and tenderness, on the 2 19,500, the patient being comfortable with no vomiting the signs more localised, on the 28th 22,900, there slight tenderness only, on the 29th 35,300, the bowels mov ing well, with no symptoms, and on the 30th 32,800, w operation was performed, a large amount of pus being f This is a typical case and one in which the other sig and symptoms present did not point to the formation of and the necessity for surgical interference. The second (Case 20, Cabot) is one of exactly opposite nature T patient in this case also was a male who had suffered appendicitis for 24 hours with a resistant abdomen Oct. 23rd the white cells were 20,100, on the 24th at 9 14,000, at 4 P M 12 000 and at 10 P M 13 250 (no tion), and on the 25th at 8 A M 8750 (the patient liquids every two hours) and at 3 P M 9600 although there was a distinct leucocytosis on the first day the affection yet the signs and symptoms were but slig and on the next day there was a rapid fall in the number leucocytes which seemed to indicate—and that correctly, the progress of the case proved—that there was no sup tive process in evidence. The number of leucocytes drop to nearly normal on the third day of the attack.

As has been recently shown by Dr C J N Longrid there is a tendency in those cases in which the in inflammation of the appendix is so severe as to cause gangrene of the tissues forming its walls for a very mar leucocytosis to be present Thus, in his published tabl 36 cases, in no less than six instances there was a l cytosis of from 20 000 to over 30 000 and in all the appen was found on exposure to be gangrenous but not surro with pus. I have observed the same in two cases in on operation the appendix was found gangrenous with hours of the onset of the symptoms and in both of there was a considerable amount of non purulent sli irritating fluid in the peritoneal cavity Both pat spite of washing out of the abdomen, intravenous injection &c., succumbed to an intense toxæmia. One was that of a strong and active young man, aged 20 the other that of a young married woman, aged 27 who was robust and healthy

As to the causation of this condition there is dispute Purulent and gangrenous processes both high count of white cells as a rule, that of purulent ditions being fairly easy of explanation, but gangrenous more difficult Virulence of the toxin resisting power of the individual have much to do degree of leucocytosis. Generally speaking, the intense the poison and the greater the resistance, the will be the leucocyte count

In both cases mentioned above the subjects were y apparently in the enjoyment of good health, sing active, and robust The onset of the infective p sudden and the poisoning intense, but their resistanc great Hence there was a rapid and surprisingly augmentation of leucocytes, the count in both 35,000 within 48 hours of the first indication of the I think that it is a fact that most of these cases of so- "fulminating" appendicitis occur in young active, persons who are therefore just those who conform conditions of marked inflammatory leucocyto intense infection and great resistance

Unfortunately, in a fair proportion of the cases in inflammation of the appendix has reached the stage of puration and the case can only be treated by drainage is a great liability for secondary abscesses to form the region of the primary mischief or at distant parts. in such cases that a blood count may again be of Another case taken from Cabot's series (Case 18) illus this very clearly In this case, on Nov 5th, the whi were 21,700 (first operation), on the 10th, 21,400, 13th, 16 000, on the 15th 24,400, on the 16th, 20, the 19th, when the second operation was performed pus pocket was found 47,700, on the 20th 16 700, 21st, 13,000, on the 22nd, 10,700, on the 26th when a operation was performed, a pus pocket being again f 30,200, on the 27th, 20 000, and on the 28th, 17, Dec. 4th, 11,900, and on the 26th, 11,300

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[4] Cabot: Clinical Examination of the Blood 1901

[5] THE LANCET, July 12th, 1902, p. 74

The Hunterian Lectures

ON

THE NATURE AND ANATOMY OF ENTEROPTOSIS (GLÉNARD'S DISEASE)

Delivered before the Royal College of Surgeons of England on March 2nd, 4th, and 6th, 1903

By ARTHUR KEITH, M D ABERD, F R C S ENG,
HUNTERIAN PROFESSOR, ROYAL COLLEGE OF SURGEONS OF ENGLAND ETC

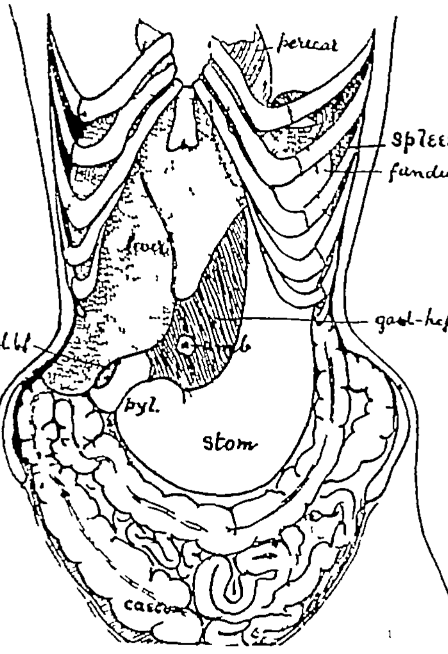
LECTURE III[1]

Delivered on March 6th

PTOSIS OF THE LIVER AND STOMACH

MR. PRESIDENT AND GENTLEMEN,—Displacement of the liver and stomach springs chiefly from two causes—either from the relaxation or paresis of the abdominal muscles which maintain the visceral shelves on which these organs are supported or, as is more frequently the case, the body cavity is constricted by clothing or contorted by disease, so that the normal respiration swing forwards cannot take place In either case the visceral displacements are much the same.

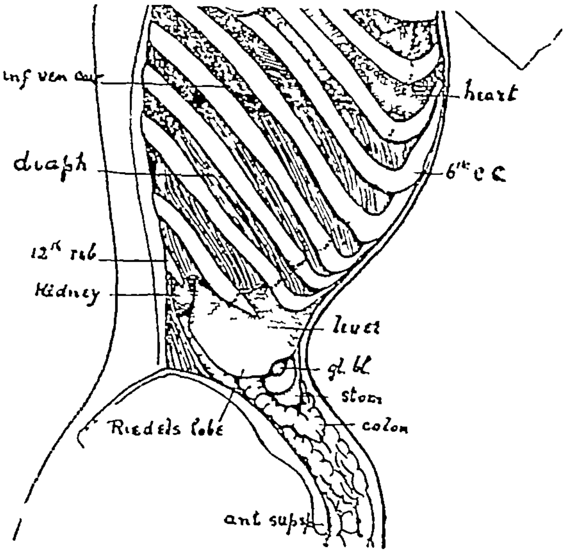
FIG 14



A case of partial ptosis of the viscera in a woman aged 45 years. The waist, which measured 26 inches in circumference was reduced to 22 inches by corsets The viscera were then hardened *in situ* by the injection of formalin The duodenum descended as far as the brim of the pelvis

The position and shape of the liver and stomach shown in Figs. 14 and 15 are characteristic of the general type of enteroptosis so frequently met with in our dissecting room. The subject from which the illustrations shown in Figs. 14 and 15 were made was a woman, aged 45 years in whom the viscera were fixed and hardened *in situ* by the use of formalin after her natural waist of 26 inches had been reduced to 22 inches by corsets a reduction quite within the limits of ordinary practice The condition of the viscera shown was present before death, the corsets merely help to emphasise the natural characters of the displacements. To understand how such a condition has been produced a number of points have to be observed. The extrusion of the viscera from the subdiaphragmatic space is due (1) to the constriction of the thorax, (2) to the pressure applied to the epigastric region which prevents the stomach and liver swinging forwards so as to over ride each other, and (3) to the depression of the ribs (see Fig 15) which throws the costal fibres of the diaphragm into a more vertical position, they tend then to press the viscera downwards rather than forwards The corsets when worn prevent an inspiratory depression of the liver, the viscera become, when so restrained by the application of corsets, a fulcrum on which the chest is raised But when the corsets are removed or undone the muscles of the wall of the abdomen, being weak from disuse, are ill equipped to oppose the action of the diaphragm. In the body shown the subcostal arch is narrow, but had the patient lived it would have opened out as the viscera were displaced further downwards until, instead of measuring 50°, it would have reached 90° or more.

FIG 15



Lateral view of the same subject as is shown in Fig 14

Riedel's lobe —Why is it that in partial or complete cases of visceral ptosis there is always a tendency for the lower extremity of the right lobe of the liver to be produced into a linguiform process (Riedel's lobe), such as is shown in Figs 14 and 15? Two circumstances have to be taken into account. 1. The part of the right lobe which lies beneath the tips of the tenth and eleventh ribs is the first to escape from beneath the lower margin of the thorax, the pressure of the costal margin tends to separate the part extruded from the part within the thorax. 2. But a more important circumstance lies in the fact that the space between the crest of the ilium and the tips of the eleventh and twelfth ribs is the part of the abdominal wall least protected by muscular support. Fasciculi of the external and internal oblique are the sole muscle supports in this region Owing to the crest of the ilium, from which they act, projecting further outwards than the tips of the eleventh and twelfth ribs, on which they act, these muscular slips tend to draw the ribs outwards rather than inwards during expiration and hence are ill designed to prevent the displacement of the liver towards the right loin. This is markedly true of the female (see Fig 14)

FIXATION OF THE KIDNEYS.

If one will analyse and estimate the various forces which maintain the kidneys in their normal position, it will be found that by far the most important is the constant pressure exerted on them by the diaphragm on the one hand and the muscles of the abdominal wall on the other Unlike the liver, the stomach, and the spleen, the kidneys rest on no visceral shelf While the diaphragm exerts its force directly on them the muscles of the abdominal wall can act only indirectly through the abdominal viscera. In front of the right kidney are the liver duodenum, colon, and small intestine, in front of the left kidney, the stomach, spleen, colon, and small intestine, through these the muscular wall of the abdomen maintains the kidney against the diaphragm, quadratus lumborum and psoas muscles.

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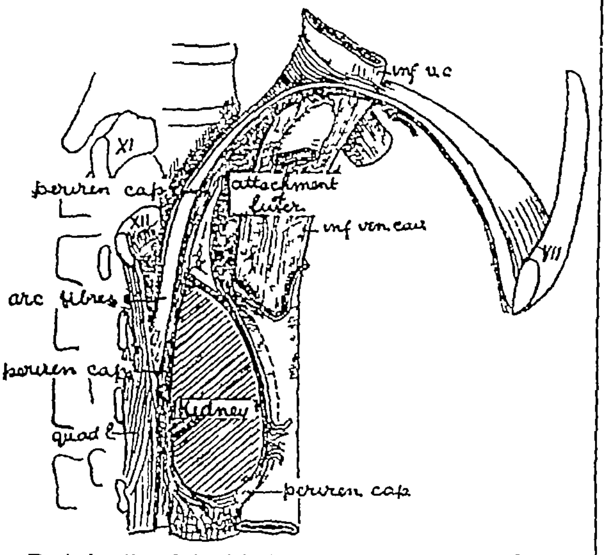
[1] Lectures I and II were published in THE LANCET of March 7th 1903, p 631.

Next in importance to the muscles is the loose connective tissue or perirenal capsule in which the kidney is imbedded. Recently the capsule has been differentiated by Zuckerkandl into two layers—the pre nephric and post nephric fasciæ, but every time I seek to demonstrate the described disposition and relationship of these fasciæ I feel that I make a greater demand on the imagination of my students than on their powers of observation Moreover Zuckerkandl's description of the perirenal capsule makes a simple matter difficult. As a passive renal bond the perirenal capsule is of the very first importance. By it the kidneys are bound to the diaphragm and for practical purposes to the diaphragm only At the upper pole of the right kidney the tissue of the capsule fuses with the connective tissue of the mesepaticon on the right side (Fig 16) and with the tissue of the coronary ligament of the stomach and suspensory ligament of the spleen on the left side Along with the viscera just named the kidneys are fixed to the arcuate fibres of the diaphragm (Fig 17) At the outer border of each kidney the capsule is continuous with the dense subperitoneal fascia of the diaphragm and transversalis fascia and muscle, but at the lower pole of the kidney the tissue of the capsule is loose and open and freely permits the respiratory descent of the kidney The meshes of the posterior layer of the capsule become laden with a peculiar fat from one to two months before birth. The fat serves as a perirenal bursa or slide on which the respiratory movements of the kidney take place.

FIG 16

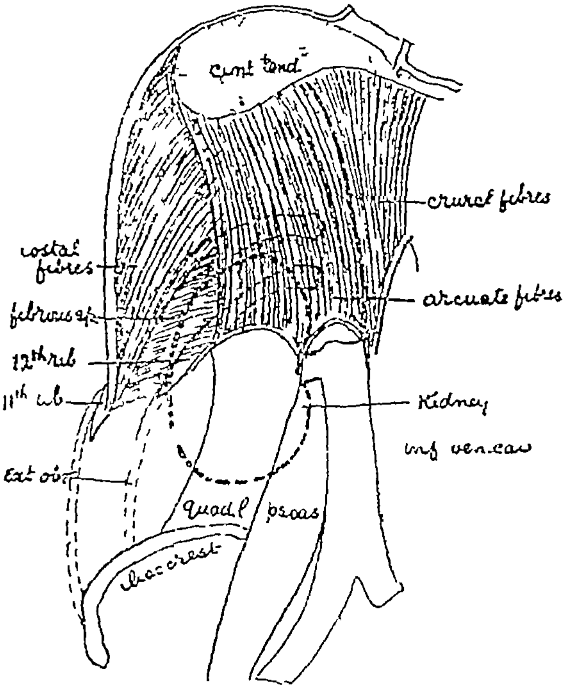


Vertical section of the right kidney in situ to show its relationship to the diaphragm and perirenal capsule. The position shown is that of complete inspiration The diaphragm was thrown into a condition of contraction by the application of boiling water

There is too, another renal bond also connected with the perirenal capsule—namely the renal pedicle. The pedicle is made up (1) of the renal artery, (2) of the renal vein, (3) of dense connective tissue derived from the radix mesenterica which fuses with the perirenal capsule at the inner border and hilum of the kidney and with the fibrous covering of the suprarenal bodies, and (4) of the renal plexus of nerves and lymphatics The renal pedicle limits the extent and direction of the movements and displacements of the kidney As a bond the peritoneum which covers the anterior or outer surface of the kidneys may be left out of account, it is so designed as to permit renal respiratory movements, it is so attached that it could only prevent a displacement in an upward direction. It is attached loosely over the lower ends of the kidneys so that these organs may descend easily on the quadratus lumborum and psoas

Respiratory movements of the kidney.—Since the inspiratory descent of the kidney is entirely produced by the contraction of the diaphragm the extent and direction of the movement are best understood by observing the relationship of the kidney to the fibres of that muscle (see Figs. 16 and 17) It is convenient to divide the kidney into two parts—viz., the *supracostal*, or diaphragmatic, the part above the twelfth rib or its representative, and the *infracostal*, or lumbar part, resting on the psoas, quadratus, and transversalis tendon (Fig 17) The kidney is in relationship only with the arcuate fibres which, arising from the arcuate ligaments, expand somewhat outwards as they ascend behind it. The supracostal part of the kidney also rests on the fibrous interval between the arcuate and costal fibres, which in 40 per cent of bodies is relatively as great as is shown in Fig 17 The fibrous space marks the former communication between the pleural and peritoneal cavities, the muscular fibres which bound it mark the outer edge of the primitive digastric band like diaphragm Above the kidney the liver is bound to the arcuate fibres on the right side (see Fig 16) and to the spleen and stomach on the left These structures, being pulled downwards by the arcuate fibres in each breath taken, push the kidneys downwards and inwards before them, the extent of the excursion varying from two to four centimetres with each breath. The kidneys, and the viscera attached in the hypochondrium above them, are pulled down on the arcuate fibres as logs on a sledge In this movement the *loose perirenal capsule and fat in front of the* quadratus lumborum and psoas act as a renal slide The renal pedicle controls to some extent the direction of the movement. On expiration the muscles of the abdominal wall, especially the transversalis, return the kidney to the initial inspiratory phase

FIG 17

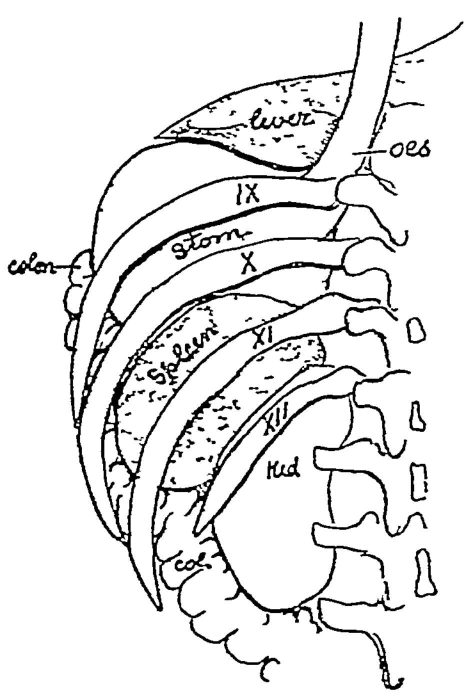


Showing the relationships of the right kidney to the diaphragm

Displacements of the kidney.—The condition essential to the displacement of the kidney, whether right or left, is a diminution of the subdiaphragmatic space. Unfortunately such a diminution may be produced in many ways (1) by compression of the thorax with clothing, (2) by a partial collapse of the thoracic walls following chest or spine disease, and (3) by the permanent contraction of the diaphragm which follows a relaxed or paretic condition of the abdominal walls. In cases of general enteroptosis the muscular fasciculi of the diaphragm measure on an average only two and a half inches, against three and a half to four inches in a condition of health I suspect, too, that in some cases of pleurisy the diaphragmatic connective tissue is contracted or in a cirrhotic condition which leads to a diminution of the diaphragmatic domes When the sub-diaphragmatic space is reduced, then the part or parts most easily ejected are displaced below the costal margin.

Displacement of the left kidney—Why is it that the left kidney is so seldom displaced? The answer is that the left hypochondrium is provided with a safety valve in the shape of the splenic flexure of the colon, which is so formed and fixed that it may enter or leave the hypochondrium with the greatest freedom as the stomach empties or fills. The mechanism will be better understood by referring to Fig 18, which represents the position of the organs in the left hypochondrium from behind when the stomach is full. When full the liver, as Symington and Cunningham have pointed out, is tilted more into the right hypochondrium, the left kidney is forced half an inch or more downwards, the spleen is carried outwards on the distended fundus of the stomach, but the part which is displaced by far the most is the splenic flexure of the colon. Professor Birmingham has clearly described the manner in which the colon replaces the gastric contents. Hence it is that when the left hypochondrial space is reduced, the splenic flexure, being in the habit of going and coming can accommodate itself to a partial or complete subcostal position, leaving the kidney and other organs undisturbed. The extrusion of the colon, however may not be enough to compensate for the diminution of the hypochondrium, then the stomach, the spleen and the kidney are all displaced. On the right side there is no obliging moveable viscus, the liver and kidney fill the diaphragmatic dome and either the one or the other must make way or as more commonly happens a part of both is extruded when the subcostal space is reduced in size. Hence the frequent presence of a Riedel's lobe of the liver with a partial displacement of the right kidney There are, however several other circumstances which give the left kidney a more secure position than the right. 1. The left kidney is bound to the spleen and the spleen is bound by its suspensory ligament to the diaphragm. 2. The arcuate fibres draw down the unwieldy heavy base of the liver on the right kidney, the fundus of the stomach, drawn down on the left kidney represents a lighter hammer

FIG 18.



The position of the splenic flexure the spleen and the left kidney when the stomach is full. When empty the kidney and spleen ascend an intercostal space while the splenic flexure is moved upwards into the angle between the spleen and stomach

Displacement of the kidney in women—It is commonly said that the kidney is ten times displaced on the right side for once on the left and that renal displacements are ten times more common in women than in men. Yet at birth the two kidneys are equally placed, through a long series of human fœtuses I noted no difference of sex, of size or of individual in the position of the kidneys In fact the only variable factor then is the relationship of the cæcum to the right kidney, it is commonly bound in front of the hilum, but it may lie internal to the kidney or in the loin below it On the other hand, the splenic flexure of the colon is always bound to the front and outer border of the left kidney

The liability of women to renal displacements begins at puberty and increases in frequency with each decade up to the fifth As the female sexual characters are developed the iliac crests expand outwards and the transverse intercristal diameter of the body becomes greater than the transverse diameter of the lower part of the thorax by an inch or more. In children, as in primates, the pelvis is narrower than the chest. In some women, from natural conformation or from an exaggeration of the natural form by the use of stays, the iliac crests may project outwards on each side two inches or more beyond the lateral wall of the thorax formed by the lower ribs. The eleventh and twelfth are the only ribs that have a relationship to the kidney (see Fig 17) As far as their movements are concerned both of these ribs may be regarded as part of the abdominal wall. They ride outwards and inwards with the inspiratory expansion and expiratory contraction of the abdominal wall. The muscles which depress them and thus limit the space in the loin into which the kidneys descend during inspiration are fasciculi of the external and internal oblique which rise from the crest of the ilium. When the projection of the iliac crests and the depression of the lower ribs become marked these muscular fasciculi, instead of compressing the loins and assisting the expiratory return of the kidney tend rather to prevent its return by expanding the capacity of the loins In this sexual character is to be found at least one of the causes which render women more liable to kidney displacements than men.

High versus low waists.—It frequently happens that in women who bear evidence of constriction from corsets the right kidney is situated at a higher level than usual, occasionally it may be found completely above the twelfth rib In such cases a long lumbar region has allowed the waist to be formed well below the costal margin, the constriction of the corsets forces the kidney upwards, in short waists on the other hand, the waist is formed at or above the level of the kidney In connexion with the formation of the waist the relative size of the twelfth rib must be taken into account The twelfth rib is more frequently short or vestigial in the female than in the male.

Relationship of the colon to the kidney—Cases have been recorded by Sir Frederick Treves and Dr T J MacLagan and similar cases have been described and discussed by Mr J Hutchinson, jun.,[2] in which a floating right kidney has given rise to obstruction of the bile-ducts In such cases ptosis of the liver and stomach with great elongation of the gastro-hepatic omentum will be found, much like the conditions shown in Fig 14 Besides these derangements three others may be noted when the viscera are exposed by the reflection of the belly wall. 1. The head of the pancreas and duodenum are displaced forwards as well as downwards being almost completely extruded from below the liver 2. The hepatic flexure still attached to the peritoneum over the kidney is displaced downwards in the right loin 3. The lower pole of the right kidney covered by its peritoneum and partially rotated on the renal stalk, protrudes in an interval on the anterior surface of the abdominal viscera, between the liver above, the hepatic flexure below and the duodenum and pancreas to the left. The kidney causes obstruction of the duodenum rather than of the bile ducts In accounting for this condition the relationship of the colon to the kidneys must be taken into account. The transverse colon is so suspended and folded that it may easily accommodate itself to the respiratory movements of the structures in the hypochondria, to the filling and emptying of the stomach, and to its own state of distension. Its mesentery forms a shelf for the liver stomach, and spleen and is pushed downwards if these organs are displaced At each end the transverse colon is fixed closely to the peritoneum over the kidneys by the hepatic and splenic flexures but the part at the hepatic flexure lying just below the liver is less

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[2] The Practitioner February 1902.

adapted for movement than the part below the stomach near the splenic flexure If then there is ptosis of the subdiaphragmatic viscera, or if the colon be overloaded and distended, the peritoneum over the kidneys is drawn downwards and forwards owing to the traction exercised on it by the displaced transverse colon The hepatic segment being the more fixed cannot be depressed without pulling on the peritoneum over the right kidney, thus making a space into which the kidney may be displaced forwards. It is the forward displacement that constitutes a *floating* kidney

FIXATION OF THE INTESTINAL TRACT

Up to this point attention has been directed to the fixation and movements of the human viscera, but now, in seeking to unravel the complicated and peculiar manner in which his intestinal tract is fixed, it is necessary to turn to the scheme of visceral fixation in other animals

Seventeen years ago, from this same chair, Sir Frederick Treves solved many problems regarding the arrangement of the human peritoneum by a reference to the rich field of mammalian anatomy It is most profitable, however, to turn at once to the primates, that order of mammals with which man has been brigaded from ancient times and from the stock of which, if there is aught of truth in the process of evolution, man certainly sprang Point for point, even in minute detail, the abdominal and thoracic viscera of the great anthropoids—the orang, gorilla, and chimpanzee—are fixed in the same manner and situations as in man (Fig 19)

FIG 19

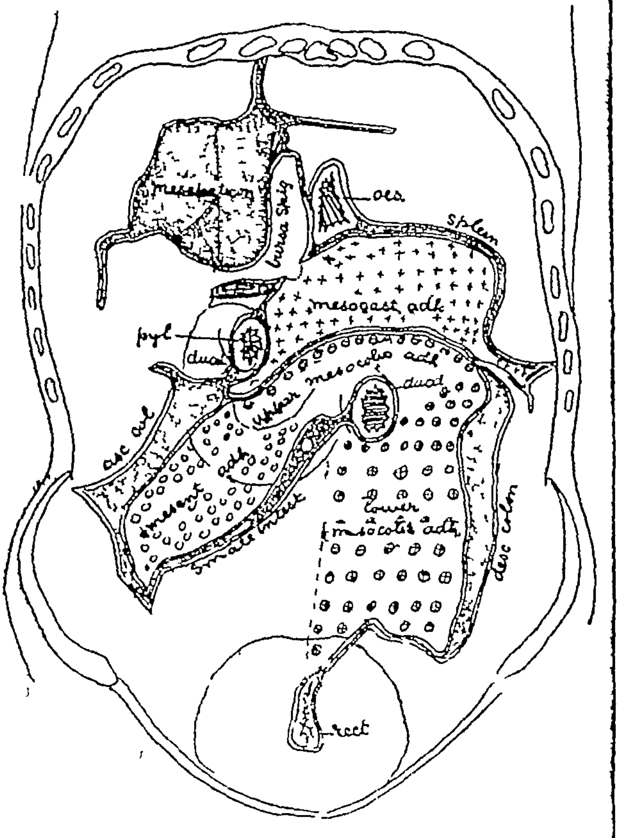

Diagram of the posterior wall of the adult human abdomen showing the areas of visceral fixation Four of the five areas of mesenteric adhesion are represented by distinctive marks: + mesogastric adhesion O mesenteric adhesion Θ upper mesocolic adhesion ⊕ lower mesocolic adhesion

To find a condition parallel to that in the commoner forms of apes or pronograde monkeys one must take the arrangements of the peritoneum found in the child at birth or a little after birth (Fig 20) The manner in which the viscera are fixed in the lowest primates, such as some South American monkeys or in lemurs generally, is morphologically identical with the human condition at the third month of development (see Fig 21) The net result which one brings back from a study of the anatomy of the primates is, that with the evolution of the orthograde posture and orthograde type of respiration, mesenteric adhesions, which appeared one after the other in five different areas, spread out and bound the alimentary tract more and more to the abdominal wall, as the animal became more orthograde in posture. The manner in which the viscera are fixed in man results from his posture and respiration The cells which bring about these mesenteric adhesions fill the broad base of the fœtal mesentery, but how they became sensitive to the new needs of the evolving organism is a problem yet to be solved. The five areas of adhesion referred to above (see Figs 19, 20, and 21) are the following (1) mesogastric, (2) mesoduodenal, (3) mesenteric, (4) upper mesocolic, and (5) lower mesocolic

The mesogastric adhesion (Fig 19)—Although the dorsal mesogastrium is produced into the great omentum in all primates, it is only in man and orthograde primates that its root becomes adherent to the posterior abdominal wall. The cœliac axis marks its original point of attachment, from there the process of adhesion spreads outwards over the left suprarenal body and upper part of the left kidney until it reaches the spleen which is attached to the mesogastrium. In 85 per cent. of children at birth the process of adhesion has extended almost to the outer border of the left kidney, thus binding the spleen to that organ. Since the tail of the pancreas lies in the root of the mesogastrium it also becomes adherent to the posterior wall of the abdomen

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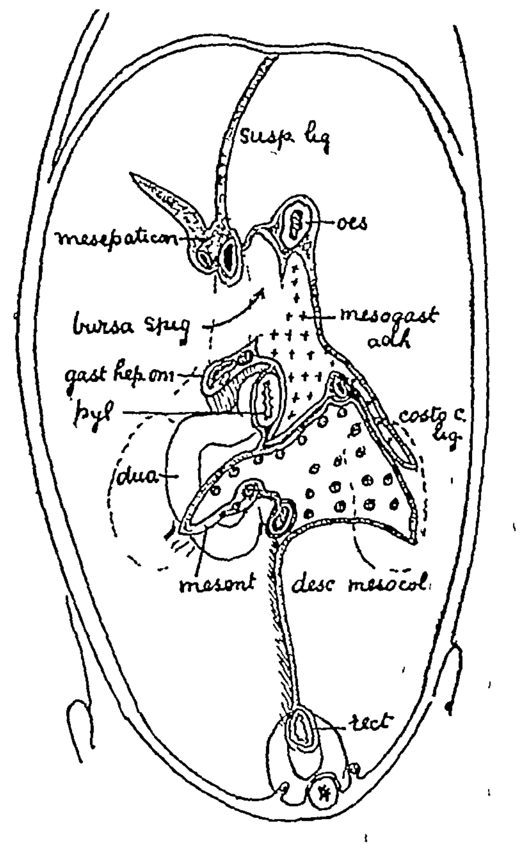
FIG 20

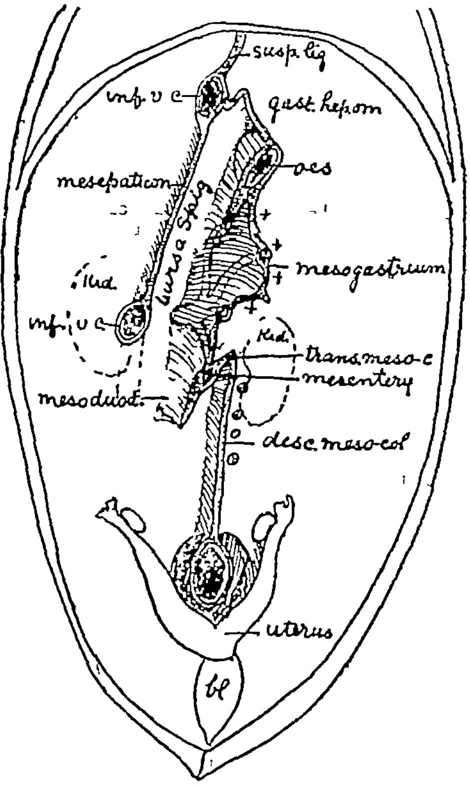


The visceral attacnments and mesenteric adhesions of a pronograde ape (*Semnopithecus cinereus*) The markings indicating the mesenteric adhesions are the same as those used in Fig 19

The lower mesocolic adhesion (see Figs 19, 20, and 21) — The process of adhesion, which leads to the fixation of the splenic flexure to the front of the left kidney and of the descending colon and its mesentery to the left loin, is earlier in appearance than either the mesoduodenal or mesenteric, but later than the mesogastric and upper mesocolic. It is seen only in the orthograde group of primates and is an adaptation to the upright posture The mesentery of the splenic flexure and descending colon is primarily attached in the middle dorsal line along the aorta, being continuous anteriorly with the radix mesenterica and mesentery of the duodenum The process of adhesion, commencing in the base of the mesentery, spreads outwards by a species of growth over the left kidney and left loin until the colon itself adheres to the parietal wall. The process of adhesion proceeds to a variable extent in the mesosigmoid It may proceed down into the iliac fossa and fix closely the upper part of the omega loop there or it may stop short and give rise to the inter sigmoid fossa.

The upper mesocolic adhesion —By this adhesion the transverse colon, the hepatic flexure, and the ascending colon are fixed in position, the cæcum and appendix being developed as protrusions from the bowel have no proper mesenteries This, the primary adhesion of the five is present in all primates and is the most difficult to describe. The important circumstance to remember is that the duodenum and upper segment or cæcal region of the colon are developed at the same time and side by side from the base of the yelk sac, their mesenteries forming one continuous mass Dr Chalmers Mitchell has shown that in birds and mammals alike these two structures—the duodenum and cæcal segment of the colon—are united by a fold of mesentery The duodenum and colon being thus adherent the mesogastrium when it grows out meets with the mesocolon. It is 20 years since Lockwood discovered that when the mesogastrium and mesocolon came in contact the process that leads to their fusion or union starts at their bases and spreads forwards to their visceral attachments. The process of fusion proceeds furthest in man and the anthropoids Further, the great omentum formed by a ballooning of the mesogastrium envelops the whole of the upper segment of the colon. In the human child at birth the cæcum varies widely in position, in seven infants out of ten it was adherent in front of the right kidney or duodenum, in three it lay in the loin and iliac fossa below the kidney The ascending colon and ascending mesocolon are formed as the child learns to walk by an extension downwards into the right iliac fossa of the primary adhesion to the kidney

FIG 21



The visceral attachments in a low primate (*Lemur coronatus*)

Respiratory movements of the transverse colon.—While the hepatic and splenic flexures of the colon are closely adherent to the right and left kidney and accompany them in their respiratory movements, the transverse colon is swung loosely by its horizontal mesocolon and accommodates itself to the free respiratory oscillations of the organs in the subcostal region The transverse mesocolon forms a shelf for the subdiaphragmatic viscera and separates them from the coils of the small intestine. The transverse colon is markedly displaced in cases of enteroptosis, the descent of the subdiaphragmatic viscera carries it and its mesocolon downwards Mr Arbuthnot Lane has called attention to the traction and obstruction exercised on the hepatic flexure in displacement of the transverse colon. The same observation applies to the splenic flexure and seeing how intimately the colon flexures are adherent to the kidneys the displaced colon may also exercise traction on them

The mesenteric adhesion —The adhesion of the mesentery of the small intestine to the posterior wall of the abdomen, in an oblique line drawn from the termination of the duodenum to the cæcum, is a character of those primates which are adapted to the orthograde posture (Fig 19) The mesentery of the small intestine together with that of the ascending and transverse colons, is originally a fan shaped sheet with only its apex attached at the radix mesenterica There it is wedged in between, and continuous with, the mesenteries of the lower colic segment and duodenum. In the human child at birth only the apex and the colic edge of this fan shaped sheet are attached (Fig 20) That attachment forms the root of the transverse mesocolon, but the rest of the mesentery is free. Immediately after birth the process of adhesion, starting at the transverse or mesocolic edge, spreads downwards in the direction of the right iliac fossa. It is not uncommon for this process of adhesion to be arrested at various stages The attachment may fail and the whole of the small bowel be suspended from the radix mesenterica or the ascending colon, and the termination of the ileum may be left free and these parts are then liable to become the seat of volvulus Even when the mesenteric adhesion spreads to its normal extent the radix mesenterica and superior mesenteric arteries are the main intestinal support

Movements and displacements of the small intestine —The small intestines lie in a special peritoneal compartment formed by the mesocolon and great omentum. Under the pressure of the belly walls they support the horizontal subdiaphragmatic shelf formed by the transverse meso-colon This septum cuts off the respiratory movements of the liver, spleen and stomach. Intestinal displacement may be due either to a diminution of the costal part of the body cavity, the subcostal viscera being thus thrust down on the small intestines, or, on the other hand, the support afforded them by the muscular walls of the abdomen may give way Their displacement is then followed by the descent of the subcostal viscera When the intestines are forced into the pelvis, displacing the pelvic viscera, the traction exercised on the superior mesenteric artery and radix mesenterica causes a partial obstruction of the third stage of the duodenum.

Time and space prevent my dealing with the various displacements that overtake the pelvic organs and pelvic wall in cases of enteroptosis On some future occasion I hope to be able to deal with them.

SMALL-POX HOSPITAL FOR GLOUCESTER.—The Local Government Board has sanctioned the application of the Gloucester corporation to borrow £2000 for the purpose of erecting a small pox hospital

BRISTOL MEDICAL MISSION.—The annual meeting of the subscribers to this charity was held on March 3rd under the presidency of Sir Herbert Ashman. The medical report stated that 8750 patients had been treated during 1902 The financial statement was satisfactory One of the speakers stated that nearly one third of the people of Bristol attended the medical charities of the city which he considered was rather hard on the medical profession.

adapted for movement than the part below the stomach near the splenic flexure If then there is ptosis of the subdiaphragmatic viscera, or if the colon be overloaded and distended, the peritoneum over the kidneys is drawn downwards and forwards owing to the traction exercised on it by the displaced transverse colon The hepatic segment being the more fixed cannot be depressed without pulling on the peritoneum over the right kidney, thus making a space into which the kidney may be displaced forwards. It is the forward displacement that constitutes a *floating* kidney

FIXATION OF THE INTESTINAL TRACT

Up to this point attention has been directed to the fixation and movements of the human viscera, but now, in seeking to unravel the complicated and peculiar manner in which his intestinal tract is fixed, it is necessary to turn to the scheme of visceral fixation in other animals

Seventeen years ago, from this same chair, Sir Frederick Treves solved many problems regarding the arrangement of the human peritoneum by a reference to the rich field of mammalian anatomy It is most profitable, however, to turn at once to the primates, that order of mammals with which man has been brigaded from ancient times and from the stock of which, if there is aught of truth in the process of evolution, man certainly sprang Point for point, even in minute detail, the abdominal and thoracic viscera of the great anthropoids—the orang, gorilla, and chimpanzee—are fixed in the same manner and situations as in man (Fig 19)

FIG 19

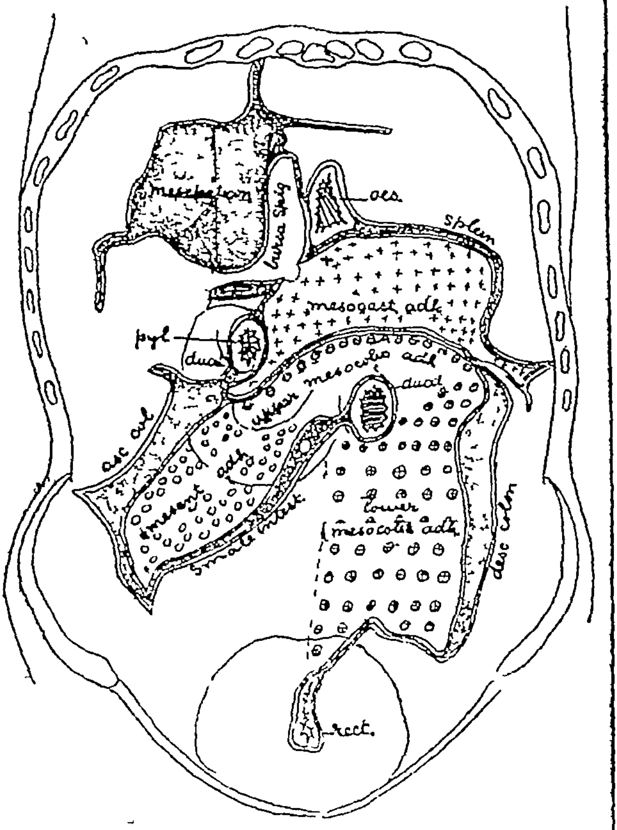


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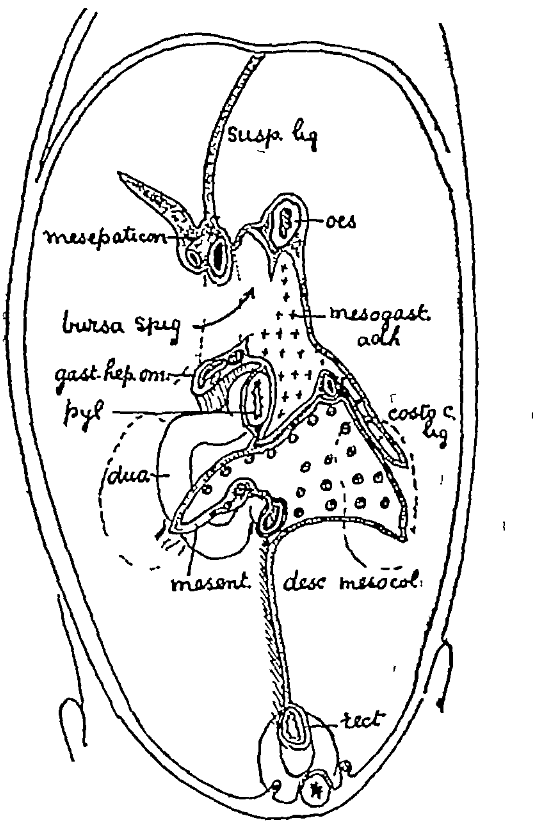
FIG 20



The visceral attachments and mesenteric adhesions of a pronograde ape (*Semnopithecus cinereus*) The markings indicating the mesenteric adhesions are the same as those used in Fig 19 form may remain perfectly well for many years Three months ago I saw a man, aged 62 years, whose urine had a specific gravity of 1036, it contained much sugar, gave no ferric chloride reaction, and he appeared perfectly well. He said that sugar was detected in 1885 and that he had dieted carefully for the last ten years Such a case as this casts doubt on the view that hyperglycæmia is harmful. It is true that many a patient with this form of glycosuria has a little albuminuria and rigid arteries, that he is liable to gangrene or boils, and that he bears operations and illnesses badly, but are not all these, like the glycosuria, to be regarded as evidence of structural and functional decay rather than as due to the glycosuria? However, it must be remembered that the passage of sugar being a loss of energy is in itself harmful, but as the amount of sugar is usually small this loss of energy is generally unimportant. It is strongly in support of the above view that this form of glycosuria is met with chiefly in elderly people. There is sometimes a tendency to treat these alimentary cases too severely It is not necessary to reduce the carbohydrates in the food beyond the point that leads to their disappearance from the urine But the urine should be more carefully examined than is usually the case, for an alimentary lævulosuria[9] has been described. A complete record of such a case, giving the effects of the administration of dextrose and lævulose, would be very valuable and we should like information as to the value of Seliwanoff's test for lævulose.[10] To be strictly accurate we ought to speak of alimentary dextrosuria and alimentary lævulosuria as the case may be. It will be noticed that I have assumed (what I believe to be true) that while many patients with so-called alimentary glycosuria are really in the early stages of composite diabetes, yet others are examples of a much less harmful condition which always remains alimentary glycosuria, never passes on to composite diabetes, and lacks the serious metabolic phenomena of this disease Whether this is so is a very fair subject for discussion.

The occurrence of sugar in the urine due to diseases or injuries of the nervous system is of little clinical interest. It is usually slight and transitory If the nervous lesion causes coma and sugar is found in the urine the case may at first be mistaken for diabetic coma. I was called to a case not long ago in which this mistake had been made, but the failure to find either acetone or aceto-acetic acid in the urine showed the case to be one of nervous glycosuria The patient died from cerebral hæmorrhage and it was found that blood had passed down the iter in the fourth ventricle. Dr A. P Beddard has kindly directed my attention to a similar case[11] in which acetone chanced to be in the urine. Aceto-acetic acid was not looked for but doubtless ferric chloride would have shown its absence. Testing for the ferric chloride reaction will always prevent a mistake between a nervous lesion causing coma with sugar in the urine and diabetic coma.

We now pass on to consider diabetes proper or, as Dr Pavy calls it, "composite diabetes" This may be defined as a disease in which dextrose is present in the blood and urine and in which, if the disease is untreated, ultimately lævo-rotary β hydroxybutyric acid appears in the blood and urine and the output of carbohydrates in the urine is greater than can be accounted for by those in the food. By far the most important sugar in the urine is dextrose but small quantities of lævulose, pentose combined glycuronic acid and other closely allied bodies are sometimes present. We know that there is a great excess of sugar in the blood and that this excess is very largely due, and probably in many cases—at any rate in the early stages—entirely due, to the failure of the body to utilise the sugar, but even in many severe cases the power to utilise sugar is not entirely lost But this is not in all cases the entire explanation of the presence of sugar in the blood for in a severe case of diabetes there may be sugar in the blood and urine even if carbohydrates are entirely absent from the food. Such sugar must come either from proteids or fat and the prevailing opinion is that it comes from the proteids, for, in the first place diabetics do very well on fat and in the next place only a little sugar could be produced even from a large amount of fat.[12] But it is clear that even in a case in which some carbohydrate is present in the food we cannot tell whether some in the blood may not have been derived from the tissues if the patient has not completely lost his power of utilising ingested sugar

The next point of interest is not nearly sufficiently grasped—namely, that many diabetics can utilise lævulose much better than dextrose. Many observers have noted this and I have frequently observed it It is said[13] that a diabetic patient soon loses his power to utilise lævulose, but I know that he may retain it for a long while and by examining the urine we can soon see when he is losing his power. This ability to utilise lævulose suggests that experiments might be made to see whether diabetics can utilise other sugars—e.g, pentose.

I have read many articles on diabetes which contain no reference to the extraordinary fact that, as was pointed out by Dr Pavy many years ago and which I have often observed, a diabetic patient who is on strictly carbohydrate-free diet may, if a little carbohydrate is given, excrete far more sugar than that given This is so important and so little known that I may be excused for quoting word for word from Dr Pavy[14] "The information supplied goes to show that not only may starch and sugar ingested traverse the system unappropriated but that their ingestion may act in such a way upon the complaint as to give rise to the elimination of more sugar than could be derived from the principles themselves Thus after sugar had for some days been entirely absent from the urine under restriction to an animal regimen two ounces of ordinary bread per diem were for a couple of days allowed and then the restricted diet again resumed. During the first day that the bread was taken the patient passed 117 grains of sugar and during the second 196 grains The following day he passed 213 grains, the next 571 then 236 grains, and lastly 92 grains After this there was an absence of sugar By the four ounces of bread the elimination of 1425 grains of sugar was occasioned which is more than could be derived from the bread itself, for I found the whole of the solid matter in the bread consumed only amounted to 1200 grains, against the 1425 grains of sugar discharged in the urine Another point worthy of attention is that the elimination of sugar continued increasing for two days after the bread had been discontinued." Thus we see that the administration of sugar may act as a direct excitant of sugar formation in the body (presumably from proteid) and if in any case some of the sugar taken is utilised we have no means of knowing whether or not some of that in the urine is not derived from the tissues which have been excited to form sugar by the ingestion of carbohydrates No explanation of the carbohydrate metabolism in diabetes will be satisfactory unless this fact is remembered.

Then, again, we want an explanation of the strange disappearance of sugar when coma comes on. This may be of great practical importance. Not long ago I saw with Mr E F White of Putney a patient who was not known to have diabetes she became comatose in the course of influenza and the first specimen of urine examined contained no sugar, but we were put on the right path by finding an abundance of aceto-acetic acid Many years ago I tried giving one or two patients syrup but it had no effect on the coma and they did not live long enough for us to determine whether there was an increased output of sugar

We much need information as to why the body fails to utilise dextrose It has not lost the general power to oxidise—it can use fats, lactates in a diabetic are oxidised to carbonates and benzol is oxidised to phenol. The only explanation which is open to us appears to be that usually offered—namely, that before the sugar can be oxidised it has to be prepared in some way and the diabetic lacks the power to do this Many symptoms —e g polyuria, the high specific gravity of the urine and pruritus vulvæ—can obviously be explained by the presence of sugar, but, as previously mentioned, I think many symptoms are ascribed to hyperglycæmia on insufficient evidence, for instance, we are told[15] that the e ' results of hyperglycæmia consist chiefly in a striking tendency to

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[9] Rosin and Laband Ueber Spontane Lävulosurie und Lävulosämie Zeitschrift für klinische Medicin. Band xlvii Hefte 1 and 2.

[10] Seliwanoff's test is fully described in Rosin and Laband's paper It consists in a bright red colour given after heating an equal part of urine with fuming hydrochloric acid and a little piece of resorcin This reaction is only given by sugars allied to ketones and therefore by lævulose Acetone although a ketone does not give it There is no other test than lævulose which ferments and gives this reaction

[12] Hesse Ueber Eiweissumsatz und Zuckerausscheidung des Schweren Diabetikers Zeitschrift fur klinische Medicin Band xlv Hefte 4 and 5

[13] Socin Wie verhalten sich Diabetiker &c Dissert Strassburg 1894 (quoted by Bunge) Physiological and Pathological Chemistry second English edition translated by F A Starling

[14] Pavy on Diabetes second edition 1869 p 241.

[15] Edsall Proceedings of the Pathological

ON THE PROBLEM OF GLYCOSURIA AND DIABETES[1]

BY W HALE WHITE, M.D, F R C P LOND,
PHYSICIAN TO AND LECTURER ON MEDICINE AT GUY'S HOSPITAL

WHEN I accepted the honour of an invitation to speak at this debate I never dreamed it would fall to my lot to open it. Had I done so I should not have dared to accept, for the subject is so vast and the difficulties are so great.

The first thing that naturally attracts our attention is the recognition of dextrose in the urine. The universally employed copper reduction test is unsatisfactory As an example I may mention that about 20 years ago, when the nervous theory for diabetes was in the ascendant, it was urged in support of it that the urine of lunatics frequently contained sugar Dr G H. Savage and I[2] showed that this was not so, the mistake probably arose from confounding the reduction given by kreatin and the other reducing bodies in the urine with that given by sugar We all know the difficulty in life insurance work of estimating the value of a dirty greenish brown precipitate given by boiling urine with copper solution and an alkali. We have probably all come across people condemned as diabetic who are not and the mistake has arisen either from the use of a stale copper solution or because of an abundance of reducing bodies in the urine which are not sugar Those who are alkaptonuric are usually condemned as diabetic. The polarimeter, fermentation, and the formation of osazone crystals are all excellent tests, but the first requires an expert, the second is tedious, and the third needs time, there may be delay in the formation of the crystals and glycuronic acid also gives crystals which, however, are in rosettes of thick plump needles, not bundles of long needles like those of phenyl glucosazone We want someone to get up and to tell us that he has found a test by which small quantities of dextrose can be detected in the urine as easily as small amounts of albumin. We also want to know more about the appearance of glycuronic acid[3] in the urine. Do some people pass it and later become glycosuric? One case I have seen suggests but does not prove that this may be so A woman whom I saw ten years ago complained of thirst and dry skin, the urine had a low specific gravity (1008), contained no albumin, but gave on many occasions an abundant brick red precipitate on boiling with Fehling's solution It did not ferment. I saw her again a few weeks ago and she is now passing genuine sugar, but the urine does not give a ferric chloride reaction Bearing on this we have Futcher's[4] paper in which he shows that both fusel oil and tertiary amyl alcohol cause both dextrose and glycuronic acid to appear in the urine. Then, too, it appears that some sufferers from diabetes pass a little glycuronic acid and it has even been stated that minute amounts of this acid may be found in healthy urine Indeed, it must be remembered that there is every reason to believe that its appearance depends upon its being provided with something to combine with rather than on any disturbance of carbohydrate metabolism. Have any here present practical experience of Bial's[5] test for it? There is, I think, no doubt that in most cases the presence of glycuronic acid is asserted on insufficient grounds A copper reducing body is found which is not sugar and it is assumed to be glycuronic acid

Allied to this is another subject on which we want further information—namely, that we occasionally see patients suffering from exophthalmic goitre who for a long while pass an abundance of sugar in the urine For example, I saw a patient ten years ago with marked exophthalmic goitre and glycosuria. Her medical attendant writes now to say that the glycosuria persisted for two years, slowly the symptoms of exophthalmic goitre have disappeared, and now she is "practically well." Some authors have maintained that glycosuria is particularly easily induced in patients with exophthalmic goitre, but von Schrötter[6] gave such a patient grape sugar in doses of 200 grammes without any appearing in the urine I have notes of one patient with exophthalmic goitre whose father had diabetes and of another who has two sisters who have diabetes. Probably the fact that polyuria, thirst, and great hunger are frequent symptoms met with in exophthalmic goitre is unconnected with the glycosuria, for they occur independently of it and in support of this is the fact that Dr H French,[7] making observations on a patient of mine with severe traumatic diabetes insipidus, was unable to produce glycosuria even by giving large amounts of sugar

We want information about the occurrence of other sugars than dextrose in the urine Clinically, three appear to be important—lævulose, lactose, and pentose Lævulose I will refer to presently Can any speakers give us definite information about the after history of women who during suckling pass lactose in their urine? It is stated that of those who develop glycosuria during pregnancy recovery takes place in three-quarters, with a tendency for the glycosuria to recur in other pregnancies, but we want to know of the quarter who do not recover—do they become genuine diabetics or continue to pass lactose? Also, we want to know if a quarter is not too high a proportion of those who do not recover, probably it is Very few, if any, observations have been made in England on pentosuria Pentose appears to exist in the urine in two conditions—namely, in association with other sugars in diabetes—as, for example, d'Amato has recently recorded the case of a patient with a pancreatic calculus and diabetes in whom the urine contained both dextrose and pentose—and in very rare cases as an independent condition in which although pentose appears in the urine the patient can utilise pentose. Brat[8] has recently recorded a case of pentosuria in a woman, aged 62 years, whose brother also had pentosuria. Some of the patients with pentosuria were morphomaniacs Is pentosuria found in any large proportion of morphia takers? In passing I should like to suggest that as accuracy of language leads to accuracy of thought we should when we know the sugar in the urine to be dextrose speak of dextrosuria, thus harmonising with lævulosuria, pentosuria, and lactosuria.

Talking of nomenclature leads me to ask for a more accurate use of the word diabetes. Even the use of the additional word mellitus does not help, for many speak of alimentary glycosuria as diabetes mellitus As it is now, if I hear a patient has diabetes I do not know whether he has the comparatively harmless alimentary glycosuria or the dangerous disease diabetes in which he is liable to coma and passes oxybutyric acid and its derivatives in his urine. Fagge was of opinion that the word diabetes should be used only for the severer disease and this would be best, however, I doubt whether now this is possible, but at any rate we might adopt Dr F W Pavy's excellent suggestion and speak of alimentary diabetes and use the phrase "composite diabetes" to indicate the patients who pass sugar and oxybutyric acid and its derivatives, of which aceto acetic acid is recognised by the ferric chloride reaction and acetone by the nitro-prusside of sodium reaction, but the detection of acetone is not nearly so important as the detection of aceto acetic acid, for acetone is often present in persons who have no diabetes It cannot be too strongly urged that no case of sugar in the urine has been even superficially examined unless the ferric chloride test has been employed.

We badly want a series of cases recorded with a view of finding out what proportion of these alimentary cases become composite cases. Some will certainly appear to do so, *for many an apparent* alimentary case is really the early stage of a composite case indeed, Ebstein believes that this is so of all alimentary cases Dr Pavy, too is strongly of opinion that alimentary cases *often* at least later become composite unless properly treated Properly treated, however, a patient suffering from the alimentary cases[23] globules stained with osmic acid were present, but even then there was a quantity of granular matter, and a case I have been recently studying and which I hope soon to publish seems to show that the blood may be of quite a pale strawberry and-cream colour and yet contain no fat staining with osmic acid but a quantity of granules which appear to be proteid precipitated by the presence of an ester of cholesterin with one of the fatty acids. The altered colour of the blood may be easily visible in the retinal arteries and it may slowly pass away as the patient improves

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[1] Being the opening remarks at the debate on Diabetic and Non diabetic Glycosuria at the Chelsea Clinical Society on March 10th, 1903

[2] Transactions of the Pathological Society of London vol xxxiv p 348

[3] See a case by Ashdown Brit. Med Jour vol i 1890 p 167 also Bial Ueber Bildung und Ausscheidung der Glykuronsäure Zeitschrift für Klinische Medicin Band xlvii Hefte 5 and 6

[4] Futcher: Fusel-oil Poisoning with Special Reference to the Copper reducing Substances eliminated in the Urine American Medicine August 10th 1901

[5] Bial's reagent consists of orcin, concentrated hydrochloric acid and ferric chloride, equal quantities of the reagent and of the urine being taken On just raising to boiling pentose gives a green blue colour readily taken up by amyl alcohol and with a characteristic spectrum If boiling is continued glycuronic acid gives the same reaction

[6] Zum Symptomencomplex des Morbus Basedowii, Zeitschrift für Klinische Medicin Band xlviii Heft 1

[7] Guy's Hospital Reports, vol. lvii p 133

[8] H. Brat: Beitrag zur Kenntniss der Pentosurie und der Pentosenreaction Zeitschrift für Klinische Medicin, Band xlvii Hefte 5 and 6.

Turning to the morbid anatomy of composite diabetes we know that the brain, spinal cord and nerves show no naked-eye or histological changes sufficiently often for such to be regarded as the cause of diabetes. I have frequently examined these and the sympathetic ganglia with negative results[24] But speaking of the nervous system reminds us that the explanation of the fact that the knee jerk is absent in 50 per cent. of diabetics is difficult considering how rare other symptoms of neuritis are There are often striking changes in the pancreas During 14 years at Guy s Hospital out of 6702 necropsies the pancreas was diseased to the naked eye in 142[25] and in 19 of these the diseased pancreas was associated with diabetes. An examination of all the fatal cases of diabetes showed that in a quarter naked eye disease of the pancreas was present. In 16 out of the 19 the gland was much atrophied, shrunken, and indurated, and this is, I think, the typical pancreas of diabetes, of the remaining three in one the gland was atrophied as a result of a pancreatic calculus and in one it was large and indurated Hansemann analysing the figures at the Berlin Pathological Institute found in ten years disease of the pancreas with diabetes 40 times and of these cases in 36 the gland was atrophied. There appears no doubt that destruction of the islands of Langerhans is of great importance in connexion with diabetes. A collection of cases by Steele[26] which has been recently published shows this Of course it is well known that diseases which only partially destroy the pancreas do not cause diabetes. Three points on which we want information in this debate are—(1) is alteration in the islands of Langerhans the essential feature of the pancreatic disease which causes diabetes? (2) can we during life tell which cases have and which have not pancreatic disease? and (3) what is the relationship of the internal pancreatic secretion to diabetes?

Passing to the subject of treatment I need not urge the advantages of withholding carbohydrates from the food for by doing so the patient gains strength and weight, and the excretion of sugar and oxybutyric acid diminishes at any rate in most cases but sometimes I have obtained an intense ferric chloride reaction even after weeks of strict diet and even when the sugar has disappeared from the urine. It often seems to me that in many cases dieting has been too strict and as a rule there is at any rate no harm in milk. In any case I would suggest that when diet will not completely control the glycosuria the patient should be allowed just so much carbohydrate as will not increase the sugar in the urine and when diet will control it he should be allowed carbohydrate food up to just below the point at which it leads to glycosuria Lævulose is certainly the best carbohydrate, it may be given up to any quantity so long as it does not cause or increase the glycosuria. Inulin which is the starch corresponding to lævulose, may also be given, it occurs in dahlia tubers and these may be cooked and eaten like potatoes. There is a pernicious belief among some patients that toast may be taken instead of bread. I need hardly say that this is not so. Although there are many reasons against alcohol yet in a severe case advantage may be taken of its energy-yielding power provided it is unsweetened Many cases are probably not allowed enough fat We should all be agreed that too sudden a deprivation of carbohydrates may lead to coma, but why this is we do not know, nor do we understand the undoubted and very important fact that coma is often brought on by exertion worry or mental anxiety Unfortunately we are much in the dark as to the treatment of coma As is shown by cases recorded by Fagge the injection of normal saline solution will sometimes bring the patient out of coma, but he relapses again in a few minutes. Better still is the use of large quantities of alkali If a patient feels a little drowsy it is a good thing to order 100 grains of bicarbonate *of sodium or 50 of the carbonate dissolved in a pint of milk* and for him to drink three or four such pints in the 24 hours. If the coma is deeper a solution of sodium bicarbonate may be injected subcutaneously, so that at least 200 grains are given at the first injection, or I have given it per rectum, but that is much less certain If the case is at all severe, with an abundant ferric chloride reaction but no coma I am accustomed to order some 50 to 100 grains of bicarbonate of sodium to be dissolved in milk and taken during the day From cases I have watched I am certain that this treatment is useful, and I think that it sometimes tides over a time till the good effect of dietetic treatment is felt. It often fails to save life, but then we must remember that it does not stop the formation of the poison. *It is evidence in support of this* view that diabetics often appear to derive much benefit from alkaline waters The bowels of these patients should be kept well open, for by that means we may eliminate some of the poison, possibly the abdominal pain and vomiting which so often herald coma should be interpreted as an attempt to rid the body of the poison by way of the gastro-intestinal tract. There appears to be no doubt that both morphia and codeine can diminish the excretion of sugar, it will be of interest to hear why they are used less than they were. Aspirin is said to act beneficially in some cases, and I hope we may have some evidence for or against it. Dr A. E. Garrod told me of a child, aged seven years who on fixed diet was excreting 30 grammes of sugar a day, she was put on *15 grains of aspirin a day and the excretion of sugar fell,* varying from six to ten grammes After a week the aspirin was stopped and the excretion of sugar fell to two or three grammes a day It must be remembered that aspirin, being a salicylate, will itself give a ferric chloride reaction. I have tried feeding diabetics on pancreas[27] and have injected liquor pancreaticus subcutaneously but without success, nor does the use of Professor Starling s secretin appear to be beneficial. The treatment of the many associated conditions is beyond the scope of these remarks, but I cannot resist asking whether the number of cases of diabetic phthisis has not diminished of late years. I think that it will be found that it has

The last point to which I would direct attention is whether we are not under the word "diabetes" *really describing* more than one disease, for example are some cases due to disease of the pancreas and some not? are those that have so-called fatty blood different from those that have not? are those in which glycogen is present in the liver different from those in which it is absent? In conclusion, I need hardly say I am well aware that in these few remarks many points of great interest have not been touched upon, but as the subject is so extensive I have confined myself to indicating, although very imperfectly, those which appear in the present state of our knowledge to be the more important

THE USE OF SALICYLIC ACID AS A PRESERVATIVE IN FOOD[1]

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In the course of the past two years our opinions have been sought with reference to the harmfulness or otherwise of the ingestion of small amounts of salicylic acid for prolonged periods and we have consequently been interested in making a careful investigation as to the effects produced by this substance, especially upon the nutrition and upon the digestive processes of the economy, for it is mainly upon these that injurious effects are said to have been exerted. We have been the more interested in our endeavours to gain information upon this matter because it has been evident to us that some industries have suffered considerably by the exclusion of salicylic acid as a preservative from their infection and necrosis of the tissues" This may or may not be so, but considering the many ways in which metabolism in diabetes is perverted it appears rash to ascribe these results to the sugar It is almost impossible to resist the temptation of believing that the wasting is due to the loss of energy in the urinary sugar Many diabetics lose 500 calories of energy a day in their urine and it is said that they attempt to make up for this by utilising their proteids and fats and hence they waste But as Bunge points out, this is a teleological argument and I think most of us feel that teleological arguments are dangerous It would be a valuable observation to record the weight and nitrogenous excretion of a diabetic kept on a weighed ordinary diet but absolutely at rest in bed and therefore not requiring the energy lost in the urinary sugar As sugar is chiefly consumed in the muscles it is supposed by some that the fault in diabetes lies in them and it has even been suggested that it is a good treatment for diabetics to do muscular work. Considering the loss of energy in the urinary sugar this hardly seems likely and it would be very valuable to have definite information.

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[23] Sanders and Hamilton: Edinburgh Medical Journal July 1879

[24] Diseases of the Sympathetic, Guy s Hospital Reports, vol. xlvi

[25] Diseases of the Pancreas, Guy s Hospital Reports vol liv

[26] American Journal of the Medical Sciences July 1902, p 71

[27] Brit. Med Jour., March 4th, 1893.

[1] A paper read before the Liverpool Medical Institution on Nov [illegible]th 1902.

In a debate on diabetes much attention must be given to the coma. It is even of greater importance than the glycosuria, for it is the commonest cause of death. At the present time the prevailing view is that the coma is in some way dependent upon the lævo rotary β hydroxybutyric acid which is found in the blood of a patient in diabetic coma It is excreted in the urine and even as much as 119 grammes have been said to be excreted in a day β hydroxybutyric acid exists in three forms[16] as inactive, lævo rotary, and dextro rotary, in the body aceto-acetic acid and acetone are formed from it and we usually infer its presence from finding one of these in the urine The right-handed acid is more easily decomposed in the body than the left-handed which is the acid of diabetes Two views prevail as to the way in which this acid acts to produce coma One is that it or its precursor or its derivatives are directly toxic Sternberg claims to have produced symptoms like those of diabetic coma by administering β amidobutyric acid which he regards as a precursor of β hydroxybutyric acid, but it must be remembered, as Magnus Levy[17] points out, that the amido acids found in the body are of the alpha and not the beta group and, further, I do not think that the animals which were poisoned with β amidobutyric acid by either Sternberg or Grube appear from the written description to have had symptoms very like diabetic coma Nor have these symptoms been satisfactorily produced by the administration of hydroxybutyric acid, aceto-acetic acid, or acetone, and, further, these bodies may be present without diabetic coma. The other view is that the hydroxybutyric acid, acting merely as an acid, diminishes the alkalinity of the blood, neutralising its sodium phosphate and carbonate, and hence the acid interferes with its power as a carrier of carbon dioxide, and the carbon dioxide consequently retained in the tissues is supposed to be the cause of the coma. About two facts there is no doubt. First, there is much oxybutyric acid in the blood and its alkalinity is much reduced By distilling the urine with strong sulphuric acid crotonic acid is formed if oxybutyric acid is present, the presence of the acid has been in this way demonstrated by various observers and also in the last two cases of diabetes under my care. In both these as many have found in other cases, the ammonia excreted in the urine was excessive and Herter[18] points out that the calcium and other bases in the urine are much increased when oxybutyric acid is present, showing that the lessened alkalinity of the blood has led to the calling forth of these bases from the tissues and by estimating the ammonia and other bases in the urine he believes we can approximately learn the quantity of oxybutyric acid in the blood As aceto-acetic acid is a derivative of oxybutyric acid we usually roughly infer its presence by the ferric chloride reaction Secondly, there is no doubt that the carbon dioxide content of diabetic blood is abnormally low, as shown for example by Kraus[19] My friend Dr E I Spriggs has kindly allowed me to give some results which he has obtained in the physiological laboratory at Guy's Hospital working with Dr Beddard and Dr M Pembrey The gas estimations of the blood from cases of diabetic coma gave from 14 to 23 volumes of carbon dioxide in 100 grammes of blood instead of from 40 to 50, the figures found for normal venous blood The alkalinity of the serum varied from 0 04 gramme of sodium hydrate per cent to 0 06, the normal being from 0 1 to 0 15. The blood of two diabetics who were not comatose was examined and it contained 24 and 33 volumes of carbon dioxide, so it was less than normal but not so much less as in the comatose cases. The carbon dioxide content of the urine, too, was diminished. But it has always seemed to me a far cry to argue that because there is little carbon dioxide in the blood therefore it is retained in the tissues, for blood could probably carry away in simple solution enough carbon dioxide to prevent toxæmia of the tissues by carbon dioxide, and this is quite supported by what Dr Spriggs tells me, for he and his fellow experimenters found that blood from a case of diabetes can absorb carbon dioxide about as well as ordinary blood, thus on passing carbon dioxide through diabetic blood it took up from 200 to 300 volumes per cent. of carbon dioxide This appears to show that the lack of carbon dioxide in the blood is not due to inability of the blood to take it up but may be owing to a low tension of carbon dioxide in the tissues in diabetes and especially in diabetic coma. Therefore it appears that in diabetes there is a poison which has two effects—namely, the production of coma and the lessening of the carbon dioxide in the tissues What this poison is we do not know That it merely acts as an acid is, I think, judging from experiments doubtful, but there is considerable evidence that it is closely associated in some way with oxybutyric acid (although, as already mentioned, it is very doubtful if oxybutyric acid itself, its known derivatives, or amidobutyric acid are the poison), for oxybutyric acid is always abundantly present both before and even more during coma.[20] This view that the poison is in some way closely allied to oxybutyric acid, is strongly supported by the fact that sometimes coma is benefited by giving alkalies. I have seen distinct benefit follow and Magnus-Levy records an excellent case, but as this treatment in no way destroys the poison or prevents its formation, at best only neutralising its acid properties, we must expect it often to fail, as, indeed, it does. It is interesting in this connexion to learn that Dr Spriggs did not find that the injection of alkalies increased the carbon dioxide content of the blood in two fatal cases of diabetic coma, which is what we should expect if we are right in believing that the carbon dioxide in the tissues is far below normal. I might in passing add that he found that in the last stages the administration of alkalies did not diminish the proportion of ammonia in the urine.

Much discussion has taken place as to the origin of the β oxybutyric acid It does not come from carbohydrates, for it may be present when they are withheld from the food and are absent from the urine. Until recently it was thought to come from proteids, now some suggest it is derived from fats, and again Magnus-Levy suggests that it is formed by breaking down of both fats and proteids.[21] If it does come from proteids the metabolism which leads to it is probably different from that leading to sugar, for a strong ferric chloride reaction may be present in the urine even after sugar has quite disappeared I have noticed this in children and if oxybutyric acid is derived from proteid we learn that, at any rate, not the whole of the abnormal proteid metabolism is to compensate for loss of energy in urinary sugar Until we know the source of oxybutyric acid we shall probably not know how to avoid coma Grube[22] believes it is likely to appear if butter is taken but not after pork This hardly seems likely considering how well diabetics take butter There seems no doubt that casts often appear in the urine in enormous numbers especially before coma. It will be of great interest if we can learn something of their origin and prognostic value

The sugar and oxybutyric acid in the urine are not the only evidences of perverted metabolism, for sometimes the blood is of a peculiar salmon or strawberry and cream colour, a fact quite ignored by many who write on diabetics. Usually the blood is said to be fatty Some analyses have shown a considerable amount of fat and in some of the published test-tube and all three were placed in a water bath at 40° C. After 12 hours a considerable amount of digestion had taken place, that in tube No. 1 was slightly greater than in the others. That in the tube containing salicylic acid and that in the tube containing NaCl were practically the same.

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[16] McKenzie: The Resolution of β Hydroxybutyric Acid &c. Journal of the Chemical Society November 1902, p 1402.

[17] Magnus-Levy: Archiv für Experimentelle Pathologie und Pharmakologie Band xlv Hefte 5 and 6

[18] Herter Lectures on Chemical Pathology

[19] Lubarsch und Ostertages Ergebnisse &c. 1895 Band ii

[20] Herter: Acid Intoxication of Diabetes in its Relation to Prognosis, Journal of Experimental Medicine vol v, No 6 1901. Magnus-Levy op cit.

[21] Op cit.

[22] Grube: Zeitschrift fur Diätetische und Physikalische Therapie Band vi Heft 2.

As regards the influence of salicylic acid on pancreatic digestion it must be borne in mind that the latter cannot take place in an acid medium. The addition of a trace of vinegar, of citric acid, or even of the hydrochloric acid secreted by the stomach will arrest it, and we know that the pancreatic juice is strongly alkaline and neutralises the acid contents of the stomach when they enter the small intestine. It would therefore be absurd to put salicylic acid into an artificial pancreatic digestive fluid, so we experimented with salicylate of sodium in quantities equivalent to 0·2 per cent. of the acid, using the method advised by the late Sir William Roberts for estimating the strength of amylolytic ferments and we have ascertained that salicylic acid in neutral solutions has absolutely no retarding effect whatever on the conversion of starch by the amylolytic ferment of the pancreatic juice.

We may sum up this part of our paper by stating that we have found that salicylic acid exerts about the same retarding influence on the digestive processes as do many articles, such as kitchen salt, which are always present in a mixed diet.

It is generally admitted by physiologists that the digestive enzymes such as pepsin and the ferments of the pancreatic juice act most energetically in distilled water to which the appropriate acid or alkali alone has been added and that the addition of other substances of almost any kind has a more or less retarding influence on their activity. It is obvious, however, that the *former* condition can never obtain in natural digestion, the diet of civilised man contains a multitude of ingredients most, if not all, of which would probably be found to delay artificial digestion. The question therefore is not whether salicylic acid delays digestion at all, but whether it does so to a greater extent than other bodies, such as kitchen salt, which form part of an ordinary diet.

We must point out that in making our experiments on digestion we have always given the benefit of the doubt to our opponents and have employed the strongest solution of salicylic acid which can be made in the cold, a condition which never could be present in the stomach. It is obvious that, even if the individual drank only beverages saturated with salicylic acid they would *soon* be diluted by the gastric juice, but, as a matter of fact, any beverages which we have encountered containing any such proportion of the acid were meant to be freely diluted with water before they were consumed. We *further* submit that the taste of salicylic acid is so pungent that no article which contained it in a proportion approaching one grain per ounce would command a sale unless it was intended that it should be freely diluted with water before consumption.

The second problem which we have to consider—viz., the effect produced by salicylic acid upon nutrition—is one that cannot very well be elucidated by laboratory experiments and we have felt that the only practical method of investigation was to take *it ourselves and to give it to others. One of* us took a dose of five grains of the pure acid every day for a month without any ill health ensuing and a smaller quantity given to children every day with their dinners (in a food-stuff known to contain it) certainly did them no harm. They remained as bright and active as ever and underwent no wasting. This we regard as a more convincing test than observing the result of administering to young animals milk saturated with salicylic acid. In the first place salicylic acid has a strong taste and cats are notoriously *sensitive* to an unaccustomed flavour in their food and we doubt whether the animals which have been the subjects of these experiments really took the milk provided for them at all. If this were so they lost weight from starvation and *not from* the salicylic acid which they did *not* take. In the second place salicylic acid was mixed with all the food which was given to the animals, so that the proportion of salicylic acid to their total ingestion was enormous. No one has proposed that preserved foods should constitute the sole or even a large portion of a dietary.

It is a curious circumstance that insects do not appear to be harmed by taking salicylic acid dissolved to saturation in syrup. Binz refers to its beneficial action in the case of bees when affected by 'foul brood,' a highly contagious disease caused by a microscopic schizophyte which apparently attacks the insects both internally and externally. Whole hives become infected by this fungus and become putrid. It has been found that if the bees are fed with syrup containing about 0·16 per cent. of salicylic acid the disease completely disappears and the insects recover their normal activity and vigour.

Lastly, we have to consider whether salicylic acid causes any injury to the gastro-intestinal mucosa and a very few words will serve to dispose of this question. In the first place it is well known that in the early days of the treatment of acute rheumatism with the salicylic preparations large doses of the acid were employed, but no indications of irritant poisoning are recorded. Kolbe, for instance (quoted by Binz), while *directing* attention *to its strongly antiseptic* qualities states that it is not poisonous to human beings and in proof of this he took himself and gave to other persons from 1·0 gramme to 1·5 gramme—i.e., from 15 to 23 grains—a day, in some cases for nine months together, without apparent injury, and we have already mentioned that we have observed no ill-effects from taking it ourselves or from administering it to other healthy individuals.

The objection that salicylic acid is injurious to mucous membranes appears to be based on the circumstance that it is destructive to epidermic structures when applied to them in concentrated form. We must direct attention to the fact that hydrochloric acid, acetic acid, &c., in their pure forms are not only irritant but intensely corrosive, if a drop of pure hydrochloric acid, which is a *far* stronger acid than salicylic acid, were put upon the mucous membrane of the stomach it would destroy it, and yet this acid diluted to 0·2 per cent., which is the same concentration as that of the salicylic acid found in some food stuffs, is essential to digestion, which *cannot go on* without it.

We have found another objection put forward to the use of preservatives which when reduced to the form of a syllogism is as follows:—

> Antiseptics kill protoplasm (in bacteria),
> The human cells are protoplasm,
> Therefore antiseptics kill the human cells.

It might be sufficient to reply that when the antiseptic enters the body it becomes *so much diluted that its action on* the protoplasm of the body would become infinitesimal, but a more complete answer is found by pointing out that there is a fallacy in the argument consisting in the assumption that a substance which has a deleterious action on one kind of protoplasm must act detrimentally on all kinds. Not only is there no proof of this assumption but we have strong evidence to the contrary. Among bacteria themselves there is great diversity. Some micro-organisms require oxygen for their growth while others are killed by it. Most forms of life are destroyed by arsenic, yet there is a fungus which grows in solutions of that poison. Quinine is potent to destroy the protozoa of malaria even when enormously diluted in the blood, we are not aware that it has ever been shown to act deleteriously on the normal cells of the human body. Fresh air and sunshine give vigour to all the higher forms of life, they are fatal to the germs of tuberculosis and of other diseases.

There is *one aspect of the question of the use of pre*servatives in food which has not received the attention which it deserves and which we desire especially to emphasise. As we have seen, authorities differ as to the harmlessness or otherwise of antiseptics, but they are all agreed as to the harmfulness of food in a state of decomposition. Now with regard to such luxuries as preserved fruit, non-alcoholic wines and similar articles of diet, it is clear that if the poorer classes who form the bulk of the population in our great cities are to be enabled to enjoy them they must not only be produced at a moderate cost but must be put on the market in a condition in which they can be used economically. Even if we grant that such articles as fruit juices could be sterilised without impairing their flavour and dietetic value it is clear that they would begin to decompose very soon after they were opened and the inevitable waste would be a bar to such articles being used. Further, there would always be a doubt as to whether or not the substance had gone bad and we should constantly be meeting with cases in which it had been consumed after it had gone too far. In short, we hold that it is safer to have a little more antiseptic than is absolutely necessary rather than to have too little.

It is hardly necessary to say that the stronger wines, such as port and sherry, can be used economically, owing to the manufactures, and because on sifting the evidence which has been given in various courts and before Parliamentary committees we have found that its foundations have been of the vaguest description, often depending less upon actual observations upon the results of taking salicylic acid itself than upon the results of taking other antiseptics which are supposed to be stronger or weaker—whatever these terms may mean Thus we have heard it argued that salicylic acid is ten times stronger than carbolic acid as an antiseptic, implying that it is equally or more toxic, and the natural inference would be that because 20 grains of carbolic acid cannot be taken without doing harm therefore 20 grains of salicylic acid could not be taken without doing as much or more harm which, of course, is absurd In fact, it has been so obvious that no definite evidence of harm having come of the prolonged administration of salicylic acid has been obtainable and the arguments adduced in support of its harmfulness have been so indirect and so misleading, that we make no apology for bringing this matter before our professional brethren.

In a Parliamentary inquiry one expects to find direct evidence bearing upon a matter of this kind which is of vital importance both to the public and to the manufacturer, but we have searched through the recently issued Blue-book only to discover conflicting evidence and an inconsistent "finding" that one grain of salicylic acid per pint or per pound is permissible in food stuffs We can find nothing to explain how this permissible strength was arrived at or why two, three, ten, or more grains per pint should not be used No distinction is made between the amount allowed in a pint of cider or other food stuff taken in large quantities and that permitted in a pint of any material of which perhaps only an ounce or two or even less, would be taken at a time

Some of the witnesses frankly admit that salicylic acid can be taken in doses of from five to 15 grains without any harm resulting The majority of those who are opposed to its use as a preservative are content to assert that its use, as such ought not to be permitted, without alleging any special harm which could be expected to arise. Dr J S Cameron, however, commits himself to the positive statement that it is a ' frightful depressant," but allows that injuries alleged to have followed the use of small doses were due to impurities Dr W H Corfield thinks that it is cumulative but admits that he has had little practical experience of its administration. The most elaborate attack on its use as a preservative is that of Dr J Dixon Mann, and as his is a fair sample of the kind of evidence on this point which was accepted in the inquiry we make no apology for quoting it at length He says (2611) "Last year in the summer, at lunch in the club, I took to drinking cider, and I got an acquired taste for the cider and continued taking it for many weeks I began to feel a peculiar tendency to looseness in the bowels not a diarrhœa, but a distinct looseness in the bowels, furthermore, I felt never, as it were, thoroughly relieved after motions This went on for a time and I could not understand how it was. I thought it was accidental in the first place, but it kept going on week after week I did not care to take any medicine and I began to cast about for what possibly could be the cause of it. I went over the things I had been in the habit of taking and the things I was taking at the time. I could not think of anything until it struck me about this cider, so I ceased taking the cider and in two days I was all right. I got a bottle of the same sort from the steward of the club, took it to my laboratory and found salicylic acid in it and, needless to say I have not taken cider since "

With regard to this evidence we take the liberty to point out that cider is a drink which cannot be taken with impunity by everybody and that symptoms such as those which have just been described are not uncommon among those who visit it, and take the drink of the cider making counties. We certainly have never heard of or experienced similar symptoms from the taking of salicylic acid itself or of the food stuffs which we have known to contain it. It is obvious that to establish the conclusion that it was the salicylic acid in the cider and not the cider itself which caused the symptoms complained of it would be necessary to make control experiments by taking the same quantity of salicylic acid without cider for some days and by taking cider free from salicylic acid for a similar period

It is not our intention on this occasion to approach this subject altogether in reference to the Sale of Food and Drugs Act, there are points in connexion with that Act which have a purely legal bearing For instance, we find that magistrates have not been satisfied with the evidence that salicylic acid is an injurious substance, and cases fought on this ground have been dismissed, so that now prosecutions are often based upon the fact that the foods preserved with salicylic acid are not of the nature, substance, and quality of the article demanded by the purchaser, although the law provides that an offence shall not be deemed to have been committed where any matter or ingredient not injurious to health has been added to the food or drug because the same is required for the production or preparation thereof as an article of commerce, *in a state fit for carriage or consumption and not fraudulently to increase the bulk, weight, or measure of the food or drug, or to conceal the inferior quality thereof*

We have found that it is contended that salicylic acid is injurious to health for three principal reasons (1) that it is an antiseptic and anti fermentative and is therefore liable to interfere with the digestive processes by destroying the digestive ferments, (2) that after absorption it is apt to injure the general health and to interfere with nutrition, and (3) that it is an irritant and is therefore apt to injure the mucous membrane of the stomach and intestinal canal. It will be convenient, perhaps, to consider the results of our inquiries under these headings, but, in the first place, although it should hardly seem necessary, we would point out that the greatest confusion has arisen through the use of the term "anti fermentative" which has been very loosely applied by those who have given evidence concerning this class of food preservative. In nearly every case it has been asserted that because salicylic acid is an antiseptic and anti fermentative it therefore of necessity interferes with digestion, and it is very generally inferred that because it undoubtedly in virtue of these qualities prevents decomposition, bacterial infection, and alcoholic and other kindred fermentations due to organised living bodies, it must therefore prevent the activity of the fixed or chemical ferments in the body which have for their function the transformation of starches into sugars and of proteids into peptones, or, in other words, which constitute the processes of digestion. In short, the objectors make no distinction between the processes of digestion on the one hand and those of putrefaction and fermentation on the other

In this inquiry we have nothing to do with the organised living ferments, these are certainly killed by salicylic acid and its efficacy as a food preservative depends upon that very fact, but we have found that the digestive processes will proceed in the presence of the acid even in a solution of 1 in 500 which is practically saturated.

Our first experiment was made with pepsin which, if active, should dissolve 2500 times its weight of hard boiled white of egg and the Pharmacopœia provides the following test for its activity If 12 5 grammes of coagulated and firm white of egg, 125 cubic centimetres of acidulated water containing about 0 2 per cent. HCl and 0 005 gramme of pepsin be digested together at 105° F for six hours and shaken frequently, the coagulated white of egg should dissolve leaving some flakes in the solution. Having ascertained the activity of a specimen of pepsin by this experiment we repeated it in two flasks each containing the above specified ingredients in their proper proportions but to one of the flasks 0 250 gramme of pure salicylic acid (which had previously been dissolved in eight cubic centimetres of boiling water) was added and at the end of six hours it was found that in the flask containing salicylic acid there was only a small amount of white of egg left, none being left in the other flask. This experiment was repeated three times and after one of them the residues were weighed, when it was found that there was a difference of not more than 0 024 gramme

To confirm the conclusions indicated by the Pharmacopœial test we have carried out the peptic digestion of albumin in the manner recently introduced by Mett brought to our notice by Professor Moore of University College, Liverpool The albumin to be acted on is coagulated in a glass tube open at the ends and the activity of the digestive process is readily estimated by observing the extent to which the albumin is dissolved from one end of the tube, preferably the upper end Three test-tubes were employed No 1 contained 1 per cent of pepsin dissolved in 0 2 per cent. of HCl in distilled water, No 2 contained the same with the addition of 0 2 per cent. of salicylic acid, and No 3 contained the same as No 2, only 0 2 per cent. of NaCl was substituted for the salicylic acid. A piece of Mett's albumin tube was added to each

TABLE I.—SHOWING THE CASES IN WHICH ORGANISMS WERE DEMONSTRATED IN THE BLOOD BEFORE THE USE OF ANTI STREPTOCOCCIC SERUM

	Nature of disease.	Under care of—	Blood examination during life.	Commencement of treatment and amount of serum used	Result.	Observations	Reference.
1	Sepsis from ear suppuration.	Low and Ballance.	Streptococci in the blood one cubic centimetre of the culture killed a rabbit in 48 hours	Begun at a week from onset 263 cubic centimetres in six days on one day 67 cubic centimetres.	Recovery	Drowsy and moribund.	THE LANCET March 19th 1898, p 779
	Puerperal.	Nathan Raw	Streptococci in the blood and in the placental tissue	From the fifteenth day 60 cubic centimetres in four injections		Unconsciousness temperature of 106° F pulse of 146.	THE LANCET July 9th 1898, p 81
3	Erysipelas		Streptococci swarming in the blood.	From about the sixth day 80 cubic centimetres in four days		—	Ibid.
4	Mastoid abscess and meningitis.	"	Streptococci in the blood	Within a few days 50 cubic centimetres in all		Prolonged illness	Ibid
5	Puerperal.	"	Streptococci in the blood and discharge	Within a week 50 cubic centimetres in all.		Periostitis and pyæmia.	Ibid
6			Staphylococcus aureus and albus in the blood and discharge streptococci absent	Only one injection of 20 cubic centimetres of anti streptococcic serum.	Died Post mortem staphylococci but no streptococci were present	Mixed infection	Ibid.
7	Middle-ear disease, with pyæmia.	Ramsay	Streptococci numerous with a few staphylococci on the fifteenth day no organisms on the twenty-eighth day	From the fifteenth day 255 cubic centimetres in eight days.	Recovery	Rigors and secondary abscesses	THE LANCET Oct 22nd 1898, p 1056
8	Pyæmia from the throat.	Wilde	Streptococci in large numbers in the blood which afterwards disappeared Slough in the throat with pure streptococci	From about the fifteenth day 345 cubic centimetres in nine days 10 cubic centimetres every four hours at first	"	Convulsions coma.	THE LANCET Feb 11th 1899 p 373.
9	Puerperal.	Grimsdale.	Streptococci in the blood on two occasions	From the ninth day 150 cubic centimetres in 15 days		No local treatment	THE LANCET Jan. 21st 1899 p 165.
10	"		Streptococci in the blood.	From the ninth day 170 cubic centimetres in 22 days.	"	Illness of about four weeks. No local treatment.	THE LANCET Sept 9th 1899 p 719
11	"	Lea.	Streptococci in the blood	From the tenth day	Died	Death on the thirteenth day	THE LANCET August 12th 1899 p 445
12	Septicæmia.	Bonney	? Gonococci in the blood	420 cubic centimetres in 17 days	Recovery	Probably gonococcal septicæmia.	THE LANCET June 2nd, 1900 p 1591.
13		Coleman and Wakeling	Streptococci in the blood.	10 cubic centimetres every four hours at first free use for 20 days		Delirium with a temperature of 104·6° F	Brit Med Jour vol. ii. 1896 p 647
14	Lymphangitis	Bokenham.	Streptococci and other organisms in the blood.	From the third day 102 cubic centimetres in four days	Died.	Mixed infection.	Brit Med Jour vol. i. 1897 p 1277
15	Puerperal.	Parrott.	Streptococci in the blood	From the third day irregularly 60 cubic centimetres in ten days.	"	—	Brit. Med. Jour., vol i 1901, p 145

by rigors high temperature, sweats rapidity of pulse, and delirium. The fact that so many patients have recovered from such a state when combined with living streptococci freely present in the circulation would undoubtedly point, I think, to the great value of treatment by this serum when applied under proper *conditions—that is to say* when it had been previously shown that streptococci and not other organisms were present

In Table II is a list of cases of malignant endocarditis in which the serum was used and in which an attempt was made to identify the organisms present Any evidence afforded by Table II. would at first sight seem to be unfavourable to the serum treatment, but it should be remarked (1) that several records with favourable issue are not included in the table, as, although very possibly examples of malignant endocarditis, the nature of the organism or the involvement of the valves remained uncertain, (2) that in many of the cases the serum was really inapplicable on account of the infection being either a mixed one or due to other organisms than streptococci (as in Cases 6 7 8 9 10, 11, and 16), and (3) that in those associated with pure streptococci some of the failure may be attributed to the small dosage employed, to the irregularity of its administration, and to the late date at which it was begun, more especially if it be recognised that there is at first probably a general septicæmia with subsequent infection of the valves.

It may be that malignant endocarditis, with streptococci present not only in the blood but, as a colony, in the vegetations bathed by the blood stream, is beyond the power of serum treatment in most instances, but examples such as Nos. 1 and 13 and, perhaps, 5 and 15 would seem to prove that this is not inevitably so, cases moreover, certainly vary much in the rapidity of their course and in virulence One would urge, therefore, that an earlier examination of the blood should be made in a suspicious case with irregular temperatures not amenable to ordinary treatment and that the examination should be a thorough one, not merely of a drop or two of blood, but of half a drachm or a drachm, incubated in sterile bouillon at the earliest moment, and that if streptococci be then found, freshly prepared 'polyvalent" serum should be used very freely and continuously in doses of 10 or 20 cubic centimetres twice a day It will be seen that in some of the cases recorded in Table I which ended successfully the amount of serum injected was very large indeed.

Moreover, as it is clear from all the more recent records large amount of antiseptic—namely, alcohol—which they contain, and the need for antiseptics, such as salicylic acid is largely due to a commendable desire on the part of a large proportion of the public to have wholesome and agreeable beverages free from the risk of the moral and physical evils which too often attend the use of alcoholic drinks

We desire to make it clear that we are not now discussing the recommendation of the Commission that the law should be altered so as to require manufacturers to state the nature and amount of the preservative, whatever it may be, which is present in certain articles sold. The practical point at issue between us and the Commission is that the latter, though allowing the use of salicylic acid would limit it to one grain per pint, while we maintain that if a larger proportion is necessary for the manufacture and preservation of the article there is no valid reason why it should not be employed It is scarcely necessary to insist on the fact that if a preservative is to be used some articles will require more of it than others and it by no means follows that the article most difficult to preserve is the least valuable and nutritious Thus, to take an extreme case, let us suppose that there is a demand for a temperance beverage with a flavour of raspberries Such a beverage can be produced in a variety of ways It may be prepared by pressing out the juice of raspberries with such additions as are necessary to render it sufficiently fluid and agreeable to the taste, or it may be prepared without the help of any fresh fruit at all, using a chemical body, the so called essence, to give the distinctive flavour It is clear that the latter being free from nitrogenous matters will be much more easily preserved than the former, though the former would certainly be the more agreeable beverage and would approach much more nearly to the characters of natural fruit We are convinced that one effect of the arbitrary limitation of the amount of preservative allowed will be to force manufacturers of the so called non alcoholic fruit wines and other temperance beverages to employ artificial flavouring bodies prepared in the laboratory instead of the natural juice of the fruit One noted firm, harassed by successive prosecutions has written to us as follows "We are now in the strange predicament of being compelled to discontinue the use of the nutrient article and use a substitute rather than that an antiseptic be used. But the game of fighting when, win or lose, one cannot recover expenses, is too one sided to be interesting, especially as the other will pay us at least quite as well." We have also good authority for alleging that another result of these prosecutions is to set manufacturers to work to discover antiseptics which cannot be recognised by the analytical chemist and we are informed that such an antiseptic is already employed by one firm. It is surely in the interests of the public that an antiseptic should be employed the presence and amount of which can be determined and the properties of which are generally known rather than one which cannot be detected when it is present and of the properties of which we know nothing

To refute a popular error is often a thankless task, to refute an error sanctioned by tradition and authority will generally excite obloquy and opposition. When, however, an error is maintained as if it were the result of the deductions of the most enlightened scientific investigations and is supported by names eminent in science and medicine the task of opposing it is not alone thankless and unpopular but is likely to be stigmatised as retrograde and reactionary Nevertheless, we have felt it to be our duty to place on record our conviction that the allegations which have been made against the employment of salicylic acid as a preservative in moderate quantities cannot be maintained. We challenge the opponents of its use to bring forward a single instance in which it can be shown that bodily injury has resulted from its employment in such a manner, and we deny that in the proportion in which we have met with it in articles submitted to us for examination it could be taken by any rational beings to such an extent as to do them any harm whatever We further maintain that the use of this substance enables manufacturers to place on the market wholesome, agreeable and inexpensive articles of food which form an acceptable and beneficial variety in the diet of persons who cannot afford more costly luxuries and which, above all, supply the place of intoxicating drinks This is the position which we maintain and we state it after mature consideration and with, we trust, an adequate sense of responsibility

CONCERNING ANTI-STREPTOCOCCIC SERUM AND ITS USE IN MALIGNANT ENDOCARDITIS

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THE therapeutic value of injections of anti streptococcic serum may be said to be still uncertain. This seems to be due, in great part, to the indiscriminate way in which it has been tried and the results have been recorded It appears to be established, by laboratory experiments, that this serum (1) is of such a nature as to be of value against streptococci only, and probably only against that variety or those varieties of streptococci by means of which it had been prepared, and (2) that it leads to the destruction of these organisms and does not merely neutralise toxic products, as does anti diphtheritic serum, for example, in the case of diphtheria—that is to say it is directly or indirectly germicidal and not antitoxic in its action In order to demonstrate the value of this treatment, therefore, it should be shown that the above conditions have been fulfilled. In most examples recorded of its use this has not been kept in mind

Many striking recoveries from grave conditions of sepsis treated by injections of anti streptococcic serum are to be found, but they are chiefly puerperal cases evidently due to sapræmia resulting from the absorption of toxins from the foul interior of the uterus, and their recovery may as properly be attributed to the local measures of disinfection adopted as to the subcutaneous injections of the serum Others are, in similar fashion, complicated by the presence of a local abscess, subcutaneous, about the appendix, or in connexion with the ear also amenable to direct local treatment Others, again, are most probably a general infection with gonococci, which, though severe, often recover under ordinary general treatment.

The evidence in favour of the serum treatment in the case of erysipelas is, perhaps, more convincing, as that disease is known to be associated with streptococci of some variety or of particular virulence and the treatment is usually only applied to severe cases But one would like to know whether the graver general symptoms met with in certain examples of this disease are due to the circulation of cocci in the blood stream, as, if so, the serum treatment would be the more clearly indicated and cases of recovery would be the more striking

As regards malignant endocarditis, local treatment of the valves is unfortunately impossible and the only way, during life, of proving the presence of streptococci is by finding them in the blood and the only strict proof of the efficacy of the serum treatment, or of its failure, would be by recovery of the patient after thus finding them or by displaying them after death in the blood and in the vegetations The examples of malignant endocarditis treated with this serum appear to be few and the number investigated in this manner to be very few It is possible, of course, that some cases ending in death, although examined for bacteria, have not been published and this is to be regretted.

In this connexion it seemed that it might be of interest to collect and to analyse the cases of treatment by anti streptococcic serum published, or alluded to, in THE LANCET and in the *British Medical Journal* during recent years (from 1896 to 1901 inclusive) They amount to between 100 and 110 in number, including more than 70 recoveries, and on reading them it is difficult to avoid coming to the conclusion that the injections really contributed greatly to the favourable results recorded, but as no examination was made in most cases to show the presence or absence of streptococci in the blood stream, nor even in the local condition, these cannot be adduced as very strong evidence of the value of the serum treatment, nor can the deaths be attributed to its failure In a few cases streptococci were shown to be present in the local condition, *although the blood* was not examined during life, and here the evidence in favour of the injections is more conclusive. In 13 cases streptococci were found during life, even in the blood stream, as shown in Table I

It is almost impossible by means of a table to convey an impression of the gravity of these latter, but, as might be expected, they were all severe and were marked often that these subcutaneous injections produce no serious symptoms, if it result that the examination of the blood be negative (as often happens) this fact should not, perhaps, be held to contra indicate the employment of the serum in a case with symptoms of sepsis and implication of the heart, especially if there is a probability from collateral evidence, such as the history of any external suppuration or dental caries or ear disease, or of absence of gonorrhœa or pneumonia, that streptococci are really the organisms concerned Of course, merely an ill defined systolic murmur, with an irregular temperature, does not constitute such a case. At the same time, it is obvious in Table II that staphylococci, either by themselves or together with streptococci, frequently cause the infection (see Cases 6, 7, 8, 9, 10, and 11)

It may perhaps be worth considering whether an anti staphylococcic serum, if such be procurable, should not rather be used in an indeterminate case or be used in conjunction with anti streptococcic serum. The only example of the use of anti staphylococcic serum in these conditions which I have come across is that of Moritz[1] and the patient recovered, but the diagnosis of the organism present had not, I believe, been confirmed previously by a blood examination, although the evidence of implication of the valves seems to have been certain.

If any conclusions, therefore can be drawn from these two tables they would, perhaps, be (1) that the gravest symptoms, combined with streptococcic infection, even of the blood stream, are not incompatible with recovery if treated by injections of anti streptococcic serum, (2) that this is true also in malignant endocarditis, but that here the chances are probably less favourable on account of the colony of micrococci involved in the vegetations in constant contact with the blood stream, (3) that in malignant endocarditis staphylococci are frequent, or a mixed infection of staphylococci and streptococci, and (4) that if an examination of the blood be negative it would be prudent, therefore, to use injections of anti staphylococcic together with anti streptococcic serum

Gloucester-place, W

HOW TO PREVENT THE SPREAD OF PELLAGRA IN EGYPT[2]

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IT is now ten years since I first discovered the presence of pellagra as a frequent accompaniment of ankylostomiasis among the poorer peasants of Lower Egypt Since then I have seen 1000 cases, most of which have passed through my wards at Kasr el Aini Hospital. Thanks to the courtesy of Dr J Warnock I have also had the opportunity of visiting most of his pellagrous patients in the lunatic asylum, who number about 40 every year These figures are sufficient to show that the disease is prevalent among hospital patients, the poorest members of whom live on diseased maize, which they eat at home because it is too bad to command a price in the local market By far the greatest number of hospital patients are men between the ages of 20 and 40 years, when they ought, of course, to be in the prime of life, working as agricultural labourers or serving their country in the police, the army, or in other ways. I have never yet found a single patient who was acquainted with the disease or who understood that an eruption of the skin was the outward sign of a chronic disease of the brain and spinal cord.

The ignorance of pellagra in Egypt is so great that I thought it would be interesting to examine some of the labourers actually at work in the fields to see if any of them showed signs of the disease. In June, 1902, I examined 315 men living in 11 different villages in the province of Gharbieh, 114 of them or 36 per cent., showed signs of early pellagra. In one village where the inhabitants are especially well to-do because they get regular pay throughout the year from the Domains Administration there were only 15 per cent. of pellagrous men, while among the men of the village which has the reputation of being the poorest the percentage rose as high as 62. Yet all these men stoutly denied that they had anything the matter with them and the overseers in charge of them stated that the pellagrous could all do a fair day's work On the same day I examined 23 young girls who were working at the threshing floor or picking eggs off the cotton plants and again I found that 30 per cent. of them were already pellagrous On a previous occasion I had examined 139 presumably healthy peasants in the province of Sharkieh and had found 50 per cent. of them to have pellagra If these figures are in the least typical of the state of the male inhabitants in Lower Egypt it is quite time that something should be done to disseminate information on the subject and gradually to teach employers of labour and peasants that the early symptoms of the disease can easily be recognised, that they will then yield to treatment, but that, if neglected, the symptoms are of a progressive nature and will end in insanity or in general debility which entirely unfits the individual for work I venture to recommend that the village authorities of Lower Egypt (mudirs, omdehs, sheikhs, &c.) should be informed by the usual methods of the Ministry of the Interior that good maize is an excellent food but that the habitual use of bad maize produces a disease affecting not only the skin but also the digestive and nervous systems There are many other points connected with improvement in hygiene, but it seems useless to insist on these so long as we have to deal with an agricultural population which is entirely unable to read

The number of markets where maize is sold is so great in Lower Egypt that it is impossible at present to make any proposal for inspecting them, though I think that the local authorities might be informed that it is improper to allow obviously diseased maize to be exposed for sale But it is not the worst maize which finds its way to the market, for the worst samples cannot command a price It is the poorest peasants who are the chief offenders, for at the end of each year their custom is to take, in lieu of some of their wages, a piece of land which they cultivate for themselves with a crop of maize. The most careless of them sow diseased maize seed, gather the crop before it is ripe, store it in damp places before it is properly dried and worst of all, preserve the cobs within their sheaths in order that the sheaths may protect the grain from being eaten by the *Sitophilus granarius* I have several times laid stress upon the fact that it is the inhabitants of Lower Egypt who require special protection in this matter Their maize crop in 1902 is calculated by the Ministry of Finance at nearly 900 000 acres The peasants in Upper Egypt are equally poor and equally ignorant, but they are saved from pellagra with certain exceptions because their staple diet is not maize but millet. The maize crop of Upper Egypt is about 100,000 acres, of which nearly half is grown in the Fayoum.

There is one other question which should not be neglected and which could be easily regulated by the Government. I refer to the maize imported for consumption in Egypt from other countries especially from those which we know to be affected by pellagra, such as Roumania and Turkey All imported maize should be examined in Alexandria before it is allowed to be sold in the market there.

Cairo

THE ETIOLOGY OF SLEEPING SICKNESS[1]

(PRELIMINARY NOTE.)

BY ALDO CASTELLANI, M.D FLORENCE.

SEVERAL germs have been described as the cause of sleeping sickness Cagigal and Lepierre in 1897 announced that they had isolated a bacillus from the blood of a patient suffering from sleeping sickness, which when injected into animals was able to reproduce the disease, but these experiments of the two Portuguese medical men were not confirmed later by Brault and Lapin. Next, Marchoux, basing his statements on the following observations, is of the opinion that sleeping sickness is due to Fränkel's diplococcus. At the post-mortem examination in a case of sleeping sickness where the patient was suffering also from

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[1] Moritz St-Petersburger Medicinische Wochenschrift 1898

[2] A paper read before the Medical Congress held at Cairo from Dec. 18th to 23rd, 1902.

[1] A paper read before the Royal Society and published in THE LANCET by request.

TABLE II —MALIGNANT ENDOCARDITIS IN WHICH ANTI STREPTOCOCCIC SERUM WAS USED AND IN WHICH AN ATTEMPT WAS MADE TO IDENTIFY THE ORGANISMS PRESENT

Case	Nature of disease	Under care of—	Blood examination during life	Commencement of treatment and amount of serum used	Result	Observations	Reference.
1	Endocarditis	Sainsbury	Streptococci in the blood before treatment absent afterwards	10 cubic centimetres every other day from two months after onset 70 cubic centimetres in 18 days	Recovery	Alteration in murmurs	THE LANCET Oct. 17th 1896 p 1079
2	"	Fox	No bacteria found in the blood but examination made after 12 injections of serum	20 cubic centimetres daily from about the twenty first day 160 cubic centimetres in 10 days	Died	Streptococci in vegetations	THE LANCET Feb 20th 1897, *p* 520
3		Pearse.	No bacteria in the blood but examination made after 16 days of treatment	Up to 20 cubic centimetres daily from about the fourteenth day 100 cubic centimetres in 11 days	Recovery	Alteration in murmurs and pericarditis	THE LANCET July 10th 1897 p 92.
4	"	Washbourn.	No bacteria found in the blood.	20 cubic centimetres daily from about the sixth week (?) 1030 cubic centimetres in 60 days	"	Development of basic diastolic murmur	THE LANCET Sept. 18th 1897 p 707
5	"	Michell Clarke.	No bacteria found in *the blood*	30 cubic centimetres *daily from about (?)* the sixth week 232 cubic centimetres in all.	"	Illness of three months variation of murmurs temperature of 103° F	THE LANCET July 21st 1900 p 168
6		Abram	Streptococci and staphylococci in the blood	10 cubic centimetres daily of anti streptococcic serum 100 cubic centimetres in 10 days	Died	Streptococci had disappeared post mortem but staphylococci were present	THE LANCET Feb 25th 1899 p 515
7	"	Rogers	Streptococci in pure culture in the blood on two occasions	10 cubic centimetres daily from two months only 50 cubic centimetres used	"	Staphylococci with streptococci present post mortem	THE LANCET June 10th 1899 p 1558.
8	"	Lermitte and Fox.	Staphylococci but no streptococci in the blood	10 cubic centimetre doses of anti streptococcic serum 149 cubic centimetres in seven days	"	Vegetations not examined for bacteria.	THE LANCET Nov 4th 1899 p 1225.
9	"	Mackie	Two colonies of cocci in the blood	20 cubic centimetres daily *from* the twenty first day 180 cubic centimetres in nine days	"	Staphylococcus albus in the vegetations and spleen post mortem	Brit. Med Jour vol i 1899 p 142.
10	"		Staphylococcus aureus in the blood sputum and urine	20 cubic centimetres of anti streptococcic serum one injection only given		Staphylococcus aureus in pure culture post *mortem acute case*	Ibid
11	"		No examination of the blood	20 cubic centimetres only one injection used	"	Vegetations with short streptococci and some staphylococci post mortem mixed infection	Ibid
12	"	Ewart	Blood examination negative.	80 cubic centimetres in seven days from eighth day after embolism	"	Development of aortic diastolic murmur Rapid case Vegetations not examined post mortem	Brit. Med Jour vol ii 1900 p 906
13		Laignel and Lavertine	Short streptococci and a few staphylococci in the blood	20 cubic centimetres daily from the fourteenth day	Recovery	Diffused systolic murmur	La Presse Médicale, Paris 1897 tome iii. p 193.
14	"	Cavafy	Streptococci in pure culture in the blood	10 cubic centimetres every other day from the seventeenth day (?) only 120 cubic centimetres in all in 20 days	Died	Streptococci almost pure in vegetations and *blood post* mortem	St George's Hospital Medical Register 1898 No 556.
15	Septicæmia and probably endocarditis.	Ewart	Streptococci in the blood	From about a month after the onset 200 cubic centimetres in 21 days	Recovery	High temperature sweating thrombosis of the veins swelling of the joints systolic murmur which disappeared	St George's Hospital Medical Register *1898, No* 1020
16	Endocarditis	Owen	No examination of the blood.	23 cubic centimetres in all in the last week of life Indefinite onset of illness	Died	Streptococci in the vegetations and the blood with many diplococci (? pneumonic) post mortem	St George's Hospital Medical Register 1900 No 1605
17		Rolleston.	No bacteria found in the blood	From about six weeks after onset 30 cubic centimetres in all in 11 days	"	Vegetations on the valves pure streptococci in the spleen cerebral and other embolisms post mortem	St George's Hospital Medical Register 1900 No 65
18	"	Curnow	Streptococci in the blood	150 cubic centimetres in all		Diplococci from the heart post mortem	Lumleian Lectures 1898 (Sir *R D Powell*)
19	"	Cooper and Ogle	Streptococci in pure culture in the blood	Not before the sixth week 110 cubic centimetres in 27 days	"	Aortic, diastolic and changing mitral murmurs hectic temperature and embolism	Brit Med Jour vol. i 1902.

single members present much larger dimensions and sometimes (as Stoltz has already observed in streptococcus lanceolatus *Centralblatt für Bakteriologie*, Band xxiv , S. 337) they present the form of a club.

3. *Gelatin.*—The description given is not to be changed.

4 *Agar*—As regards the agar stab, I do not modify anything

Agar streak.—Instead of the description I gave I would put simply the following The growth is generally much more vigorous than the typical streptococcus pyogenes and the streptococcus lanceolatus, the colonies showing a marked tendency to coalesce. Still in some cases the growth may be much more delicate than usual and the colonies may remain separate.

5. *Bouillon*—I have nothing to change, but I would add the following The bouillon tubes presenting a general cloudiness at a microscopical examination show chains and diplococci forms sometimes diplococci forms only

6 At the end of the paper, where I make the differential diagnosis between my streptococcus and the other varieties of streptococci, I have written in my note that the streptococcus which I have described is differentiated from the streptococcus lanceolatus because it grows well on gelatin , *besides, in the agar cultures of my germ I have never seen the dew drop like appearance of the agar culture of the streptococcus lanceolatus* I should perhaps like to omit from my note the last sentence, which I have italicised, or at least to modify it, because some recent experiments have shown me that the agar cultures of my germ may show in *rare cases and special circumstances* (very old agar, &c.) a certain likeness to the agar culture of the streptococcus lanceolatus. Besides, I think, the fact that my germ grows well on gelatin is quite sufficient to distinguish it from the streptococcus lanceolatus

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Entebbe.

ON PROLAPSUS UTERI, WITH SPECIAL REFERENCE TO AN OPERATION FOR REPRODUCTION OF THE SACRO-UTERINE LIGAMENTS[1]

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[After quoting part of a paper by Mr F Bowreman Jessett which appeared in the May number of the Journal of the British Gynæcological Society in 1901 on the same subject and thus pointing out that to that author belonged the credit of previously devising and publishing an operation upon the sacro-uterine ligaments, Mr Stanmore Bishop said —]

But while this is the case the procedure which I advocate and which I desire to bring forward now differs from the one which Mr Jessett describes not only in some points of technique, but essentially in its aim and in the result produced. Mr Jessett seeks to produce, and succeeds in producing a return of the uterus to its normal level in the pelvis and fixes it there—fixes the cervix to the sacrum behind and the fundus to the abdominal wall in front. So long as the adhesions which he makes between the structures hold good the uterus is rigidly retained in position and I conceive is unlikely ever again to prolapse but the aim and result of his operation are firm fixation with little or no movement afterwards of the organ so fixed The aim of the operation which I am about to describe is quite different. It is to obtain, as nearly as possible, a *return to the normal condition* I should like to emphasise this phrase "a return to the normal condition' because I believe that we have a right to expect such a return at the present time in these cases. It is to be noted that we have to deal in this deformity not with the ravages of disease, leaving behind them alterations in structure which render such a return impossible, or with actual losses of tissue which cannot be replaced, but with the results of injury or traumatism, which are not necessarily followed by either of these—which leave the parts affected in new relations to one another, it is true, but beyond this in most cases but little altered intrinsically and therefore simply necessitating the repair of the results of such injury in order to restore the patient to the *status quo ante*, and this I believe in the majority of instances to be perfectly practicable.

Therefore we need first of all a definition of the *normal* uterus and I offer this as practically useful for the purposes of this paper The normal uterus is one which is free to move in every direction within certain limits but not beyond, and which is capable of development in all its parts during a succeeding pregnancy In order to make what follows clearer permit me very briefly to draw attention to some points in the anatomy of this region The general anatomy is, of course, perfectly well understood, but there are certain things upon which fresh light has lately been thrown and these are, I think worth consideration The uterus is a muscular body with muscular offshoots, ending in tendons the latter blending with the periosteum of the pelvis at four points of which the two anterior are nearly opposite to the two posterior These muscular offshoots are much longer in proportion to their width and so permit of the free movement of the uterus within certain well defined limits. They are the true ligaments of the uterus, and by their periosteal attachments they support the uterus at a normal level and prevent prolapse. These true ligaments are the round or fundo-pubic ligaments in front and the sacro-uterine, sacro-genital, recto-uterine, or retro-sacral—for by all these names they are described by various authors—ligaments behind. Attached to and swinging from, the periosteal insertion of these true ligaments to the bony pelvis, the uterus is free to move within certain limits but not beyond It is also perfectly free to develop in all its extent during pregnancy If we wish to restore the uterus to a normal condition we must therefore so act as once more to leave it *free to move within normal limits, but not beyond, and to develop in its whole extent during any succeeding pregnancy.*

I need say nothing of the round ligaments. Their anatomy, position and use are all perfectly well understood, but it may surprise some that I should describe the sacro uterine ligaments as musculo-tendinous offshoots of the uterus In old works on Anatomy and in most of later date, these ligaments are figured and described as mere folds of peritoneum In "Grey's Anatomy," last edition, 1901, they are still so described. In the eighth edition of 'Quain's Anatomy" there is exactly the same description, but this is altered to some extent in the last, the tenth edition, edited by Schäfer and Thane. In this, after describing the fold of peritoneum, it is said "This fold contains a variable amount of fibrous tissue and some non striped muscular fibres forming the utero-sacral ligament."

Schultze, in 1888, in his work on "Uterine Displacements," p 2, says "These folds of peritoneum [referring to the folds of peritoneum surrounding the uterus] contain muscular bands arising from or inserted into the uterus and in the ligamenta rotunda and ligamenta Douglasii, at the anterior and posterior edges of the folds these bands are particularly well developed From the posterior surface of the uterus, a little below the junction of the cervix to the body of the organ, the muscular bands in the folds of Douglas pass to the lateral parts of the sacrum, nearly at the level of its second vertebra. The upper, so-called posterior, insertion of these muscular bands varies considerably, though it would seem that they always lose themselves in the muscular wall of the rectum and in the subserous connective tissue. The anterior or lower insertion is formed by some muscular fibres from each side coalescing behind the uterus and forming a single unique muscle, called by Luschka the musculus retractor uteri In the gravid or puerperal uterus the normal hypertrophy of the muscular tissue of the uterus extends to that of the folds themselves " But undoubtedly the best account of them is to be found in a paper contributed to the January number in 1902 of the *Journal of Anatomy and Physiology* by Professor Dixon and Professor A. Birmingham. They say "The sacro-genital ligaments are two bands of mixed fibrous and muscular tissue which pass from the region pericarditis he found Fränkel's diplococcus in the exudation of the pericardium. It is worth noting that he found the germ in the pericardium only and not in the cerebro spinal fluid or in any other situation In a second case complicated by chronic rhinitis and suppuration in the sinus frontalis the secretion of the nose showed the same micro-organism. Besides these two observations, to which I do not think a great amount of importance can be attached, Marchoux was brought to this hypothesis by having noticed that sleeping sickness sometimes developed in people who had suffered from pneumonia.

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[1] A paper read before the British Gynæcological Society on Dec. 11th 902.

Lately there have been the bacteriological researches of the Portuguese Commission and those of Dr Broden The Portuguese describe a germ (a diplo streptococcus, to use their denomination) which they state they have found constantly in the cerebro-spinal fluid at the post-mortem examination of their cases They state that they have also found the same organism in patients during life constantly in the blood of cases examined for this purpose and very frequently in the cerebro-spinal fluid taken by lumbar puncture. The characteristic of their organism is that it does not usually grow on the ordinary culture media like agar, glycerine agar, &c, and not at all on gelatin The Portuguese do not mention having made any attempt to see if the blood of patients suffering from sleeping sickness has any agglutination power on their germ

Dr Broden, director of the bacteriological laboratory at Leopoldville, describes as the cause of the disease a bacillus which is slightly motile, producing a pellicle in bouillon and growing abundantly on potatoes He was able to find the germ constantly in the blood of all his patients The bacillus was not agglutinated by the blood of patients suffering from sleeping sickness

In this short note I propose to give only a brief account of my experiments and researches. I must state first that I have never been able to find any of the germs described by my predecessors but, on the other hand, I have found an organism which I think I have good reasons to consider to be the cause of sleeping sickness I have grown it with absolute certainty (and always pure) in eight out of ten post-mortem examinations, from the cerebro-spinal fluid, and from blood of the heart taken with aseptic precautions. *In vitâ* I have found it only once in the blood, but I have grown it in two cases out of three from the cerebro spinal fluid removed by lumbar puncture.

Description of the organism.—The germ may be considered as a distinct variety of the streptococcus group The microscopic appearance is very variable, depending on the different media on which the germ has been cultivated and on the different times of growth, &c, all transitions from long chains to typical diplococci being seen The form and size of individuals are also, within certain limits, variable Frequently about the chain and the diplococcus forms well defined mucoid capsules (*Schleimhullen*) are seen, and in hanging drop preparations the short chains and the diplococci forms show a well marked Brownian movement.

Staining properties —It is easily stained with the ordinary solutions of the different aniline dyes

Cultivation —*Gelatin* —Growth occurs very well on gelatin at a temperature of about 22° C and also below In a stab culture the stab is generally thread shaped, although sometimes it may appear a little granular, the surface growth is very slight. In streak cultures the colonies coalesce, forming a mass with a fine granular surface and sometimes wavy borders In some few cases after five or six days I have noticed a very slight liquefaction of the gelatin.

Agar —In a stab culture growth takes place luxuriantly along the stab, the surface growth being generally more delicate. In streak cultures in most cases the growth is very vigorous, the colonies not remaining separate but coalescing into a whitish mass with granular surface and wavy borders. In none of the cultures is the typical growth of the streptococcus pyogenes seen—viz., the collection along the stab of small circular semi translucent discs, which show a great tendency to remain separate. Still, in rare cases—especially if the agar is old—the growth may be much more delicate and the colonies may remain separate. The water of condensation shows, as a rule, a slight whitish deposit

Glycerine agar —The growth is the same as on agar, but rather more delicate.

Sugar agar —There is no gas formation.

Litmus agar —The colour of the medium does not change

Potatoes —There is very slight growth, sometimes none.

Bouillon —The appearance of bouillon cultures varies greatly In the majority of cases the bouillon remains clear and there is a flocculent and sometimes sandy sediment. In these cultures one generally finds long chains on microscopic examination. In some cases the bouillon is cloudy, with little or no sediment, and in cultures of such an appearance microscopical examination will often show the cocci arranged in pairs and in short chains. The same strain of germ sometimes will make the bouillon cloudy and sometimes not. I once inoculated a tube of bouillon from an agar culture and obtained a bouillon culture with no turbidity and with a well marked flocculent sediment. Two weeks later I inoculated another tube of bouillon from the same agar culture, but this time the bouillon became cloudy and the sediment was very slight. In a strongly alkaline bouillon it is easy to obtain a diffuse cloudiness. The same observation has been made by Waldvogel with other varieties of streptococci.

Serum —There is good growth, but more delicate than in agar

Milk.—There is no coagulation. This is an important character of differentiation from the streptococcus pyogenes, as well as from Fränkel's diplococcus, both of which produce coagulation (Kruse, Pansini Lehmann)

Relation to oxygen —The micro-organism is a facultative anaerobe.

Agglutination.—Experiments have just been begun to determine if the germ is agglutinated by the blood of patients suffering from sleeping sickness. The experiments are still too few for one to come to any definite conclusion, but as far as they have gone the results have been very satisfactory

Conclusions —From the description just given I think that this germ must be considered a new variety of streptococcus. Every bacteriologist knows how difficult it is to differentiate sharply the varieties of streptococci on account of the numerous transition forms that occur, even a sharp separation between the streptococcus pyogenes and the streptococcus lanceolatus[2] (Fränkel's diplococcus) seeming to many observers to be impossible Still, I think that the streptococcus I have found may be regarded as a distinct variety The cultivation on gelatin is sufficient to differentiate it from the streptococcus lanceolatus, as the latter does not grow at all, or only very badly, on that medium. Besides, the agar cultures of my streptococcus have not the dew drop-like appearance of those of the streptococcus lanceolatus. It is differentiated from the streptococcus pyogenes by its much more vigorous growth on all media, and especially on agar, by the tendency of its colonies to coalesce, and by the non coagulation of milk. As regards the diplo-streptococcus of the Portuguese I do not think any confusion can arise The Portuguese state that the culture of their germ generally failed every time on the usual media like agar, gelatin agar, &c and with gelatin they never succeeded in obtaining cultures

The streptococcus that I have described grows very well on gelatin and on all the other usual media. This character differentiates the organism also from the streptococcus intracellularis (diplococcus intracellularis of Weichselbaum) which does not grow at all, or very badly, on gelatin, and also, according to some observers (Lehmann), on cow serum.

My experiments are not complete and they are not yet numerous enough, still, having grown my germ (always pure) in eight out of ten post-mortem examinations and having grown it from the cerebro spinal fluid taken *in vitâ* by lumbar puncture in two out of three patients and having also had, as far as I have gone, very satisfactory results as regards agglutination, I think that I am not wrong in stating that according to all probability the cause of sleeping sickness is to be looked for in this germ. I think that this organism is a distinct variety of streptococcus, to be classed between the streptococcus pyogenes and the streptococcus lanceolatus (Fränkel's diplococcus), and it might be called the streptococcus of sleeping sickness

Additions and Modifications to my Preliminary Note.

1 Counting the last post-mortem examination I have grown the micro-organism in nine out of 11 post-mortem examinations.

2 *Microscopical appearances* —To be added, the following In old cultures involution forms are produced, frequently

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[2] I follow the classification and nomenclature of Lehmann (Lehrbuch der Speziellen Bacteriologischen Diagnostik)

as a last resource and operations were planned and instruments such as the old hernia knife and dissector were constructed for that one all important purpose—to avoid opening the peritoneal cavity Naturally in those days no attempt was made to interfere with the ligaments and all operators busied themselves with attacks upon the uterus through the one avenue open to them—the vagina—and upon the one structure with which they believed that they could safely deal—the vaginal mucous membrane. It was not then a question as to what was the ideal treatment, it was a question of what was possible under the then existing conditions

When an attempt was first made to shorten elongated and lax ligaments, those the ends of which lay outside the peritoneum and could be dealt with without invading that cavity were naturally the first to be attacked and the operation for shortening the round ligaments was devised. In cases of retroversion or retro-flexion it has done extremely good work and will continue to do so, but it is curious to note that the importance of the genito-sacral ligaments was fully recognised by Alexander himself who instituted this operation, although he and those who followed him made no effort to deal with them by operation In his Practical Gynæcology,' p 61, he says "The Hodge or the Hodge and stem, according to the nature of the case, are always introduced just before the operation is commenced. The Hodge should be fairly large so as to push the cervix well back and relax the posterior uterine ligaments. The stem is removed at the end of the third week. Where there is a weakened perineum a tendency to cystocele or rectocele or distinctly relaxed retro-sacral (*sic*) ligaments the perineum must be fortified at the same time that the round ligaments are shortened or a Hodge's or other pessary as an inferior support will require to be permanently worn.'

Useful as this operation on the round ligament is in cases of retro-deviation, its inefficiency in cases of prolapse and procidentia is evident *a priori* from the very conditions of the problem involved, and is equally evidenced in practice by the numerous fixations which have been in vogue of late years. A pull from the uterine cornu towards a fixed point in the pelvis on the same or but very slightly higher level can never raise the whole body of the uterus to any great degree, still less if the posterior supports are gone can it raise and carry backwards the cervix. It will then simply draw the uterus forwards towards the pubes and so place it in a still more favourable position for further descent, and, recognising this, surgeons who had overcome by that time all dread of an open peritoneum seized the uterine body and drawing it bodily forwards and upwards, fixed it to the nearest point which offered resistance, the abdominal wall above the pubes But such ventrofixation materially interferes with the proper development of the anterior uterine wall in any subsequent pregnancy and so it became a matter of great importance to show patients who in spite of this had carried a fœtus to full time development. Several such cases are now on record, but whilst it has thus been shown that such a result is possible, cases are also on record in which abortion has occurred repeatedly, others in which the resulting parturition has been greatly impeded, and others in which death has resulted. It is human nature that successful cases should be emphasised and that those which have ended badly should be frequently unreported The more honour to those authors who have faithfully recorded their failures but none the less the departure from a normal condition induced by this operation and its results stands out clearly No operator who has performed a ventrofixation, and still less the practitioner to whose unlucky lot it may fall to attend a patient through the succeeding period of irregular dilatation of the uterus during pregnancy and the equally risky parturition can feel happy or secure until this severe test is well over however triumphant they may appear afterwards. If nothing nearer to a return to the *status quo* is possible, the method with all its drawbacks may in some cases be justified—in women past the child bearing period, for instance—but if better methods can be carried out, methods which attain more nearly to a restitution of the prolapsed organ to its original position and condition, then the supposed necessity of this plan loses its *raison d'être*

I have myself performed a large number of ventrofixations and besides the objections already mentioned another has been strongly impressed on my mind. The portion of abdominal wall to which the uterus has been attached, although relatively a fixed point, is not so absolutely Months after the fixation has been carried out the area of fixation will be found to have sunk inwards, having been drawn backwards and downwards by the weight of the attached organ, which will have sunk again to a much lower level than that at which it appeared at the time of operation to be located, so that the final result is, even so far as the mere elevation is concerned, not so satisfactory as at first would seem to be the case. The bladder in many of my cases also was compressed to some extent, its capacity was decreased, so that the patients were troubled by undue frequency of micturition and an inability to restrain themselves for any length of time when desire to urinate arose.

I do not mention vaginofixation except to condemn it. I have practised it in one case but should never again attempt it The principle upon which it is based is, to my mind, false and its results, so far as I have seen them, are deplorable

There is, moreover, one comprehensive objection to all these operations and a very forcible, if not a fatal, one. Consider for a moment the symptomatology of this condition. In the very earliest period of prolapse and increasing *pari passu* with it pain and a sense of dragging weight are felt in the lumbo-sacral region. The uterus as it descends usually becomes more bulky and many of the discomforts experienced are attributed to its increased weight This is doubtless true but for the full explanation I conceive that we must go still further back. The nerves of the uterus are derived from the inferior hypogastric and spermatic plexuses of the sympathetic system, both of which lie on the posterior concave wall of the pelvis behind the peritoneum and closely applied to the periosteal surface, as well as from the third and fourth sacral nerves of the spinal system So long as the cervix maintains its normal position with regard to the posterior pelvic wall so long there will be no tension upon these nerve filaments but immediately that position is altered by the rupture of the genito-sacral ligaments which keep the cervix in due apposition tension on these nerve fibres will commence and increase with every degree of departure from its normal proximity to the sacrum.

Again, the veins which return the blood from the uterus—the uterine veins—follow the course of the uterine arteries. Now it is well known that traction upon the uterus in a downward direction will so kink and narrow these arteries that section of the uterus may be made through its entire extent without loss of any appreciable amount of blood so long as that traction is kept up though the cut surfaces will bleed freely if the uterus is allowed to resume its normal position. The less resistant and much thinner vein wall will be still more easily affected by descent produced by any cause. As the blood current in them is delayed hyperæmia of the organ must necessarily ensue and the uterus become heavier still. Such increased weight leads to increased obstruction and a vicious circle is formed, escape from which is only possible by the restoration of the organ to its normal plane and its retention there.

From this point of view a survey of the various operations practised brings out still more plainly their inefficiency Amputation of the cervix, which I have omitted, although it may decrease the actual weight at the moment, can never reapproximate the lower part of the uterus to the sacrum and so relieve tension in the nerve fibres supplying that organ. And the same objection applies to any operation upon the mucous membrane of the vagina or upon the perineum. I believe that the words which I have quoted from Mr. Bowreman Jessett in the introduction of my thesis are absolutely true and that slowly but surely the weight of the heavy uterus above acting as a wedge will open up again the passage beneath, which has been temporarily narrowed, however ingeniously it may have been done, and it is evident that even immediately after operation the normal relation of the cervix to the sacrum has not been reproduced. The same precisely may be said of Alexander's Olshausen's, or any of the other operations which deal solely with the round ligaments Ventrofixation will certainly relieve the venous hyperæmia by taking off the narrowing strain upon the blood vessels of the uterus, but it cannot in any way replace the cervix in its normal relation with the sacrum and so restore the nerve filaments to their normal freedom from tension.

One last operation has been practised for the relief of this condition and surely we are justified in considering it the last effort of despair This operation was described by Professor Edebohls at the Manchester meeting of the British Medical Association in July 1902. When all else fails this operator removes the uterus, and with it the mucous membrane of the vagina down to the vulval edge. Then he of the isthmus uteri in the female, outwards and back wards on each side to blend with the tissue on front of the lower end of the sacrum and the back of the rectum. The two genital folds, two well marked peritoneal ridges *covering* these ligaments, become continuous with one another on the back of the isthmus uteri, forming the torus uterinus in the female." These bands are therefore true ligaments, and although small and covered by peritoneum in such a way that their actual character at first sight may escape, and has escaped, recognition, are far more important as to resisting and supporting power than mere peritoneum could by any possibility be. Before the cervix, and with it the uterus, can descend, still more before they can be everted, as we see them in procidentia, these musculo-fibrous bands the utero-sacral ligaments, must be *weakened relaxed, or torn* through.

Besides these true ligaments of the uterus, upon the integrity of which, I contend, the maintenance of its normal position depends, there is another and broader attachment of the uterus—that, namely, to the bladder, which at first sight would seem to have much to do with its retention at a proper level. But firm as this connexion is, its value is greatly discounted by the mobility of the bladder itself, an organ by no means firmly attached to its surroundings and the posterior wall of it, to which the uterus is connected; being a structure which is continually varying in its position as the viscus of which it is a part is filled or emptied. Everyone's experience of prolapse, and *still more of procidentia, is that* in such cases the bladder loses its own position and is dragged downwards by the descending uterus Indeed, the converse theorem might be far more safely held, that the bladder depends greatly for the maintenance of its normal position upon its attachment to the uterus and through it upon these ligaments than *vice versâ*. Such a theorem would obtain additional support from the fact that Professor Dixon and Professor Birmingham describe these sacro genital ligaments as existing also in the male In male subjects they are attached anteriorly to the base of the bladder and assist materially in its retention in its normal position.

The broad ligaments are usually considered to be amongst the more important structures which maintain the uterus at its normal level, but, I confess, I think without good reason. These ligaments—so called, since they contain no real ligamentous tissue—are composed entirely of two folds of peritoneum, inclosing between them some loose connective tissue, arteries, veins, lymphatics, and a portion of the ureter They have no true resistant power against descent of the organ which they inclose. Like all other portions of peritoneum they are capable of great extension by slow but persistent forces acting upon them, this is evident in all cases of procidentia. The uterus may be outside the pelvis, outside the vulva, it is still embraced by the broad ligaments, which are not torn through but simply stretched, and such stretching has evidently not met with any determined resistance from them They are supple, smooth, in no way altered in structure, but have simply yielded passively to the forces brought to bear upon them. We see exactly the same thing in the formation of the voluminous sac of a large scrotal hernia. This capability of easy yielding to persistent force is indeed well exemplified in the changes which occur in these very folds themselves during pregnancy and still more in that portion of them which covers the uterus itself The peritoneal covering of an unimpregnated uterus is small indeed compared with the large expanse which lies upon that uterus at full term, but which is precisely the same, and will return to almost its original size and shape when once parturition is over

It is evident that we cannot rely at all upon merely peritoneal attachments to prevent or to restrain prolapse, so that the value of the broad ligaments for this purpose is a negligible quantity There are certain other things, the importance of which has been very generally emphasised by authors, as being more or less subsidiary factors in this question Such are (1) the angle at wh[illegible]he ute[illegible]us lies with reference to the vagina, (2) the poten[illegible]ity of the vaginal canal, as opposed to the idea of an actu[illegible] space beneath the uterus, (3) the action of the levator ani, pelvi[illegible] fascia, and transversi perinei muscles in maintaining suc[illegible] potentiality and in converting an actual canal into a valv[illegible]ar slit in the tissues, and (4) a postulated balance betw[illegible]n intra abdominal pressure and the external atmospheric [illegible]ressure. Such a case as the following, however, counterpar[illegible]of which must be in the memory of all operators, demo[illegible]rates that all these subsidiary factors may be absent or non-effective, and yet so long as the true ligaments of the uterus are intact that organ will not descend

A married woman, aged 51 years, attended at the Ancoats Hospital in July, 1902, with the complaint that her uterus was coming down. She had had two children, the eldest of whom was 27 years old The labour had been a severe one, necessitating the use of forceps, and she attributed all her troubles to this confinement. The uterus commenced to come down, she said, as soon as she began to go about. On *examination the perineum was found to be entirely absent*, the sphincter ani was split and the vagina and rectum had a common opening which was divided about half an inch above the skin level by a narrow band, the combined edge of the rectal and vaginal mucous membranes There were marked rectocele and cystocele, but the finger passed up the vagina found the uterus in its normal anteverted position and at its normal elevation in the pelvis Thus, although all subsidiary factors had been non effective for 27 years and the patient had been engaged in a laborious occupation, necessitating much standing, the uterus itself had not prolapsed, its intrinsic ligaments being intact. Incidentally, and inasmuch as all these patients describe their condition in *the same way*, as a "falling of the womb," this case emphasises the necessity of careful differentiation for operative purposes between true uterine descent and mere prolapse of the vaginal walls, for the latter of which conditions the operation for reproduction *of the sacro-uterine* ligaments is not required or suitable

Returning to the true ligaments of the uterus, I think that a few moments consideration will show that of the two sets —the fundo-pubic and the sacro uterine—the integrity of the latter is of by far the greater importance. Their relative shortness, the position of their implantation below the main bulk of the uterus, their coordinate action with the vesical attachment in front, all render them more effective in maintaining the uterus in its normal position than the comparatively longer round ligaments which act upon the fundus And, indeed, instinctively as it were, in all measures short of operative interference practitioners have always acted upon these facts Where the perineum and its contained muscular fibres are intact, and often when they are not, pessaries have been used designed apparently with the one idea of replacing or shoring up these *sacro-uterine* ligaments. I do not refer to rings or inflatable ball pessaries which, indeed, are mere mechanical plugs, but to those pessaries which act upon a scientific basis—Hodge's, Thomas's, and their modifications. These all act *in this* way, although their action has been otherwise explained and justified They support weakened and relaxed sacro uterine ligaments and if these are not torn through the support and rest so obtained may, and indeed often do, *permit of* the latter regaining their normal length and tone and so the patient may be cured by the use of these appliances When these ligaments are torn the upper bar of the instrument to some extent replaces them In the first instance, after a certain time the pessary *may be* disused, in the second it will always require to be worn, and this I conceive to be the reason why some patients will apparently be cured by pessaries worn for a sufficient length *of time* whilst others can never dispense with *their presence* Of course the integrity or otherwise of the other ligaments and of the perineum is a large factor in any given case, but not, I contend, of the primary importance which belongs to the *sacro* uterine ligaments.

But if this is true of cases treated by measures short of operation, how is it, then, that when operative interference is undertaken, the importance of these posterior ligaments *is so entirely ignored*? Schultze himself, to whose description I have already referred, makes no such suggestion in his *résumé* of operations for prolapse. The reason I believe *is to* be found mainly in the conditions under which *operations have been evolved* When first surgeons attempted to remedy this defect it was not possible as it is now to avail ourselves of all the routes by which the uterus might be reached The sacro uterine ligaments are *deeply seated and difficult* of access. Moreover, in all the *old text*-books on anatomy, as we have seen, they are described as mere folds of peritoneum. Not only is mere peritoneum useless but *to* the pre-antiseptic surgeon the peritoneum was *forbidden ground* It was the one structure in the body of all others to be avoided Even in operating on herniæ, where it is now recognised as so all important that the condition of the constricted gut should be known, the peritoneal sac in *those days* was opened only or less from time to time. Actual procidentia occurred first 12 months previous to examination. Defecation and urination were normal, but reposition of the uterus was required before the latter act could be performed. Her actual state on admission was as follows. The perineum was very short, about half an inch. The sphincter ani was complete. The uterus was outside the vulva and was somewhat enlarged and heavy. The sound passed three and a half inches. The os pointed to the anus. The general condition of the patient was good. The urine was normal. She had worn Thomas's, ring, and pot pessaries. The two first did not remain *in situ*. The last was extremely uncomfortable and ineffective, some prolapse still occurring, probably however, this was merely vaginal. On August 21st, 1902, the operation as described above was performed. Some difficulty with the intestines was experienced, notwithstanding the extreme Trendelenburg position. They were therefore allowed to escape and were surrounded and covered by warm flat sponges whilst the utero-sacral ligatures were placed. The left suture could not be satisfactorily made to penetrate the periosteum owing to the trouble caused by the intestines and the frequently jerking character of the respiration, so that the parietal peritoneum only on this side was embraced by the suture. On the right side, however, the suture was properly placed. On searching for the round ligaments, these were found to be so attenuated that only by drawing the fundus backwards and so putting their peritoneal covering on the stretch could they be recognised. After uniting their intra pelvic extremities the intestines were replaced and the abdomen was closed. No rectocele or cystocele was evident on inspecting the vagina afterwards. Urine was passed naturally at 11 A.M. on the next morning. The bowels acted well on the third day. Some pain was complained of over the hypogastrium on the morning after the operation but this was relieved after a suppository of morphia and did not return. From first to last no pain was complained of in the sacral region. On Sept. 1st (ten days later) Tait's perineorrhaphy with interrupted buried sutures was performed, the wound being afterwards sealed by celloidin. The patient made a perfect recovery without incident and was discharged from the hospital on Sept. 19th.

CASE 2.—The patient was a married woman, aged 46 years. She had had two miscarriages, the first occurred eight months after marriage nine years previous to examination, the pregnancy being ten weeks in duration, and the second took place 16 months after marriage with a pregnancy of two months. She had had one living child six years since. The confinement lasted for 50 hours with rupture of the membranes 24 hours before the appearance of labour pains and it was terminated by forceps and chloroform. 19 months after confinement she first noticed the descent of the uterus which came down suddenly. In the following year, 1898, she was forced by pain to go to a women's hospital in Manchester, the uterus being then outside the vulva. The condition was treated by rest and pessaries of various kinds. Since that time she had consulted various medical men and had been treated by some operation in another hospital, five weeks after which she had a ring pessary placed in the vagina. This came away on the following morning. After this she wore a pot pessary with straps for 12 months. This gave her great discomfort and she said that the uterus came down by the side of it, she gave up using it in November, 1901. Then she wore a ring pessary for a while. Since April, 1902, there had been some bleeding which had dribbled from time to time but never very much. Her menstruation had always been regular as to time but the period now lasted for a week. Before marriage it lasted for three days. Her last period commenced 14 days since. Defecation was always regular until Christmas 1901, since then she had had pain about the umbilicus before the act. Her condition at the time of examination was as follows. She was a healthy-looking woman, of medium height and of sanguine complexion. The uterus lay between the thighs with the fundus looking towards the anus and the os looking upwards towards the pubes. The vaginal wall was entirely everted and dry being covered by scaly epithelium. The os contained a small fleshy polypus, the pedicle of which sprang from just within the cervix. This was destroyed with the Paquelin cautery under cocaine. The fingers could be made to meet above the fundus, inclosing nothing but vaginal wall and peritoneum. There was no trace of the sacro-uterine ligaments to be detected by palpation. The perineum was short and after reduction of the uterus there remained marked rectocele and cystocele. On August 25th, 1902, the operation described above was performed. When the uterus was drawn up by the traction ligatures to its full height its fundus projected one and a half inches beyond the level of the abdominal wall, showing the great relaxation of the vaginal walls. The Fallopian tubes were normal and the ovaries were slightly cystic. After the operation upon both sets of ligaments the abdomen was closed by triple suture and sealed. After operation there were still marked rectocele and cystocele. On the 26th urine was passed naturally. She vomited slightly after the anæsthetic. There was no pain over the sacrum or elsewhere. The abdomen was supple. The temperature was normal until 6 A.M. when it rose to 99 6° F, falling to normal by 10 A.M. the same day. The respirations ranged from 24 to 30 and the pulse from 80 to 84. On the 31st the period began. Sharp pain was present before for about an hour which was situated above the pubes. She lost more than for the last two or three years during which time it had been scanty and unsatisfactory, coming on for a few days, ceasing, and returning again. She thought that this period was much more natural and felt better after it than she had done since the uterus came down. The period lasted for five days. On Sept. 8th the abdominal wound was healed. Tait's perineorrhaphy with interrupted buried sutures was performed. The deeper tissues had so far retracted that the needle had to be carried close to the ascending pubic rami before sufficiently resistant material could be found for satisfactory reunion. Even when finished the space immediately in front of the sphincter did not seem to be sufficiently firm. The surface was sealed by celloidin. On the 9th urine was passed naturally at 4 A.M. On the 17th the abdominal sutures were removed. On Oct. 6th she returned home well and perfectly sound. There was some little delay after the last operation owing to the presence of pus in the tip of the vaginal flap and it was feared that one of the buried sutures might be infected, but douches with creolin cleared this up and no suture was extruded. The temperature throughout the whole stay in hospital never rose beyond 99 4°. The patient was shown at Stockport on Nov. 20th, 1902, and the result was confirmed by examination by three members of the Stockport Medical Society, one of whom was the president, and another the previous medical attendant who had been present at her confinement which he described.

Although the number of cases is but small they are perhaps sufficient to show not only the practicability of the operation but the good results to be expected from it. Its claim to be considered a rational attempt to attack the problem of prolapsus uteri in a scientific manner will rest upon the due consideration by operators of the anatomical conditions present in these cases and their appreciation or otherwise of the various arguments I have endeavoured to set forth.

Manchester.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

NEPHRECTOMY BY LATERAL EXTRA PERITONEAL INCISION.

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ON August 4th 1898, a man, aged 58 years, came under my care with a history of which the following is a summary. Nine weeks previously he observed that his urine was blood-stained and also that there was some difficulty in voiding it. This condition lasted three days and then disappeared, only to return, however, the following week. This sequence, the passing of blood stained urine for a few days followed by the passing of clear urine for an interval of a few days, continued till admission to hospital. During the last four weeks he had, in addition, pain in the hypogastric region at the point of the penis and down the left thigh as far as the knee. Two days before admission he had for the first time pain in the left lumbar region. When first seen all the above unites the bared connective tissue between the bladder and urethra on the one side and the rectum on the other by a series of purse string sutures, beginning at the peritoneal opening, pushing this up and placing another immediately beneath. Proceeding in this way until he reaches the skin, this also is united and a continuous perineum is thus produced, as in the male, from the anus to the urethra. He adds, very properly, that the result must be carefully explained to the patient before submitting her to this transformation.

It is I think, evident that none of the operations which I have described, and which comprise all those at present in use for the cure of procidentia or prolapsus uteri, can fairly be described as producing a return to the normal condition, but that they are, on the contrary, simply substitutions of one abnormal and deformed state for another The change may be, and doubtless often is, an improvement on the original, but it is not, and cannot be, a reproduction of the *status quo ante*

As I have endeavoured to show, the genito-sacral ligaments, though small, are all important in maintaining the normal position of the uterus, in cases of prolapse, and *a fortiori* in those of procidentia, they are relaxed, lengthened, and in many instances are torn through In the slighter cases the support of a properly fitting pessary by allowing rest and time for them to recover tone will be all that is required, but in the severer instances, where they are absolutely torn through, no amount of rest will bring about their reunion Torn muscular fibre retracts and atrophies from disuse, in the case of small muscles such as these a few months will suffice to render them practically indistinguishable from the connective tissue in which they lie Can anything be done to replace them, once more to afford stability to the postero inferior segment of the uterus in its normal position?

Here it is well again to emphasise the importance, if we are to restore the uterus to its normal position and condition, of its being free to move within certain limits If absolute fixation of the antero superior wall of the uterus is faulty, still more would absolute fixation of its postero-inferior segment be injudicious, since the normal descent of the cervix in parturition would be prevented and the escaping fœtal head would find itself opposed by the immoveable wall of the sacrum, the coccyx and the firm fibrous structures spreading from them both At the same time an attachment must be contrived which will be firm and permanent For a fixed point the aponeurotic structures covering the anterior surface of the sacrum supply a perfectly satisfactory and sufficiently broad area for choice. In choosing the particular point the ureter and rectum must be carefully avoided. Both lie over these structures and beneath the peritoneum. Both are easily recognisable. So also are the nerve strands which form elevated flattened ridges It is wise also to choose a point fairly free from vessels The main vessels—the common and internal iliac arteries and veins—are too far out for any uneasiness to be felt on their account. I have found that a point between the rectum on the inner side and the ureter on the outer is well adapted for the purpose. As to the height vertically on the surface of the sacrum, the manner of selecting this will be dealt with later It will vary with almost every case.

In old cases of procidentia, as I have already pointed out, it is useless to search for the remnants of the original ligaments They will have atrophied, and even if they could be found after a long and difficult dissection, the result of which would be needless damage to the tissues involved, they would be useless for reparative purposes Whilst this is especially true in such cases it is also true in minor cases of prolapse Bovée[3] however claims to have found and united the torn ends of these ligaments both from the vaginal and from the peritoneal aspect, Personally I believe that in every case this is mere waste of time and exposes the patient to needless risks Like Mr Bowreman Jessett I do not attempt a dissection which must be extremely difficult and is from the very conditions present foredoomed to failure, but seek to substitute something which will act in the same way, which is easily accessible, and which is sufficiently firm to be trustworthy.

Now in the upper extremity of the posterior fornix a sufficiently firm resistant material is available which, whilst firmly attached to the cervix, yet is of sufficient length between its most superior point and that blended with the latter to permit of normal freedom of movement. It is this which is utilised as the new sacro-uterine ligament. Its superior surface is covered with peritoneum. If this is denuded by the removal of a short narrow strip, its connective-tissue surface is bared for attachment to the parietal peritoneum behind Greig Smith long ago showed that the most permanent adhesion possible was one between peritoneum and bared connective tissue, but in order still further to insure stability the suture which unites the two is passed deeply into the fibro-muscular layer of the vaginal fornix without, however, penetrating its mucous coat This is done on both sides, one suture on each side, and the cervix is now slung to the anterior wall of the sacrum by the upper anterior wall of the posterior fornix You will note that no attempt is made to attach the posterior fornix to the posterior wall of the uterus, as in Mr Bowreman Jessett's operation

The technique of the operation as I have carried it out is briefly this The protrusion being reduced the patient is placed in the extreme Trendelenburg position and the abdominal wall is opened by a median incision As soon as the intestines have sunk away from the pelvis towards the diaphragm two threads are passed through the broad ligaments, one on either side of the uterus inclosing tube and round ligament, the ends of these threads are tied and by them as tractors the fundus of the uterus is drawn forwards A special sound is passed up the vagina by an assistant and made to press upwards the posterior fornix so as to render it prominent On either side a stout silk thread is passed vertically through the substance of the fornix, avoiding the mucous lining, so that each protruding end is half an inch distant from the other and the whole loop is from one half to three-quarters of an inch from the cervix. The fornix is now applied to the sacrum and a spot is chosen directly opposite, free from vessels and subjacent nerves and ureter and well outside the rectum, where the needle carrying this suture is entered deeply so as to embrace the periosteum covering the bone, it is brought out again half an inch directly above its point of entrance Before tying this suture a narrow strip of peritoneum is removed from that portion of the fornix which lies in its grip, so as to bare the connective tissue beneath This is repeated on the opposite side, the sutures are tied and their ends are cut short Sometimes the position of the rectum will only permit of single fixation This should then be more central in its position as regards the uterus and somewhat broader The new ligament or ligaments are now formed and the cervix hangs in its normal position from the sacrum by that portion of the vagina which lies between it and the sutures. The traction threads through the broad ligaments are now removed. As in all cases of procidentia the round ligaments have been also greatly lengthened, they are now shortened by Olshausen's method But it is important not to shorten them to their fullest extent, so as to permit of some play still being left, so that the uterus may rise with the filling of the bladder beneath as in the normal condition For this part of the work, Doyen's pubic retractor is very useful, giving as it does a clear view of these ligaments and of their points of exit from the pelvic cavity I have found it to be rather in the way in the earlier stage, so that I only introduce it after the new sacro uterine ligaments have been made After shortening the round ligaments it is removed and the abdomen is closed The position of the uterus and vagina is now as nearly as possible that which obtained before prolapse began, whilst the uterus itself is perfectly free to move within normal limits, perfectly free to develop in its entirety This manœuvre does not, of course, exclude or attempt to take the place of perineorrhaphy if this should be necessary, but any repairs of this kind I prefer to carry out at a later time, about 14 days afterwards if all goes well Of all the methods by which perineorrhaphy can be carried out Tait's appears to me to be the most rational, with certain modifications, but these are outside the scope of the present paper

I have now performed this operation upon ten patients, but as their history and results are so far almost identical and this paper is already so long I shall only give details of two

CASE 1 —The patient, a married woman, aged 30 years, had had two children, the eldest being six years old and the youngest four years old Her first confinement lasted for three days and was terminated by forceps She attributed her prolapse to a fall down three stairs with the child in her arms nine days afterwards. Since then she had felt it more through the lower wound into the pelvis. Two days later the edges of the lower wound became red and swollen. The stitches were taken out and fomentations were applied and the inflammatory trouble soon disappeared. The patient was fed with nutrient enemata, beef tea, and milk alternately for seven days, and then she was given in addition one drachm of meat juice by the mouth every two hours, two days later milk was given in gradually increasing quantities, until by the eleventh day she was taking three pints of milk in the 24 hours and one drachm of meat juice every two hours. On the fifteenth day she was taking fish. She left the hospital for the convalescent home five weeks from the date of admission

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[3] American Journal of Obstetrics July 1902

I saw her four months later when she expressed herself as being quite well. There was no abdominal tenderness or pain after food and she could take any kind of food, she said that she was more comfortable than she had been for the last three years. I saw her several times subsequently as she complained of pain in the region of the inguinal scar, and here a ventral hernia was developing Pressure with a pad was tried but gave no relief. As the hernia not only gave rise to much discomfort but was also a source of great anxiety and was rapidly increasing in size I recommended an operation for its radical cure. On Nov 15th, 1902, the scar and hernial sac were excised and the various layers of the abdominal wall were sutured separately The coils of small intestine which presented in the wound during the operation were smooth, shiny, quite free from adhesions, and bore no trace of the process through which they passed eight months before. On Feb. 6th, 1903, I found that there was no bulging in the site of the old ventral hernia

Queen Anne-street, W

A CASE OF EMPHYSEMA IN VIOLENT LABOUR.

By John Braithwaite, M.D Durh,

Physician to the Devonshire Hospital and Buxton Bath Charity

The patient, who was a primipara aged 24 years and of small stature, began to have labour pains about 3 P.M. on Feb. 14th, 1903. From the first the pains were frequent and violent. The membranes ruptured about 11 P.M. About midnight her mother noticed that her face and neck had begun to swell. I saw her about 4 A.M. on the 15th when pains with very violent expulsive efforts were occurring about every three minutes. The pulse rate was 120 The fœtal head was in the first position and half an inch from the perineum. On placing my hand over the abdomen I found that the uterus was not always contracting when the patient was 'bearing down." There was well marked emphysema over the base of the nose, both sides of the face, the front and both sides of the neck up to the mastoid processes, and over the whole of the front of the chest as far as the nipples. She complained of her neck being painful on movement and said that the skin crackled like brown paper There was also hæmorrhage into the inner half of both conjunctivæ. A little chloroform stopped the expulsive efforts and lengthened the intervals between the proper pains. Labour ended about 6.30 A.M. without any further trouble. Convalescence was uninterrupted. On the 16th the emphysema had disappeared from the base of the nose. On the 17th it had almost left the cheeks, but whilst straining at stool she could feel the sides of her neck being puffed out. On the 19th the face and upper half of the neck were quite clear and on the 23rd I could only find a few isolated patches on the chest By the 28th the emphysema was all gone.

Buxton.

A CASE OF FLOATING KIDNEY IN AN INFANT

By Rees Phillips M B Lond,

House Surgeon to the Hospital for Women Brighton

Floating kidney and moveable kidney appear from the literature of the subject to be very rare in infancy Morris states that a floating kidney with a mesonephron is 'excessively rare." I have therefore thought that the following case might be worth recording in this connexion

The patient was a male child, born on Feb. 4th, 1903, whom I was called to see a few days after birth on account of an attack of greenish vomiting attended by collapse. When seen by me the child had recovered from the attack and looked apparently healthy and well developed Examination of the abdomen revealed a very lax and atonic condition of the walls and there appeared to be a small oval tumour causing a prominence of the abdominal wall just below the ribs on the left side. Palpation showed that this tumour was the left kidney "floating" forwards. It glided about readily within the abdomen and could be displaced forwards so as to come in contact with the abdominal wall just to the left of the umbilicus. The right kidney was also "moveable," but not 'floating" Its movement was chiefly in a vertical direction and the anterior and posterior walls of the abdomen could be compressed together above its upper extremity and the kidney thus held down. Since then the patient has had about half a dozen similar attacks of green vomiting and the mother states that he has had three attacks of "convulsions" with foaming at the mouth The child is very constipated. Whether the symptoms are dependent on the abnormal mobility of the kidneys or are merely coincident I cannot say The symptoms do not appear to be influenced by the position of the child As the floating kidney has existed from birth this must be a case in which a mesonephron exists

Brighton

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY

A Case of Multiple Myeloma with Bence Jones Proteid in the Urine

A meeting of this society was held on March 10th, Mr **Alfred Willett**, the President, being in the chair

Dr F **Parkes Weber** read an account of a case of Multiple Myeloma with Bence-Jones Proteid in the Urine. He said that the patient, a rather fat man, aged 50 years, complained of rheumatoid symptoms commencing about the end of the year 1899 About February, 1900, he began to suffer from pains in the loins and stiffness in the small joints of his hands. Soon afterwards the upper part of his back began to bend so that he always had a stooping attitude. Previously to this illness the patient had been strong but as a young man had had gonorrhœa and a chancre on the penis. One of his sisters suffered from diabetes mellitus. The urine of the patient was found to contain the Bence-Jones proteid. The daily amount of the urine was about 2000 cubic centimetres and it contained about seven per mille of the proteid as measured by Esbach's albuminimeter By a more exact method (precipitation with alcohol, drying and weighing) Dr R. Hutchison found that about 15 grammes of the proteid were excreted daily The reactions of the proteid were the typical ones described by Dr Bence-Jones, Dr Kühne, and Dr T R. Bradshaw For some time the patient's condition remained fairly stationary and at first by the use of local hot baths massage, &c., the power of bending his fingers was improved. Afterwards, however, the general weakness, cachexia, and anæmia greatly progressed and gummatous disease of the tongue and on one rib made its appearance. Examination of the patient's blood showed slight leucocytosis. In January 1901, it was found to contain about 23 per cent of the normal hæmoglobin In the cubic millimetre there were 2 980,000 red cells and 11,000 white cells (25 6 per cent. lymphocytes, 3 per cent. large mononuclear 70 3 per cent. polymorphonuclear and 1 per cent eosinophile) No myelocytes or atypical cells were detected amongst the leucocytes. On Jan 25th, 1902, the patient died after copious hæmorrhage from the intestines, which post-mortem examination showed to be due to chronic ulceration of the duodenum. The Bence-Jones albumosuria persisted to the last. At the necropsy the bone marrow of all the bones examined was found to be more or less affected by a diffuse sarcoma like growth of rounded or polyhedral mononuclear cells, a form of multiple myeloma" or 'myelomatosis." A report on the microscopic characters of the new growth by Professor R. Muir was quoted. The presence in the tumour of cells containing granules and globules of various sizes constituted a striking histological feature in the present case The new growth was confined to the bones and formed no localised tumours projecting from the bones, such as had been noted in some cases of multiple myeloma. In fact, neither by direct symptoms were present. The urine, which was of average quantity, was dark red, with an acid reaction and a specific gravity of 1024. Microscopically a large number of red blood corpuscles with a few epithelial cells were evident. Tube casts could not be recognised Physical examination revealed the presence of a distinct enlargement of the left kidney, which was tender on pressure. All the other viscera appeared healthy On the 13th an incision was made on the left side extending from the tenth costal cartilage to a point an inch internal to the anterior superior iliac spine All the structures down to, but excluding the peritoneum were divided in this line. The serous membrane was then reflected from the abdominal walls till the whole of the anterior surface of the kidney and a considerable part of the renal vessels were exposed. The gland was then removed by separating it from the surrounding tissues and tying the vessels and ureter between double ligatures A small incision was next made in the loin by cutting down on the point of a pair of dressing forceps introduced through the anterior opening Through the lumbar wound the cavity was loosely packed with sterilised gauze, whilst the anterior incision was stitched in layers with catgut. Two days later the packing was removed and, as there was only a little serous stain in the dressings, just sufficient gauze was introduced to keep the posterior wound open After other two days the packing was dispensed with entirely The patient's progress after the operation was satisfactory for a month, the wounds healed and the quantity of urine and urea averaged 50 ounces and 400 grains respectively per day A trace of albumin, however, was still present The patient now began to show signs of mental confusion and this condition gradually became worse till by the end of September he was unable to answer any question intelligently In the beginning of October dermatitis affecting the whole surface of the body appeared. This gradually improved under treatment so that by the end of the month the skin was practically well Three weeks later the patient's mental condition had quite cleared up and he left the hospital with, however, the albuminuria still present, though not so marked During the whole of this period the urine was normal in quantity and contained on an average 420 grains of urea in the 24 hours Tube casts were never observed The patient was seen every few weeks after leaving hospital and his urine was examined, but it was not till eight months after the nephrectomy that the albumin had quite disappeared.

He was last seen four weeks ago—i.e., four and a half years after the operation—when he appeared to be well in every respect The anterior incision was represented by a linear cicatrix which showed no tendency to stretch. There was no apparent weakness of the abdominal walls notwithstanding the fact that he was regularly employed at his work as an engine fitter Sensation between the middle line and the cicatrix was only very slightly blunted.

The kidney on removal was found to be enlarged in its lowest third to double the normal size whilst the remainder was regular in size and shape On cutting the organ open it was evident that the enlargement was due to a tumour into which blood had been extravasated Microscopic examination demonstrated that the neoplasm was a carcinoma undergoing colloid degeneration

The advantages of removal of the kidney by this method far outweigh its disadvantages The organ is easily accessible, there is no stretching of, or tension on, the vessels, large tumours can be removed through the wound, whilst the ureter if necessary, can be exposed almost down to the bladder The intestines do not come into the field of operation, the blood supply of the colon is not interfered with, and the shock consequent on opening the abdominal cavity is obviated, whilst the wound is not any deeper than in the transperitoneal method In the case of stone the viscus can be thoroughly examined between the fingers. In septic conditions the peritoneal cavity is not infected. Adhesions, both anteriorly and posteriorly, are easily reached, whilst in those cases where the peritoneum is so adherent to the kidney that it cannot be stripped off and the abdominal cavity has to be opened this part of the operation is much easier than by the lumbar incision and is not any more difficult than by the abdominal route. The disadvantages are (1) that the opposite kidney cannot be examined through the wound and (2) that a risk of ventral hernia is incurred, but in the case of wounds taking an aseptic course the latter objection is more theoretical than real, as the above instance shows.

Glasgow

EXCISION OF A PERFORATING GASTRIC ULCER.

BY ARTHUR EVANS, M S. LOND, F R C S ENG

ASSISTANT SURGEON TO THE WESTMINSTER HOSPITAL SURGEON IN CHARGE OF OUT PATIENTS SEAMEN'S HOSPITAL SOCIETY ROYAL ALBERT DOCK.

A WOMAN, aged 36 years, was admitted into the Westminster Hospital late on the evening of April 25th, 1902, suffering from acute pain in the abdomen. She was brought to the hospital in a hansom cab, but walked into the surgery Her condition on admission was as follows. She lay in bed with her knees slightly flexed, her face was not anxious, nor were her eyes sunken, her tongue was moist and clean, her pulse was 120 per minute, regular and easily compressible, and her temperature was 100 2° F When I saw her, half an hour after admission, her temperature had risen to 100 8° and her abdomen was rigid, slightly retracted, and tender all over, the tenderness being most marked over the region of the stomach The previous history was to the effect that she had been an in patient in the Middlesex Hospital four and a half months previously with a four months' history of pain increased by food and relieved by vomiting She was there found to have marked tenderness over the whole of the left abdomen, most marked at a spot two inches above, and to the left of, the umbilicus Nothing else was found In eight days her pain had disappeared and in three and a half weeks she was discharged from the hospital The history of the present illness was as follows For the last three days the patient had had a return of the old pains after food On April 25th, at 3 P M she was suddenly seized with severe abdominal pain and vomited once, the vomit consisted of food only, there being no blood in it. The pain was exceedingly severe from the very beginning, causing her to keep her knees drawn up, it was felt all over the abdomen but was most marked in the left hypochondriac and epigastric regions

The diagnosis of perforation of a gastric ulcer having been made the abdomen was opened by a four inch incision in the mid line between the umbilicus and the ensiform cartilage. On opening the peritoneum some fluid escaped which was whitish, opaque, and greasy On passing the hand over the front of the stomach it was found to be adherent to the anterior abdominal wall At this site the stomach wall was very much thickened so much so that malignant disease was feared Cutting through the adhesion, which was about a quarter of an inch thick, the thickened portion of the stomach was drawn out of the abdominal cavity and the peritoneal cavity was shut off by gauze pads In the centre of this thickened area and by the side of the adhesion was a round hole of the size of the end of an ordinary black lead pencil, through this, stomach contents were passing, amongst which pieces of cauliflower could be recognised In order to determine the pathological nature of the mass in the stomach wall an incision was made through it into the stomach, the incision crossing the perforation, when it was seen that the mucous membrane was free from malignant disease and the stomach wall, although here an inch in thickness appeared to owe its altered condition entirely to inflammatory processes. (Subsequent microscopic examination confirmed this.) To put an end to the constant leakage of stomach contents through the hole the interior of the stomach was lightly wiped out with sponges. The greatly thickened tissues surrounding the perforation did not permit of the invagination of that portion of the stomach wall, so that area, measuring about two and a half by one and a half inches, was excised. The mucous membrane of the rest of the stomach was normal, and there was no obstruction to the finger passing into the pylorus The mucous membrane was sewn up with a continuous silk suture and the other coats were brought together with one row of Lembert's sutures, the stitches passing well beyond the edges of the wound and an occasional one being afterwards inserted here and there along the line of suture as seemed advisable. An incision was made in the right inguinal region and through this and the upper wound the peritoneal cavity was mopped out with sponges and then thoroughly flushed with sterilised water The whole of the cavity was again as far as possible sponged over and the wounds were sewn up, an iodoform gauze plug being placed in contact with the wound in the stomach and brought out at the lower end of the upper wound and a large-sized curved glass tube was passed difficulty might be experienced in distinguishing appendicular abscess within the pelvis from inflammatory and suppurative affections originating in the genital organs. A case of pyosalpinx was quoted in which the pain and tenderness were referred to the right iliac fossa and a case of suppurative ovarian cyst was related which had for three years given rise to attacks which were believed by several good observers to be due to appendicitis. In conclusion, a case of appendicular abscess deep in the pelvis was referred to which was opened by an incision resembling that employed for external prostatectomy through the perineum between the urethra and rectum.—The PRESIDENT referred to cases which he had seen of tuberculous disease in the region of the cæcum and appendix which resembled appendicitis very closely. He had also met with three cases of ovarian tumour with a twisted pedicle which had given rise to the greatest difficulty in diagnosis; in two of these the tumour was found lying in the iliac fossa. A case of perforated duodenal ulcer in a girl, aged 20 years, had also given rise to symptoms of appendicitis. An abscess was opened in front and a fæcal fistula resulted. Subsequently an empyema formed which was drained, food passing through the opening. The patient ultimately recovered.—Mr ALBAN H. G. DORAN had frequently seen ovarian tumours with twisted pedicles mistaken for appendicitis. He referred to a case of tuberculous vermiform appendix occurring in a patient aged 24 years, which appeared to be part of a localised tuberculous ascites. He also referred to a complicated case of salpingitis which appeared to have spread from the opposite side and which was associated with appendicitis. He was satisfied that salpingitis might spread from one tube to the other.—Dr F. DE HAVILLAND HALL related a case which was regarded as an incarcerated epiplocele but in which it was found that the appendix had passed down the femoral ring. Cases of hysterical patients often presented much difficulty in diagnosis.—Dr H. A. CALEY thought that when there was much and long-continued pain lesions of the colon rather than of the appendix should be suspected and he referred to a case of a middle aged man who had suffered from continuous pain for four years, the case having been regarded as appendicitis and the appendix having been removed without relief.

Dr A. H. N. LEWERS communicated a case of Abdominal Hysterectomy for a Retro-peritoneal Cervical Fibroid weighing 13½ pounds. The patient was a single woman, aged 42 years, who had noticed a swelling of the abdomen for three or four years. The tumour was removed and the patient made a good recovery, leaving the London Hospital on July 22nd, 1902. Reference was made to previously recorded cases[1] and stress was laid on the fact that such retro-peritoneal cervical fibroids formed a class by themselves. The operation for their removal was a very extensive one. This was the sixth case which Dr Lewers had operated upon.—Mr ALBAN DORAN said that he could not regard merely the size of the tumour as a cause of shock. Dr Lewers's case was a true cervical fibroid, but so-called retro-peritoneal cervical fibroids were often not of uterine origin, being connected with the broad ligament.

HARVEIAN SOCIETY OF LONDON.—A meeting of this society was held on March 5th, Dr W. Winslow Hall, the President, being in the chair.—Mr J. P. Lockhart Mummery read a paper on the Value of Arthrotomy in the Treatment of certain Joint Lesions. He pointed out that many cases of what might be called subacute septic joint lesions followed or occurred contemporaneously with infections such as influenza, scarlet fever, measles, or pneumonia. Other cases occurred after some septic lesion such as a whitlow or in oral sepsis, and the organism of the lesion had been demonstrated in the fluid contained in the joint. Certain cases known as chronic rheumatism or rheumatoid arthritis, might in reality be pyæmic in origin and comparable with gonorrhœal arthritis. Mr Mummery then dealt with two types of septic arthritis following infection of the blood—the acute and the subacute, sometimes called 'pyæmic arthritis,' but not part of a general pyæmia. The primary focus from which the blood was infected was often insignificant. Acute septic arthritis was generally the result of direct infection from a wound and rarely proceeded from the blood except as part of a general pyæmia. In one patient, however, aged 21 years who was out of health a slight abrasion of the finger caused a pustule. Five days later he felt a sudden pain in the left ankle. Four days later he was admitted to a hospital, very ill, with a temperature of 102° F. and the left ankle much swollen and inflamed and evidently containing pus. The finger had nearly healed. Incisions were made into the ankle which was treated with a continuous water bath. The incisions had to be opened again a week later and ultimately septicæmia rendered it necessary to amputate. After this the patient recovered. There were no history of traumatism, no previous joint disease, and no general pyæmia. The infection seemed to come from the finger and earlier opening of the joint would probably have saved the limb. Subacute septic arthritis might follow sepsis after pregnancy or the acute fevers or gonorrhœa. Treated by rest and lotions these cases showed frequent formation of adhesions or recurring attacks of synovitis, whereas opening the joint and washing it out gave excellent results. The joint lesions were often mistaken for acute rheumatism but the condition did not react to salicylates. In gonorrhœal arthritis there was a marked tendency to the formation of adhesions and recovery was very slow, but with opening and washing out the joints, especially if done early, the disease usually rapidly subsided. Mr Mummery alluded also to the use of arthrotomy by Dr John O'Conor of Buenos Ayres in cases of acute rheumatism. It was claimed that this treatment lessened the duration of the disease and the liability to cardiac lesions. Dr O'Conor believed that the joints formed the infected foci from which the heart was affected. In England, where rheumatic fever seemed to react to the use of salicylates, it was difficult to believe that arthrotomy was needed. Mr Mummery here described the practical details of arthrotomy at some length. He regarded the operation as simple and practically free from risk, the open method being infinitely superior to aspiration. Before closing the wound it was important that all bleeding should be stopped.—Mr J. H. D. Phelps said that having worked for the last three years with Dr O'Conor he was able to speak very favourably of arthrotomy and irrigation in septic and gonorrhœal arthritis. As regarded the treatment of acute rheumatism by arthrotomy doubt had been thrown on the nature of Dr O'Conor's cases but those which Mr Phelps saw presented all the clinical features of the disease. Bacteriological observation had unfortunately not been carried out.—Dr Sidney P. Phillips said that septic joints were very rare as a sequel of the infectious diseases.—Dr John F. H. Broadbent and Dr S. Vere Pearson also took part in the discussion.

PLAISTOW AND CANNING TOWN MEDICAL SOCIETY.—A meeting of this society was held on Feb. 25th. The annual report was read and adopted. The office bearers of the previous year were re-elected for another year.—Mr Harvey showed some microscopic sections from (1) a case of Hæmorrhage into a Suprarenal Capsule, and (2) a case of Congenital Multiple Sarcomata of the Skin (the full details of this rare case were given by Mr G. Pernet before the Pathological Society of London in April 1902).—Mr Percy Rose showed a naked-eye specimen of a Pancreas containing numerous Calculi.—Dr T. D. Lister read a paper on the Principles of Infant Feeding. He pointed out that all the divergences of medical opinion began from what was the common starting point of all practical workers—viz., that pure good cow's milk supplied the only generally applicable substitute for natural feeding. He condemned the encouragement of artificial feeding in the case of the healthy children of mothers able to feed them. After recapitulating the differences between cow's milk and human milk he said that the elaboration of percentage feeding was justified chiefly on theoretical grounds and contended that the essential differences between cows' and human milk prevented the attainment of a humanised milk in the literal sense. After referring to the proportion of whey proteid and curd proteid in the respective milks suggestions were made for the home preparation of modified milks based on the methods of Professor Rotch and Dr White and Dr Ladd. He drew attention to the value of a certified milk system, as recently referred to by Dr Coutts and thought that more coöperation with the milk trade would afford a useful field for some of the activities of local medical societies. For the less intelligent and also the poorer classes, where a little milk had to go a long way, dilution with cereals, or even with water simply, was a valuable method and one often adopted for routine practice in hospital extension nor by metastasis were any other parts of the body involved. Dr Hutchison and Dr J J R. Macleod made a careful chemical investigation of the bones, blood, and organs, but failed to find in any of these tissues or organs a body giving exactly the same reactions as those of the Bence Jones proteid in the urine From the vertebræ and ends of the femur, however, they obtained a proteid giving very similar reactions, differing somewhat in the temperature at which it coagulated and in not being re dissolved on boiling Moreover, no similar proteid could be obtained from normal red bone marrow They argue that in the present case the bone marrow was probably *the seat of production of the* proteid excreted in the urine and that this proteid was not a non assimilated digestive proteid as suggested by Magnus-Levy Though the case was complicated with syphilitic gummata, chronic ulceration of the duodenum, and a generalised rheumatoid affection of the joints it was a typical one of multiple myeloma with Bence-Jones proteid in the urine, the ' myelopathic albumosuria " of Dr Bradshaw, also called in Italy ' Kahler's disease " When the diagnosis was first made it was probably the second case of the kind recognised *during life* in England, the first one being that recorded by Dr Bradshaw in 1898 In the latter part of the paper various questions regarding multiple myeloma with, and multiple myeloma without, 'Bence Jones albumosuria " were discussed and a summary was appended of all the hitherto recorded cases in which Bence Jones proteid had been detected in the urine, including certain cases in which no bone disease was discovered and certain other cases in which the reactions of the proteid in the urine were not quite characteristic. Multiple myeloma was regarded as a convenient term to include various forms of myelogenic new growth Two types at least were to be distinguished (1) a growth like the present, in which the bone marrow only was involved, and (2) a growth in which nearly all the cells resembled small or large lymphocytes and in which lymphatic glands as well as bone marrow were affected. Taking all the data that could be obtained into consideration Dr Weber stated the following conclusions (1) that Bence-Jones albumosuria was always the result of disease of the bone marrow, (2) that it was due to an abnormal metabolic or degenerative process in the myelocytes or in the tumour cells derived from the myelocytes or their predecessors, (3) that the reason why it was generally associated with myelogenic tumour formation was that the tumour cells derived from bone-marrow cells, however much they might morphologically resemble true bone-marrow cells, were more prone to abnormality than real myelocytes, and (4) that non myelogenic tumour cells were not affected in the same way and therefore metastatic tumours in the bone marrow did not give rise to Bence Jones albumosuria like myelogenic tumours

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[1] Transactions of the Medical Society of London, vol. xxiv., p. 106.

Dr BRADSHAW (Liverpool) said that when five years ago he first brought a case of myelopathic albumosuria to the notice of the society not more than six cases had been described and that at the present time no less than 32 cases had been recorded. He considered that myelopathic albumosuria should be recognised as a definite disease, distinct on the one hand from osteomalacia and on the other from multiple tumours in the marrow unattended by changes in the urine He referred to a case of the disease at present under the care of Dr J Barr, in which sudden paraplegia and cystitis followed a feeling that "something had given way' in the back. He next dealt with the question whether the proteid was an albumose or an albumin He said that in its chemical behaviour it seemed to be intermediate between a native albumin and proto-albumose The coagulum by heat was much more soluble than that obtained from native albumin and had been said not to be a true heat coagulum. The nitric acid reaction was identical with that of proto albumose, and, on the other hand, it was not dialysable The term "albumose" was applied by physiological chemists to bodies which differed considerably from one another in their chemical reaction Thus one member of the group, hetero-albumose was insoluble in distilled water, proto albumoses were coagulated by nitric acid and deutero albumoses were not coagulated by nitric acid The essential idea of an albumose was a proteid derived from albumin but with a smaller molecular weight and of less complexity than the latter Now all the albumins commonly met with contained a hetero-albumose group or radicle and yielded hetero-albumose and other albumoses when digested, and it had been shown by Magnus Levy that the Bence Jones proteid did not contain the hetero-albumose and therefore was probably an albumose He considered that it was probable that the new growth in the bones was the seat of the formation of the albumose. He pointed out that the disease more frequently affected males than females

Dr HUTCHISON said that it was of importance to determine where the proteid passed in the urine was produced He had examined all the organs, but had failed to find a proteid similar to that passed in the urine. A proteid was found in the portion of the medulla replaced by the myeloid growth, but it was not exactly of the same nature as that which was found in the urine. The view that it arose *from the cells* of the growth was probably correct, though it was difficult to see how the destruction of these cells could account for the quantity of proteid passed in the urine

Dr MACLEOD said with regard to the exact chemical nature of Bence-Jones albumose that its chemical reactions would indicate that it belonged to the native proteid group rather than to the proteoses. The biuret reaction was of a distinct violet colour, not a rose pink, which was characteristic of the proteoses From its other reactions no definite opinion could be deduced. To decide whether the albumose proteid was derived from the gastro-intestinal tract or not it would be necessary to restrict the proteids of the diet to a greater extent than had been done in Dr Weber's case By its chemical reactions its chemical nature could not be determined, but this in any future case might easily be done by injecting it into the blood of an animal and finding if a specific precipitin was developed.

Dr W LEE DICKINSON said that the occurrence of Bence Jones albumosuria was characteristic of myeloma of the bones and did not occur in cases of osteomalacia, lymph adenoma of the marrow, or Hodgkin's disease He referred to the excess of lime which was frequently found in the urine of diabetic patients and asked if any such excess had been found in this case

Dr HUTCHISON said that the lime had not been estimated, but there was a large excess of phosphates.

Dr WEBER replied.

MEDICAL SOCIETY OF LONDON

Conditions simulating Appendicitis with Cases of Appendicular Abscess in Unusual Positions —A Case of Abdominal Hystereotomy for Retro peritoneal Cervical Fibroid

A MEETING of this society was held on March 9th, Mr A PEARCE GOULD, the President, being in the chair

Mr FREDERIC S EVE read a paper entitled "Some Conditions simulating Appendicitis with cases of Appendicular Abscess in Unusual Positions." Five cases of tuberculosis of the cæcum were related the symptoms of which closely simulated appendicitis All gave a history of recurrent attacks of pain, sometimes commencing suddenly One patient was supposed for years to have suffered from gastric ulcer the pain being referred to the epigastrium In nearly all the cases constipation existed but vomiting was not marked except in one instance The chief point in which they differed from appendicitis was in the slight character of the local tenderness A swelling of firm consistence due to a thickened, indurated, and contracted cæcum was observed in all The appendix was only found once and was not tuberculous In one case observed by Mr Eve in 1901 there was evidence of chronic obstruction and a short-circuiting operation was performed with good result. The condition had been mistaken in one recorded case for carcinoma, from which, however, it was distinguishable clinically by the absence of leucocytosis Allusion was made to the difficulties in diagnosis in some instances between appendicitis and affections of the gall bladder, kidney, and intestine, such as carcinoma, colitis and obstruction by a band in the right iliac fossa cases being quoted in illustration In appendicitis the localisation of the pain and the position of the abscess were subject to great variations owing to modifications in the length and position of the appendix itself and vagaries in the position of the cæcum and other abdominal organs In one case the pain was referred to the right loin owing to the tip of the appendix being attached beneath the liver and in another the pain was always localised in the left flank. Cases of appendicular abscess beneath the liver and about the umbilicus (owing to non descent of the cæcum or unusual length of the appendix) were related Great of the food supplied. General failure of nutrition, however, may, and in no inconsiderable proportion of cases certainly does, depend on defective assimilation and dissimilation of the part of the tissues generally quite independently of functional disabilities of primary digestion This distinction we cannot help thinking has not been made sufficiently plain in those chapters of the present volume which deal with the subjects of nutrition and malnutrition. If we examine, for instance, the chapter on Marasmus or Athrepsia, as it is now generally called, it is to be observed that this condition of simple wasting is described as an extreme form of malnutrition occurring in infancy and independent, as far as is known, of constitutional or local organic disease, in fact, that it is a vice of nutrition only This definition though little calculated to meet with the approval of those who attribute this disease to atrophy of the gastric and intestinal glands, would be quite in harmony with post-mortem evidence, as well as with the more recent views of Bouchard and his school, if the term 'vice of nutrition" were allowed to apply to the vital activities of all the tissues of the body equally with those of the intestinal tract proper, which, so far as we understand it, is not Dr Holt's meaning

Although in the preface the author informs his readers that his purpose has not been to ' deal with surgical topics more than in their medical aspects,' we notice that in the chapter on Adenoid Growths considerable space is devoted to their surgical treatment. In addition to our objection on general principles to physicians usurping surgeons' prerogatives we consider that in this instance the value of Dr Holt's book is not enhanced by his account of this particular surgical operation—indeed, we imagine that most surgeons in this country would hardly admit that "the majority of the growths encountered in ordinary practice can be removed with one sweep of the curette" There is, indeed, a danger by such a method of procedure of the periosteum being stripped from the posterior wall of the pharynx if too much energy is displayed in the use of the curette. Such an accident has, within our own knowledge, occurred on more than one occasion and might with advantage have been included among the dangers of the operation enumerated by the author

With regard to the subject matter generally of the present volume it must be admitted that, with very few exceptions, it has been brought remarkably well up to date. And in this connexion we notice that although the congenital condition of pyloric stenosis has been most adequately described, another congenital condition of probably equal importance—namely, achondroplasia—is entirely omitted both under this name and under its numerous synonyms. Owing to the similarities of this condition with that of fœtal or congenital rachitis, to the mistakes in diagnosis which are likely to occur when this somewhat rare disease is met with, and to the interest which attaches to the disease, it is to be regretted that this omission has been made.

As a work of reference on the diseases of children we regard this recent edition of Dr Holt's book as even more complete and trustworthy than the last edition of Professor Baginsky's classical work on the same subject which was recently reviewed in THE LANCET[1] Moreover, it is more readable, more practical, and more up-to-date. In fact, in our opinion, there is no work on the subject of the diseases of infancy which is comparable with the volume under review and with the exception of Dr Rotch's "Pediatrics," no book with which we are acquainted contains anything like such full, systematic, and accurate directions for the feeding of infants, either in health or in disease.

A Text book of Palæontology By KARL VON ZITTEL. Translated and edited by CHARLES EASTMAN, Ph.D Vol. II. With 373 figures in the text. London Macmillan and Co Pp. 283. Price 10s. net.

THIS the second volume of the translation of Professor Zittel's shorter work upon Palæontology deals with the lower vertebrates from fishes to birds, the mammalia being reserved for a third and final volume. It is not merely a translation of the German original but is to be looked upon as a partly new work since addition to, and some slight alterations in the arrangement of, the facts detailed by Professor Zittel have been made by various gentlemen in America and in this country at the request of the editor

Palæontology is making such rapid strides at present that the antiquity of a text-book on the subject is apt to be measured more correctly by months than by years It therefore behoves an editor of a responsible and authoritative work like the present to keep a very keen and constant eye upon current zoological literature. This appears to have been the attitude of Professor Eastman and his colleagues, with the result that the student of the general facts of palæontology, so far as they are embraced in this volume, can follow the instruction given with confidence. That instruction is, however, dealt out in a highly concentrated state, so much so perhaps as to be not easily assimilable by the novice. The author and his several editors have been at pains to fit in every corner with information and have thus produced a handbook which is just a little bit suggestive of a dictionary The desire of making the reader acquainted simply with names in default of other facts has been pressed a little too far Thus, of the Stegocephalan genus Macromerion all that is said is 'Imperfectly known." In such cases the elementary student might perhaps have been better left in temporary darkness and the space thus saved might have been devoted to a less pemmican like description of forms not "imperfectly known." For an avowedly elementary text-book the section devoted to Fishes appears to us to be in comparison inordinately long, and here the practice of the simple mention of names and localities is carried to an excess not approached elsewhere in the manual. On the other hand, the minute differences which distinguish allied genera or even families of bony fishes are set forth at times with a prolixity which is surely out of place in a book which does not pretend to exhaustive treatment.

From minor faults Professor Zittel's handbook is singularly free, but we have noticed one or two For instance, in treating of the Ganoid fishes the family Aspidorhynchidæ is printed in "clarendon" type and is followed by "Woodward' in 'small pica" type. On the very next and, indeed, opposite page another family of the same group of fishes—viz., Lepidosteidæ—is distinguished by the same clarendon type, but the name of that family is in this case followed by 'Bony-pikes" in small pica—a state of affairs which leaves us in doubt as to whether "Woodward" is the popular name of a group of fishes or whether "Bony-pikes' is the name of some eminent palæontologist. Again, the name of a family of ancient and primitive lizard like beasts is given as ' Proterosauridæ.' We well remember that excellent and eminent surgeon and palæontologist, the late Mr J W Hulke, correcting a friend in thus pronouncing a name which should be written and pronounced "Protorosaurus" The name, in fact is not compounded out of an impossible and non-existent comparative of the Greek word for first, but is derived from two words meaning, of course, "first hour"—the lizard of the prime, in fact. But after all these are trifling blemishes and do not detract from the usefulness of the volume which will be a lasting testimony to the peculiar work. Commercial sterilisation was not to be depended upon, for it sometimes meant making a market for milk already undergoing decomposition. In regard to the feeding of children of the well to do and the use of predigested milk foods, he thought that it was wiser to use partially or completely predigested foods than to carry dilution to what was often almost starvation point, reducing the degree of predigestion as nutrition improved Finally, Dr Lister insisted that the striking feature of the literature of the subject was that each method had failed in other hands than those of its advocates and that each had been successful when carried out by those who had developed its application. The inference was that the skilful application of a well understood method by those knowing all its points was the thing to be desired and that the main object of nutrition being obtained the method was of secondary importance. He therefore urged the desirability of using whatever method was best adapted to the facilities and intelligence of their patients, and said that the first duty of the profession in striving to settle the problem of infant feeding was the elimination of doubtful milk by the education of public opinion —A brief discussion of the paper followed and a vote of thanks to Dr Lister brought the proceedings to a close

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[1] THE LANCET Nov 15th 1902, p. 1329

GLASGOW SOUTHERN MEDICAL SOCIETY —A meeting of this society was held recently, Dr Duncan Macgilvray the President, being in the chair —Dr W F Somerville gave a demonstration of the Curative Properties of High frequency Currents in all conditions attributable to Retrogressive Changes in the Nervous System A number of patients were present whose ailments had either been cured or greatly relieved by a course of this treatment. One patient who had suffered from peculiarly obstinate sciatica and was on the present occasion accompanied by his family medical attendant gave a graphic account of the speedy and complete relief which he had obtained under the high frequency current. Among the cases shown were some in which chronic eczema due to varicose veins had quite healed under this treatment and one in which a large area that had been occupied by scrofuloderma had almost healed. An electric couch was also shown and a practical demonstration of high frequency currents was given

ÆSCULAPIAN SOCIETY —A meeting of this society was held on March 6th, Dr Thomas G Stevens, the President, being in the chair —Dr J S Risien Russell read a paper on Early and Anomalous Signs of Tabes Dorsalis. He said that probably no clinical picture was better recognised than that of the ordinary well developed ataxic patient. But there were others that were less distinct and for the diagnosis of these a systematic examination of the nervous system must be made The knee-jerks might be present and ataxy absent and yet a diagnosis of tabes be made , for the Achilles jerk might be absent and patchy analgesia present on the trunk, inner side of the forearm or the front of the legs, or the pupils be irregular immobile or sluggish, or optic atrophy be present though the vision was not defective noticeably to the patient Some cases commenced with bladder hesitancy others with gastric crises or herpes zoster might be the earliest sign Auditory vertigo, tinnitus, and deafness might be early signs of tabes

Reviews and Notices of Books.

The Diseases of Infancy and Childhood By L EMMETT HOLT M.D , LL.D Second edition revised and enlarged. With 223 Illustrations London Henry Kimpton 1903. Pp 1161 Price 25s

THE second edition of Dr L. Emmett Holt's work on the diseases of infancy and childhood departs but little from the general scheme of arrangement which rendered the first edition such a valuable work of reference for those who take an interest in, or make a specialty of, the important branch of medicine included in the title Conformably with the recent growth of knowledge in the department of the feeding of infants the chapters on this subject have been entirely rewritten and much new material has been added, while 21 additional illustrations contribute largely to the clearness and vividness of the clinical descriptions

Many of the reforms in our methods of feeding infants can be traced so clearly to the knowledge disseminated through the medium of the first edition of this popular work that the interest of readers will naturally centre in those portions of the new edition which deal with this subject. Among the methods of artificial feeding Dr Holt considers that the American or percentage system, as conducted in the Walker Gordon milk laboratories, is the best, ranking next to breast-feeding in usefulness and trustworthiness Of this method he remarks on p 186 "My own results have steadily improved each year as I have come to understand more clearly the indications for using the different changes in the milk which the laboratory has made possible. I have therefore no hesitation in placing it when intelligently used next to maternal nursing " Considerable space is devoted by the author to the description of this method which has been, since the publication of the first edition, placed on an even more scientific and substantial basis. The chief improvement recorded in this method lies in the possibility of varying the relative proportions of the caseinogen and lactalbumin of cow's milk. This extension of the method has very important bearings inasmuch as it is the inability on the part of infants to digest the casein of cow's milk which sometimes renders the ordinary modifications of milk absolutely futile in treating difficult cases of indigestion. The laboratory method of feeding has not always proved a success in this country and the reason for a certain proportion of the failures is doubtless because many persons have hastened to adopt this new method without thoroughly understanding the principles which underlie its scientific application. On this point Dr Holt remarks that "those whose knowledge of laboratory feeding consists only in the acquisition of a few formulas which are supposed to be appropriate for the early, middle, or late period of infancy are in little better position than one who feeds all children under his care on Dr A.'s or Dr B 's mixture or upon any of the commercial infant foods The results will probably be about the same. An equally improper way of using the laboratory is that of those physicians who know nothing of milk percentages and care less and who simply write, as I have known many to do, such directions as the following —'Send milk suitable for three months old baby ' In this way all the advantages of laboratory feeding are missed, and its fundamental principle violated, which is for the physician to prescribe a food adapted to the child's digestion at the time " Although Dr Holt places in the front rank this system of feeding which depends on the assistance of a milk laboratory he nevertheless maintains that with sufficient care and attention to certain details a degree of accuracy sufficient for all practical purposes can be secured by a method of home modification. This admission is especially important for practitioners in this country who are unable in the great majority of cases to avail themselves of the services of a properly equipped milk laboratory

The treatment of the symptoms of infancy by the modification of food rather than by drugs is even more strongly insisted upon in this edition than was the case when Dr Holt originally published his book some few years ago , in fact, as far as infancy itself is concerned the only logical inference which can be drawn from Dr Holt's teaching is that in the vast majority of instances those conditions which are not amenable to this form of treatment or to hygienic measures are not amenable to any other The diseases of infancy are mainly dependent upon disordered conditions of nutrition attributable doubtless in the majority of cases to faulty digestion and inefficient assimilation of food from the alimentary tract owing to the inappropriate character therefore, that the subject of chemical pathology is approached in accordance with the latest developments A rapid glance through the somewhat closely printed pages shows that this is so At the end of each lecture a list of the literature on the subjects treated is printed and the literature referred to is of quite recent date. In the chapter on Water and the Inorganic Salts the author suspects that the constant use of carbonated waters is sometimes harmful in several ways, as through local irritant action or through an accumulation of gas in the stomach favourable to the production of atony He points out that in the case of the dog the introduction of large volumes of carbon dioxide into the stomach and intestine is quickly followed by a decided alteration in the reaction of the urine, acid urine becoming rapidly neutral or alkaline. Further, it is stated that clinical experience has shown that there are some persons in whom uric acid calculi are more rapidly formed when carbonated waters are used than when "still" waters are used In the same chapter there is an excellent disquisition on alkaline waters and purgative saline waters The lectures obviously deal largely with the practical side of the subject, but, on the whole, we think that the author has entered somewhat too strongly into controversy The volume is a very handy one for students and practitioners, covering a vast range of subjects within comparatively small compass, and the details are presented in a decidedly bright and intelligible manner

Analytical Records
FROM
THE LANCET LABORATORY

HÆMOGALLOLES

(KASSLER AND WOLFF 101 FLEET-STREET LONDON E C)

HÆMOGALLOL is the name given to a substance produced from hæmoglobin by the action of the reducing substance gallic acid The effect of gallic acid is to remove one atom of oxygen from each molecule of hæmoglobin It follows that the product hæmogallol contains a larger percentage of iron than does pure hæmoglobin. Our analysis gave the percentage of iron (Fe) as 0 19 It is a reddish brown powder which may be conveniently administered inclosed in capsules (hæmogalloles) Clinical trials show that this form of iron is readily assimilated without causing disturbance in the alimentary canal. It has been employed with good results, according to reports from German clinics, in anæmic conditions It would appear to be an excellent form of iron in those cases in which that metal is indicated.

(1) "IRRESISTIBLE" AND (2) BRIGADE" WHISKIES

(HATCH MANSFIELD AND CO LIMITED COCKSPUR-STREET PALL MALL, LONDON S W)

1 The analysis of this whisky was as follows extractives, 1 40 per cent, mineral matter 0 01 per cent, and alcohol by weight 37 67 per cent., by volume 44 79 per cent. equal to proof spirit 78 50 per cent In regard to secondary products the following were the results per hectolitre of absolute alcohol acidity in terms of acetic acid, 53 52 grammes, aldehydes, 18 57 grammes, furfural, 4 46 grammes, ethers reckoned as ethyl acetate, 73 07 grammes, and higher alcohols, 89 20 grammes This whisky gives results consistent with the description that it is 'blended," while its somewhat high proportion of acidity and ethers indicates that it has been matured in sherry casks. The spirit has a delicate rather than a full malty flavour It is entirely free from the physiologically bad products of immature whisky 2. The analysis of this whisky was as follows extractives, 1 00 per cent, mineral matter, 0 01 per cent, and alcohol, by weight 33 22 per cent, by volume 45 41 per cent. equal to proof spirit 79 57 per cent. On determining the amounts of secondary products the following were the results given in grammes per hectolitre of absolute alcohol acidity in terms of acetic acid, 39 60 grammes; aldehydes, 15 70 grammes, furfural, 3 14 grammes, ethers as ethyl acetate, 49 32 grammes, and higher alcohols, 73 26 grammes. These results indicate that this whisky has been stored for a shorter period than the previous specimen and, moreover, that it has been more freely blended. The amount of ethers coupled with the acidity would, however, indicate that it has been stored in sherry casks The flavour is only slightly malty, but the whisky is free from raw products

KRONENQUELLE MINERAL WATER.

(SCHACHT WARNER AND CO 55 FORE STREET LONDON E.C)

The waters of Kronenquelle at Salzbrunn in Silesia are well known. They belong to the mildly saline and slightly carbonated class According to our examination, however, Kronenquelle water may also take a place in the category of lithiated waters, for, according to spectroscopical examination, this water contained a distinct amount of lithia. Further, on concentrating a quarter of a litre and eliminating the calcium and sodium salts a distinct precipitate of phosphate of lithium was obtained on adding a solution of sodium phosphate The character of the water may be judged from the following analysis which we made total mineral matter 2 10 grammes per litre, carbonate of soda, 0 837 gramme per litre, carbonate of lime (with magnesia), 0·685 gramme per litre, and sodium chloride, 0 16 gramme per litre The water contains only a slight excess of carbonic acid gas. It is agreeable to the taste and has a peculiar cleansing sensation in the mouth, owing doubtless to the alkaline carbonate. The water has been used in the treatment of gout and it is no doubt useful when a course of alkaline lithiated water is indicated

NON ALCOHOLIC BEER.

(H. B MAY DYSON'S-LANE NURSERIES UPPER EDMONTON LONDON N)

Though it is not strictly true to describe this beer as absolutely non alcoholic, yet it contains, according to our examination, less than 2 per cent of proof spirit, which is within the Excise limit. It contains nearly 3 per cent. of malt extractives The beer is agreeable to the taste, having a malty flavour and the bitter taste of the hop It is a good deal lower in alcoholic strength than lager beer, while it certainly has similar refreshing qualities.

STERILISED SWISS MILK, JURA BRAN

(THE SWISS MILK SOCIETY PENINSULAR HOUSE, MONUMENT STREET LONDON E.C)

The analysis of this milk was as follows total solids, 12 70 per cent, fat, 3 69 per cent., and mineral matter, 0 78 per cent. The milk is thus of excellent quality with a satisfactory percentage of cream. The milk was quite sterile, a result which is all the more satisfactory since the flavour was that of fresh milk. There was an entire absence of 'scalded" flavour We could find no indication of metallic contamination and it is stated that the bottom of the tin is not soldered, so that the milk is not burnt in the hermetically sealing process

VARIOUS SOAPS

(E. COOK AND CO EAST LONDON SOAP WORKS BOW LONDON E.)

On examination the toilet soaps submitted proved to contain an excellently pure soap basis and in no instance was any evidence obtained of free alkali. Amongst those examined were baby soap, white rose and cucumber soap, rose soap, honey soap, oatmeal soap, butter milk soap, glycerine and cucumber soap, almond and glycerine soap, white lily soap and rose and cucumber soap All the foregoing are admirably adapted for toilet purposes, they are economical in use and contain a minimum of moisture and are free from irritants. A similarly excellent soap basis is employed in the preparation of the medicated soaps containing respectively coal tar and carbolic acid. Finally, we have examined three soaps—namely, paraffin soap, petroleum soap, and lightning cleanser—which are made for ordinary household use. We found them powerfully detergent and the soaps containing petroleum and ability of Professor Zittel in writing text-books on palæontology and to the discrimination and energy of Professor Eastman and his editorial colleagues

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LIBRARY TABLE

Obstinate Hiccough By L F B KNUTHSEN, M D Edin. London J and A. Churchill. 1902 Pp 169 Price 6s — This publication is a graduation thesis and, like many other theses of the same nature, is the result of a certain amount of laborious work in the collocation of facts but is quite lacking in anything suggestive of originality or research. The author gives a long and very detailed account of a case of severe hiccough which came under his own care and which proved fatal, and he then proceeds to cite all the cases of hiccough which have been reported in English and foreign journals and which he has compiled doubtless with much labour, the cases amounting altogether to over 150 These form a sufficiently interesting record and show the great multiplicity and variety of drugs and methods of treatment that have been adopted at different times, none of which have proved specific and trustworthy for all conditions of hiccough, even when the trouble was due apparently to the same cause The author then deals briefly with the anatomy, physiology, pathology, and treatment of hiccough. He gives it as his opinion, without any very serious arguments to support it, that the pneumogastric is the nerve most directly concerned in hiccough. Dr Knuthsen has nothing more original to suggest under "treatment" than the somewhat threadworn platitude that the condition underlying the symptom of hiccough should be first sought and treated, and only when a *prima causa* fails to disclose itself should the hiccough be treated as a disease *per se* The treatise ends with a catalogue of all the drugs and methods of treatment that have been used to combat hiccough with references to the cases in which they have been employed

Lehrbuch der Anorganischen Chemie Von Dr H ERDMANN Dritte Auflage, mit 291 Abbildungen, 99 Tabellen, einer Rechentafel, und sechs farbigen Tafeln. Braunschweig Druck und Verlag von Friedrich Vieweg und Sohn. 1902. Pp 788 Price 15 marks. (*Manual of Inorganic Chemistry* By Dr H. ERDMANN With 291 illustrations, 99 tables, a reckoning table, and six coloured plates.)—This is the third edition of a well known German manual. In our notice of the previous edition we pointed out that the author's plan was to present the mathematical aspects of chemical science before dealing with rudimentary facts We always maintain that the student should be made familiar with a few facts by experiments under his own observation before discussing theoretical principles The present edition has been decidedly enlarged, 30 more pages having been added, while the number of illustrations and tables has been materially increased We can only repeat what we wrote in a notice of the second edition, published in THE LANCET of Feb 9th, 1901, that although a "Lehrbuch," the author has managed to give within its covers a very comprehensive and lucid treatment of the subject and that the work is thoroughly up to date, ample references being made to the standards of atomic weight which have recently been codified by well known authorities. The coloured illustrations are admirable and refer chiefly to the spectra of the rare elements Since the second edition was issued we observe that the author has resigned his professorship at Halle and has become a professor in the Royal Technical High Schools in Berlin.

Experimentelle Beiträge zur Pathologie des Blutes (*Experimental Contributions to the Pathology of the Blood*) By Dr P SCHMIDT With four lithographic plates Jena Gustav Fischer 1902. Pp 42 Price 3s —This treatise is devoted chiefly to an inquiry into the nature and origin of the basophile granules in red corpuscles observed in certain conditions of anæmia. After a brief *résumé* of previous research on the subject Dr P Schmidt gives an account of his own work and then in discussing the whole question compares his results with those of other workers. He obtained the phenomenon of basophile granulation most readily and certainly in rabbits and guinea pigs after subcutaneous injections of phenyl hydrazin From his own researches the author is led to the conclusion that these granules are of nuclear origin and are for the most part produced by the division of the nucleus which precedes the regeneration and multiplication of the corpuscles in conditions of anæmia He finds them closely associated with the appearance of normoblasts and polychromatism in the blood In this view he is opposed to E Grawitz who regards the granules as degeneration products of the hæmoglobin contents of the corpuscles The author meets the main objection of E Grawitz that this basophile granulation is not found in the blood forming centres, such as bone marrow and the spleen, by pointing out that even the nuclei of normoblasts and of marrow cells in these centres stain very feebly, and considers, therefore, that the inability to establish the presence of this granulation in marrow may be due to inefficient methods of staining He states, moreover, that he has actually found undoubted evidence of basophile granulation in the corpuscles of normal bone marrow on one occasion. His discussion of the whole subject is interesting, but it cannot be said that the conclusions which he draws from his experimental data are entirely convincing

Ferments and their Actions By CARL OPPENHEIMER, M D, Ph D Translated from the German by C AINSWORTH MITCHELL, B A Oxon., F I C London Charles Griffin and Co, Limited 1901 Pp 343.—The introductory part of this work is devoted largely to what may be termed the polemics of fermentation. The author has made an attempt "to formulate a comprehensive conception of the notion 'ferment' on a dynamic basis and starting from this standpoint to regard the theory of ferments as a theoretically closed field of discussion." Thus he has treated the enzymes and organised ferments as a connected whole. Basing his attitude upon the researches of E Buchner, which practically removed the old distinction between organised and unorganised ferments, he starts with a comprehensive conception of a ferment which he says can only be of a dynamical character He decides, therefore, that enzymic processes are of a chemically exothermic kind. He then describes the mode of action of various ferments and closes with a section in the general part of the work on the Importance of Ferments to the Vital Processes. The special part of the work is divided into (*a*) the hydrolytic ferments, of which pepsin is a type, and (*b*) the oxidising ferments, of which yeast with the diastases is a type. There are very many points in regard to the nature and action of ferments which require further elucidation and already in the light of fresh researches several authorities on the subject find that they have to shift their ground The translator in his preface points out the view of the author that a ferment can never effect a synthetic process, whereas comparatively recent researches have shown that the action of lipase is a reversible one The work forms a very convenient and handy text book of reference on the subject.

Lectures on Chemical Pathology By C A. HERTER, Professor of Pathological Chemistry, University and Bellevue Medical School, New York. London Smith, Elder, and Co 1902. Pp 461. Price 7s 6d —With a few exceptions this volume contains the subject matter of a series of lectures delivered by the author at the University and Bellevue Hospital Medical College, New York, during the sessions of 1899–1900 and 1900–01. It may be assumed,

THE LANCET.

LONDON SATURDAY, MARCH 14, 1903

The Vaccination Acts

MR. BALFOUR has informed Parliament that there is to be no new Vaccination Bill this session and that the Act of 1898 is to be renewed, though probably only for a single year This probability carries with it the possibility or perhaps more than the possibility, of a Vaccination Bill being introduced in the next session of Parliament The Prime Minister vouchsafed no reason whatever either for the non introduction of a new Bill this year or for the proposed continuance of the 1898 Act for only a single year As regards the latter point, we rather appreciate this non committal attitude. When the Bill of 1898 was in the House of Lords it will be recollected that it was passed only owing to the hope held out by the Government that a Revaccination Bill would be introduced in the following session. That hope remains unfulfilled and we trust that Mr BALFOUR and his colleagues are a little ashamed of having in effect misled Parliament on that occasion. It is certainly better for them on such a question to say less than they mean rather than more and possibly the present reticence is more hopeful than the former comparative effusiveness

It has, we think, been the contention of Dr F T BOND, secretary of the Jenner Society, that there ought to be a year's delay before the introduction of a new Bill and that the year should be taken advantage of to hold some kind of inquiry into the working of the 1898 Act. There is, however, no Parliamentary hint of any formal inquiry, and indeed it may safely be assumed that the Local Government Board has during the whole period of the operation of the most recent Act been carefully noting alike its virtues and its defects In these circumstances there seems to be no strong reason for any other inquiry, but at the same time it is quite possible that if the actual drafting of a Bill has already been undertaken at Whitehall questions may have arisen which cannot be settled offhand and which, therefore, may usefully be considered at greater leisure, so as to have everything in readiness for the introduction of a well thought-out measure at the beginning of the next session of Parliament. The relation of the new educational authorities to the administration of the Vaccination Acts, and especially to any provision relating to revaccination, is a question which may require careful discussion and consultation between the central health authorities and the central education authorities We are very willing to hope that reasons such as these, together with pressure of public business in other directions, have largely entered into the Government's decision to defer any fresh legislation on this important subject

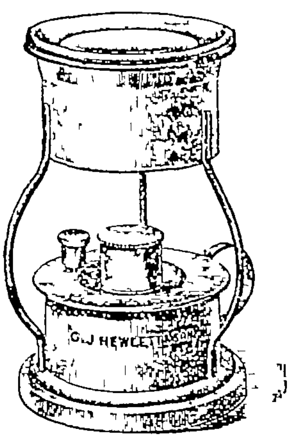
Meanwhile, evidence continues to accumulate of the need for legislation. It is a humiliating confession that though we know quite well how to prevent small pox there yet should have been in the provinces of England since the beginning of the year between 2000 and 3000 cases of the disease, as Sir MICHAEL FOSTER has elicited by means of a question in Parliament, and that in 1901–02 there should have been about 10,000 cases in London, and in 1900–02 much over 2000 cases in Glasgow, and a few years earlier very nearly 2000 cases in Gloucester Every one of these facts is a reproach to the nation and to its methods of government. At a time when the protection of the public health is receiving more attention than ever before when elaborate efforts are being made to prevent tuberculosis, when we are deploring our comparative helplessness to check the spread of cancer and are entering on most careful research in the hope of removing our inability concerning it,—while all this is being done there yet remains the paradox that as a nation we knowingly permit one of the foulest diseases that has ever afflicted humanity to exact its yearly toll of sickness and of death, accompanied by all the incidental evils that small-pox invariably carries in its train, though there lies ready to our hand an easy and simple and very safe method of reducing its ravages practically to the vanishing point. Judging from his freely expressed views on the whole subject the President of the Local Government Board is fully alive to these anomalies and to the national disgrace under which we at present rest in this matter Indeed, one of the best hopes of an early removal of this scandal from our public health administration is to be found in the fact that the Minister who is at the head of the department which has special charge of such questions is himself so keenly conscious of the utter indefensibility of the present position.

Though the whole subject of vaccination is of infinitely more importance to the public than to the profession of medicine, there is yet one body of medical men who have a grievance to suffer so long as the present system continues. Elsewhere in this issue of THE LANCET (p. 754) there is reported a series of resolutions adopted at a meeting of public vaccinators at Plymouth It is not necessary to refer to all the points which they raise, but obviously they are asking only common justice in requesting that public vaccinators should be as independent in position as are vaccination officers. At present the latter cannot be dismissed except with the consent of the Local Government Board, while the former are regarded as being only under contract terminable by four weeks notice. If a competent medical man, with the usual responsibilities of life to face, is to devote any large portion of his time to special work such as vaccination under appointment by any local body it is obvious that he should have reasonable security for the permanence of his position. Days or hours periodically devoted to vaccination are so much time taken from other branches of professional work and a man who is capriciously deprived of office cannot immediately substitute for the lost occupation such employment as he could have secured in the time given to official duty in former years Proper and impartial consideration of questions of emolument between employer and employed cannot be carried on under constant threat of dismissal from office in the event of non acceptance of offered terms. What the exact remuneration of public vaccinators should be is a complicated question on which we do not profess to enter here. In fixing fees under the described and contain some free alkali. The lightning cleanser, however, gave no reaction distinctive of alkaline excess These soaps contain no foreign ingredients beyond those described, they are free from objectionable resins and silicates.

New Inventions.

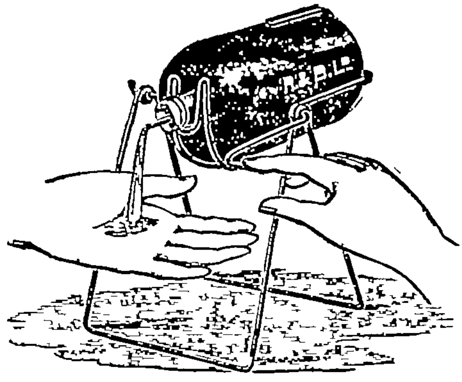
UNNA'S PASTES AND HOT WATER BATH

THE "pastes" consist of gelatin discs containing zinc oxide, boric acid ichthyol, iodoform, resorcin, carbolic acid, or other agents used in dermatological practice. The discs loaded with these medicaments are somewhat larger than a five-shilling piece and about three times as thick In practice the disc is placed in a water bath specially constructed for the purpose. As shown in the illustration the water bath consists of a spirit lamp over which is placed a water-container, upon the top of which a shallow porcelain dish rests The discs are placed in the porcelain dish in which, as soon as the water boils, they melt, furnishing a liquid paste which may be painted on the affected part with a camel hair pencil. This method of preparing applications for dermatological use offers several obvious advantages. The apparatus and discs are supplied by Messrs. C J Hewlett and Sons, 40, 41, and 42, Charlotte street, London, E.C



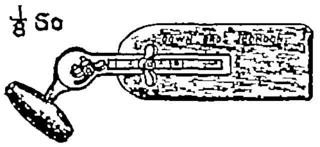
AN ASEPTIC SOAP CRADLE

THE accompanying figure illustrates a very simple and useful adjunct to the wash basin for the use of medical men and others. The apparatus consists of a base constructed of stout wire in triangular form On the apex of this triangle a wire framework adapted for holding a bottle swings and by means of a handle the bottle may be tipped and a supply of liquid soap obtained The quantity of soap discharged can easily be regulated The manner of using the apparatus will be seen in the accompanying illustration. The soap cradle may also be attached to the wall. A cork with double perforation is fitted into the neck of the bottle A glass tube is passed through one of the perforations to within a short distance from the bottom of the bottle Through the other perforation a short piece of glass tube is fitted The liquid soap passes out of the short tube, air taking its place through the longer tube The bottle is made of brown non actinic glass and the label consists of sand blast lettering The apparatus is supplied by Messrs Reynolds and Branson, 13, Briggate, Leeds.



A NEW SPLINT FOR COLLES'S FRACTURE.

MR. JAMES S ASHE, of the Adelaide Hospital, Dublin, has invented a new splint for the above fracture for which the following advantages are claimed. It can be used for both arms. An extension movement can be obtained, together with any degree of adduction or abduction. It consists of two parts (1) the splint proper and (2) the crutch. The splint proper is a piece of wood about five inches by three inches by a quarter of an inch with a screw at one end which allows the crutch to be racked out to any degree according to the size of the arm, &c., and there fixed. The crutch is T shaped and is composed of metal, the cross piece being wood is the part held by the hand, the limb has a cut-out groove in it which slides up and down on the screw of the splint proper, another screw allowing it to be fixed at any angle The accompanying illustration explains the working Messrs. Down Brothers, Limited, of St. Thomas's street, London, S E, are the makers.



Looking Back.

FROM

THE LANCET, *SATURDAY*, MARCH 12, 1825.

FOREIGN DEPARTMENT

ANALYSIS OF FOREIGN MEDICAL JOURNALS.

REVUE MEDICALE—JAN

Croton Tiglium.

From some researches made by M. CAVENTOU on this vegetable, he has ascertained that the oil extracted from it, which has become extensively used in this country, is precisely similar to an oil procured from the seeds of a plant, called in France, *Pignon d'Inde*, and, therefore, *suggests* it as a substitute for the former M.M Recamier and Kapelar have made some comparative experiments with the two oils, and have shown that their action is identically the same.

Thridace

The juice of the *lettuce* introduced into practice by Dr Duncan, and highly extolled by him as a substitute for opium, has been lately examined by M. François, and he has discovered what he considers to be the active principle of the plant, to which he has given the name of Thridace.

On the Use of Citric Acid in Uterine Hæmorrhage

In No 8 of the present volume we gave an abstract of a paper read on this subject at the Royal Academy of Medicine on the 13th of January Dr Macleod, considering the introduction of a lemon into the cavity of the uterus to be a very novel, not to say an ingenious procedure, submitted it to the notice of the Westminster Medical Society, for the purpose, we suppose, of eliciting the opinions of the persons present respecting it. A discussion ensued, Dr Granville expressed himself as opposed to the remedy, considering it to be unsafe and ineffectual Some gentlemen conceived that there would be great difficulty in getting the lemon out It might be introduced easily enough, but how was it to be extracted? A silence followed, the question was so important, that it required the most serious deliberation, and such it received! With the greatest imaginable gravity, and with the air of one "profoundly skill'd in analytick" Dr Copland arose, *Dr Copland, Consulting Physician to the Queen's Lying in Hospital cum multis aliis honoribus*, modestly *suggested* 'that a small bit of string should be fastened to the extremity of the decorticated lemon, by the aid of which it might be safely withdrawn" !!

The suggestion was excellent, it dissipated all doubt and difficulty, it was the very *quod erat demonstrandum* of the question, and the Society testified their approbation by great laughter and applause required to elucidate the difficulties now existing. Bronchopneumonia is unfortunately not a rare disease and consequently plenty of material can be obtained for clinical observation, and if other observers confirm the statement that cases of this disease can definitely be divided into two groups great assistance will be derived in regard to treatment, and also in reference to the prognosis, in individual cases.

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The Working of the Midwives Act

THE remarks made by certain of the speakers at the meeting recently convened by supporters of the Midwives Act, under the chairmanship of Sir MICHAEL FOSTER, require a little consideration from us. It will be seen from the report of this meeting published in THE LANCET of March 7th, p. 679, that the supporters of the measure, having succeeded in Parliament in securing legislation more or less in accordance with their wishes, do not look forward with entire confidence to the working of the Act when its application comes into force. They wish, therefore, to pre-concert measures which shall achieve the object for which the Act has been framed—viz., the relief of the parturient poor, and in any such endeavour they will have the sympathy of the medical profession shown none the less cordially because the majority of medical practitioners, like ourselves, think it probable that the Midwives Act renders subsidiary efforts in behalf of the parturient poor particularly needful.

In calling to mind the main provisions of the Act it appears to us that the consoling feature of its progress through Parliament was the amendment which caused the inclusion of a clause penalising the practice of midwifery by those not certified under the Act. The inclusion of this penalty clause saved the Act from being largely ineffective. No woman is to be certified under the Act as a midwife unless she has complied with rules and regulations that are to be formulated by a Central Midwives Board the formation of which has been settled upon and the duties of which will soon commence. The Central Midwives Board besides regulating the course of training of midwives and appointing examiners, will publish annually a roll of duly certificated midwives and will decide upon the admission to the roll of women already practising as midwives. Every council of a county or county borough throughout England and Wales is to be the local supervising authority over midwives within its area. Every woman certified under the Act before holding herself out as a midwife or beginning to practise must give notice in writing to the local supervising authority. In this way the women certified as midwives under the Act will be brought under local and general control, so that the public will feel that their employment, so long as they keep within their sphere of knowledge, is unattended with the risk entailed by the services of the old time monthly nurse. But if this qualified measure of security is counterbalanced by a drying up of the supply of midwifery nurses the benefit derived by the public is surely a shadowy one. The objections which we and a large majority of the medical profession have always had to legislation for the registration or certification of midwives have been often set out in our columns. We think it opportune to allude briefly to them so that when the new Central Midwives Board begins to work its members may take all steps to guard the public. The duties of a midwife are not clearly defined in the Act, nor is there any special provision made to secure that she shall immediately seek the aid of a medical man when confronted with pathological conditions that are beyond her skill. There can be little doubt that in the eyes of that large class for whose welfare she has been called into being the certificated midwife with her limited training will rank as the equal of the medical man. Services will be asked of her that can only safely be performed by those who have full medical and surgical experience. Acquaintance with one particular physiological process when it is normally performed must not, in the public interest, be allowed to qualify a certificated midwife to play the part of a general practitioner. We shall rejoice as heartily as any promoter of the Midwives Act at the disappearance of the dirty GAMP, and shall hail with delight, giving credit where the credit is due, any distinct abatement in infant mortality that can be traced to its working, but we would urge upon the Central Midwives Board the necessity of making certificated midwives understand that there are limitations to their duties and responsibilities.

At the meeting already alluded to which was convened by Mrs. HEYWOOD JOHNSTONE at the Grosvenor crescent Club, it was evident that the chief difficulty anticipated by the supporters of the Act relates to the supply of midwives in rural districts. The anticipation is likely to be well founded. The number of certificated midwives available in 1903 will largely depend upon the freedom with which the Central Midwives Board grants certificates to women who are now gaining a living as monthly nurses. If the Central Midwives Board adopts a low standard of training and character there will be as many midwives as at present, but the Act will be a fiasco. If, on the other hand, it insists upon good character and efficient training in obstetrics, then the dearth anticipated will be no doubt severely felt, especially in rural districts. As Dr. R. BOXALL has pointed out trained midwifery nurses are with difficulty induced to exercise their calling in the remote country parts. The first step on the part of the board towards securing a sufficient number of midwives should be to find out through the medical men and clergymen of the various districts which of the women now acting as midwives can with safety be certificated. Then with the aid of the medical man those regions left stranded by the removal of incompetent midwives should form themselves into self supporting associations to keep the services of a properly trained midwife for attendance on the parturient poor. Such a nurse should know when to ask the assistance of a medical man. This plan is more or less the one suggested by Mrs. HEYWOOD JOHNSTONE and forms the only solution, so far as we can see, of the impending difficulty. In short, the less that the Act interferes in country districts with the existing condition of things the better chance it will have of not breaking down altogether in some of its operations, but, also, the less chance will it have of remedying the evils which justify its presence on the statute book. This can hardly be called a strong argument for new legislation.

Act of 1898 it is quite possible that payment for revaccination during epidemics, as distinguished from primary vaccination at ordinary times, did not receive sufficient consideration, and boards of guardians have a right to express their views on such a subject What we insist on is, however, that due discussion of these points cannot but be hampered by the present utterly unsatisfactory tenure of office.

In the resolutions referred to we are glad to note that the public vaccinators recognise the right of the ordinary medical practitioner to consideration by the Government in respect of vaccination work duly and efficiently performed. The proposal is that every practitioner should receive a fee for every certificate of vaccination performed in accordance with the standard of efficiency recognised for public vaccination That seems on the face of it a reasonable solution of a question which is not unattended by difficulty, and it is to be hoped that whatever legislation be introduced on the whole subject the Association of Public Vaccinators will take steps to impress on all its members their duty to exercise the utmost discretion in the practice of domiciliary vaccination and to avoid all reasonable ground for criticism by the medical attendants of the households into which they are called in the course of their official duties.

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Broncho-pneumonia

THE etiology and pathology of lobar pneumonia are now thoroughly understood and although this affection has usually been considered a pulmonary disease yet many authorities consider that it should be placed amongst the specific fevers and perhaps the term "pneumonic fever" would be a more apt one than "pneumonia."

With regard to broncho-pneumonia—otherwise called "catarrhal," "lobular," or "patchy pneumonia"—less unanimity prevails Professor E AUFRECHT[1] considers that a catarrhal inflammation of the mucous membrane of the finer and finest bronchi is an absolute condition upon which broncho pneumonia depends, in this view he is supported probably by most observers Dr SAMUEL WEST,[2] however considers that cases of broncho-pneumonia in children may be divided into two groups according as the disease has been preceded by bronchitis or not, and he calls these groups "primary" or "idiopathic" and "secondary" respectively Broncho pneumonia, whether primary or secondary, is met with chiefly in the early years of childhood and becomes less and less frequent as the fourth and fifth years approach It can hardly be said that children are less susceptible to bronchitis after the age of four years than before, yet broncho-pneumonia, as has just been pointed out, becomes much less frequent after that age. If lobar pneumonia is due to a specific infection it scarcely seems reasonable to assert, as Dr WEST points out, that children under four years of age are less susceptible than children above that age, especially as the pneumococcus is found almost as frequently in the broncho pneumonia of little children as it is in the lobar pneumonia of the adult. From this fact in the bacteriology of the disease the suggestion arises that the form which the inflammation takes in the young child depends upon some peculiarities in the lungs as compared with those of the adult. Dr WEST maintains that the respiratory mechanism in children presents many such peculiarities. The chest walls are elastic and yielding owing to the incomplete ossification of the ribs and the thorax approaches the cylindrical in form, the type of respiration is diaphragmatic rather than costal and remains so up to about the sixth or seventh year In structure, also, the lungs of children present many notable differences from that which is found in the adult, thus, the trachea and main bronchi in the young child are much larger, the other branches are also larger in the child than in the adult, and occupy greater relative space, the air cells are smaller and the interstitial tissue of the lung is more abundant There are other differences which might also be mentioned, but those which we have named are sufficient to justify the suggestion that inflammation in the lungs of young children may assume a form unlike that which is seen in older patients Dr WEST, therefore, arrives at the conclusion that the same exciting cause—e g a pathogenic organism such as the pneumococcus—which in the adult and older children excites a lobar inflammation, in very young children usually causes a lobular inflammation If this contention is correct the distinction drawn between primary or idiopathic broncho pneumonia and secondary or catarrhal broncho-pneumonia requires to be carefully considered both on clinical and pathological grounds. In support of this classification Dr WEST records several cases illustrative of each group The instances which he relates differ considerably in their type and course and certainly corroborate his views The bacteriology of broncho pneumonia, so far as it is known, also testifies to the value of his theory He quotes the results of several observers and the evidence thus adduced shows that in secondary broncho pneumonia the streptococcus is the most frequent organism that is found, whilst in primary broncho pneumonia it is the pneumococcus, and it is further proved that in the latter affection the pneumococcus is almost as common as it is in the lobar pneumonia of adults

In dealing with the main differences between the morbid anatomy of croupous pneumonia and broncho pneumonia respectively, Professor AUFRECHT states very definitely that "catarrhal pneumonia never has a granular cut surface," and he also gives in great detail the microscopical conditions found in each variety of the disease, which, in his opinion, differ considerably Dr WEST, on the other hand, says "It is now well known that the microscopical distinctions often drawn between the minute lesions of lobar and lobular pneumonia cannot be regarded as absolute and that, for example, even the fibrin network which is so common in acute lobar pneumonia is not uncommon in acute broncho-pneumonia, while it may be absent in lobar pneumonia" The views which we have quoted will thus be seen to be somewhat diverse. We believe, however that modern research tends to corroborate the classification suggested by Dr WEST The division into primary and secondary varieties undoubtedly removes some of the difficulties which are felt at the bedside, but further investigations are siege which he undergoes at the hands of continental quidnuncs eager for the latest information as to the condition of his venerable patient. On the day before the great ceremony of March 4th he had to cut off all telephonic communication with his own residence, the assault of the said quidnuncs having previously been so persistent that they declined to accept as 'information' even the bulletin which he had authorised the members of his family to quote in reply to them! But, as he assured a friend quite lately, he forgets all these worries in the far more trying cares that beset his patient, whose self abnegation really grows with the demands made upon it and whose life seems inspired by the watchword of the great French ecclesiastic, 'Rest? we shall rest thro' Eternity!'"

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[1] Professor Nothnagel's Encyclopædia of Practical Medicine.

[2] Diseases of the Organs of Respiration

THE FUTURE OF ST GEORGE'S HOSPITAL

WE have received from Mr C L. Todd, the secretary of St. George's Hospital, some papers which have been circulated among those interested in the matter relative to a proposal to remove the hospital from its present site to one of greater extent. The question is one that has been under debate in an informal way for some time among St. George's men. The papers give the reasons why some of the governors of the charity have proposed the removal of the hospital and these may be summarised by saying that the increasing difficulty of carrying on the work of the hospital in conformity with modern ideas, which has been for some years past increasing, has now become insuperable unless a considerable extension of the present site and buildings of the hospital can in some manner be obtained The amount of medical and surgical work done by means of the hospital beds has doubled during the past 30 years entailing a greatly increased staff of nurses, officers, and other employés, for all of whom additional accommodation has now to be found. The governors of the hospital have during the last 12 years made every effort, by rearrangement and enlargement of the existing buildings to provide this accommodation but the limits of practical extension have been reached The same story of inadequacy of space must be told of the out patients' department. This and all the various special departments of the hospital are suffering from want of room The proper quarters for an x ray installation, for systematic treatment by baths for electrical treatment, for the Finsen treatment of lupus, and for other modern therapeutical developments have to be found. With regard to the medical school, those who advocate removal point out that it has for years been suffering from the exiguity of its premises and prophesy that it will not be possible much longer to carry on educational work at Hyde Park Corner It will thus be seen that those who propose the removal of the hospital can make out a very strong case. But the same may be said for those who object to the revolutionary course. Those who would preserve St. George's Hospital in its present site hold that the site would not be insufficient for the purposes of the hospital alone if the nurses home and the medical school could be accommodated elsewhere It might be necessary to remodel the central block of the building but the expense of this and of rehousing the school and the staff taken together would be nothing compared to the expense of rebuilding a large general hospital on a new site in the west end of London. The extreme difficulty of finding a site large enough for the purpose anywhere in the west of London is obvious, while it is equally clear that any change which would remove St. George's Hospital far away from its present position would entirely alter its whole organisation, as well as deprive London of a receiving house for the numerous accidents in the parks and streets that converge at the west end of Piccadilly The governors of St. George's Hospital have an extremely difficult question before them, one, indeed, on the solution of which the whole future of a dignified and valuable London charity of many years' standing may depend. We are certain that they will discuss the *pros* and *cons* of the removal of the institution with all care and forethought They will receive a great deal of gratuitous advice, the cocksureness of which will always be proportionate to the ignorance of its donors But as this will probably be apparent to them they may be expected to disregard it. In one way the situation may be easier for those who desire to remain in their old quarters than it has been for some time The excavations of a tube railway have considerably reduced the value, at any rate temporarily of the houses in St. George's place immediately to the west of the hospital, so that extension in this direction is no longer out of the bounds of imagination on the score of expense

THE PREVALENCE OF SMALL-POX

CASES of small pox continue to be reported from various places in the north of England. The disease has broken out among navvies working at Harrogate Over 300 cases are under treatment at Liverpool and Salford and Leeds are also suffering Small pox has broken out in Winson Green Gaol, Birmingham, while Keighley, a great anti vaccination centre is also affected by an outbreak After all, there is no argument in favour of vaccination so cogent as an outbreak of small pox In the South of England six cases have occurred in one family at Braunton, Devonshire. The cases were of such a mild nature that the first four were considered to be chicken pox. The infection was apparently imported from Cardiff. An inquest was held by Mr Wynn Baxter on March 6th at the Whitechapel Infirmary upon the body of a man who was found in a dying condition in the street by a policeman The cause of death was hæmorrhagic small pox. Dr R Dudfield, medical officer of health of the borough of Paddington, has issued his report upon the epidemic which prevailed during 1901 and 1902 The outbreak in Paddington lasted for 14 months and in all 132 cases were notified. Of these 15 were notified in error so that only 117 cases are dealt with in the report The 117 cases occurred in 81 houses, 61 were males and 56 were females. With regard to vaccination state, "unvaccinated" includes both those who had never been vaccinated and those who were only vaccinated after infection The following table shows the vaccination state and age periods of the fatal cases —

Fatalities per 100 Cases of each Group

Ages	Unvaccinated	Vaccinated in infancy only	Revaccinated
0–15 years ..	50·0	—	—
15–30	42 8	4 3	—
30–45	50·0	22·2	25·0
45–60	—	16·6	100·0
60 years and upwards	—	—	—

At first sight the mortality percentage among the revaccinated cases looks alarming, but there were altogether only seven cases of small pox in this group Two were females and neither died, five were males and of these two died—one aged 43 years revaccinated 20 years previously and one aged 46 years revaccinated 25 years previously It is this case which brings the mortality of the 45–60 group up to 100 0, being the only revaccinated case in the group The other figures in the table speak for themselves. At all ages the cases, vaccination state, and deaths were as follows never vaccinated, 11 cases with six deaths, vaccinated after infection, six cases with two deaths, vaccinated in infancy only, 94 cases with 10 deaths, and revaccinated, seven cases with two deaths. One of these cases, an infant infected *in utero* and aged 13 days, was not notified and so is additional to the

Annotations.

"Ne quid nimis"

THE ROYAL MEDICAL BENEVOLENT COLLEGE

ON Wednesday, June 10th, H R.H the Prince of Wales will preside at a festival dinner of the Royal Medical Benevolent College in aid of the funds of the charity and in celebration of the jubilee of the laying of the foundation stone of the College. It is not to the credit of the medical profession that such a noble institution as the Royal Medical Benevolent College should have to plead so earnestly and so repeatedly for funds to carry on its splendid work. Had it not been for the dauntless courage and untiring efforts of a few medical men this good work would have been considerably curtailed and while the profession would have had a less effective charity both the profession and the public would have lost an educational institution of merit. We have so often urged the claims of the College that we hesitate again to remind our readers of the scope of its work, but we feel sure that all who love their profession and its institutions will bear with us in appealing to those who for one cause or another may have overlooked a charity which ought to be their peculiar care The Royal Medical Benevolent College provides pensions for aged medical men and the widows of medical men in reduced circumstances, together with a school open to all classes, but offering special advantages to the sons of medical men, 50 of whom are foundation scholars. There are 50 pensioners who receive £30 a year each. The 50 foundation scholars, we should mention, receive an education of the highest class and are boarded, clothed, and maintained at the expense of the College. For the benevolent side of the institution a sum of over £6000 is required annually and the greater part of this amount is derived from voluntary contributions. As we have already mentioned, the jubilee of the College is close at hand and in a building 50 years old it is not surprising to learn that considerable structural alterations have been found necessary and that sanitary defects have had to be remedied There is also a debt owing to the bankers of nearly £3000 To clear off these liabilities and to put a little money by are now the objects of the council and we feel sure that the medical profession will do its utmost in some measure to repay the kindness of his Royal Highness in presiding by subscribing the £10 000 for which the council is appealing as a jubilee fund. But if the Royal Medical Benevolent College is to take the place which it ought to take among the charities of the profession by continually enlarging its sphere of usefulness something more will be required than great efforts made at widely separated intervals of time The flow of charity must be a steadily increasing one from year to year In England alone there are over 20,000 registered medical men. If every one of these were to subscribe only 10*s* per annum it would mean that the income of the College would be £10 000 a year Ten shillings a year is not a large sum it is less than threepence per week, and with a banker's order given for the sum to be paid regularly the disbursement would scarcely be felt. But the united subscriptions would make a vast difference to the usefulness and power for good of the College

A PLUCKY DEED

AT the levée held on March 9th His Majesty the King presented Captain Herbert Cumming French, R.A.M.C., with the decoration of the Albert Medal, second class. The service for which this decoration was awarded was as follows. On Nov 17th, 1902, H.M. Transport *Wakool* was steaming through the Straits of Malacca at a rate of about 12 knots per hour when a native fireman jumped overboard Captain French, who was a passenger, immediately dived into the sea from the promenade deck, a height of about 36 feet, and swam to the place where the fireman had been last seen When, however, he reached the spot the man had sunk and Captain French, becoming exhausted by the weight of his clothing, had to make for a life-buoy Both men were eventually rescued by the life boat. A strong current runs at the place and Captain French ran great risk of being caught by the ship's screw and, in addition to this danger, sharks and water snakes are frequent in the Straits of Malacca. We congratulate Captain French on his plucky deed and the recognition of it at the hands of His Majesty

LEO XIII AND HIS JUBILEE

ONE of our Italian correspondents writes under date, Rome, March 7th —"The Pope seems destined to do credit to Italian medicine, from Celsus to Lapponi. True to the prescriptions laid down by the former in his famous first chapter, for the first 68 years of his life he lived as the Roman Hippocrates says every 'sanus homo qui et bene valet et suae spontis est' ought to live, 'partly in the country, partly in the town, and, oftener than not, in the open air He ought to yacht or hunt,' or allow himself the recreation of rod or gun In this latter form of outdoor exercise the Pope, when Archbishop of Perugia, was exceptionally proficient and after an enjoyable day on the Umbrian hill sides he would return with a heavy bag of red legged partridges for distribution among the hospitals of his diocese—a feat he thereafter celebrated in Catullian hendecasyllabics for the amusement of the dean and chapter From this life of the student alternating with that of the sportsman he passed, just 25 years ago, to the Vatican there, as supreme Pontiff, to play the part of 'prisoner' (with doors locked on the inside) and to assume the reins of an empire on which, if the sun never sets, a cloud ever hangs. It is at this stage that his body physician found his responsibilities really begin True, his august charge inherited the constitution and the wiry physique of a long line of mountaineers, advantages strengthened by plain living, high thinking, and out-door recreation, systematic without monotony But confinement even to 'a palace and a garden' on the least healthy of the hills of Rome involved a sudden change of habits, nay, a revolution in the *modus vivendi* which put the preceding 68 years of well ordered life to a severe test However, as Dr Lapponi himself is the first to admit, His Holiness is an exemplary patient, observing with promptitude and in entire good faith the prescriptions from time to time submitted to him and reinforcing the regimen with that best of all auxiliaries to the professional man, the will to live. It is thus that he performs feats of endurance, mental and physical, that would impose a formidable strain on men 20, or even 25, years his junior and that the ordeal of his pontifical jubilee on March 4th left him fatigued doubtless, but much less so than hundreds upon hundreds of the 60,000 spectators who from all parts of the world thronged St. Peter's for the ceremony Not that this marvellous vitality or resisting power ever lulls to sleep the vigilance of his body physician. On the contrary, Dr Lapponi, well aware how often in practice the unexpected happens, is never more alert than when all the omens seem to be most favourable and redoubles his precautions down to the minutest details, not only of diet and rest in the recumbent posture, but even of clothing and temperature and the transition from one suite of apartments to another He himself, indeed, is feelingly reminded in his own person—

> Quid valeant humeri quid ferre recusent

and complains, good humouredly enough, of the constant or else relegated to the small hours of the morning or at a time when the ordinary traffic practically ceases We should like to know what the effect of this heavy steam traffic is likely to be upon the various mains in the streets. The consequences that may arise from the crushing of these mains are really alarming, considering the close proximity of the water mains, gas mains, and the high pressure electric mains As long as the streets are to be permitted to the use of engines and wagons on the same scale as railroads we may well shudder at the awful possibilities of turning electric currents astray and of letting loose gas and water at the same time

CANCER "CURES"

IN the *Pall Mall Gazette* of Feb 27th a short article appeared which was called "A Triumph of Electricity" It concerned itself with the cure of cancer by "high frequency" electricity and the gist of it was that a "doctor" who lives "in a handsome house not a hundred miles from Hyde Park" and is "one of the first and foremost private medical men in this line" and "one who may in all truth be said to have advanced even a step or two further than any other" has discovered that "high frequency" is the cure for cancer. Reference is also made to the opening of a hospital for the application of his treatment. There are also in circulation just now a printed leaflet and a letter about the same matters and in these appears the name of Mr. E. A. Cloete Smith. He has a hospital not far from Hyde Park. The letter recommends the high frequency treatment of cancer as against the use of the Roentgen rays and mentions Mr. Smith as the skilled operator Considering the nature of cancer and the slow and laborious work which is being done in many quarters to try to solve the problem of finding a successful treatment for it—considering, too, the slight encouragement which is leading investigators forward into the x ray and other electrical methods in spite of many disappointments—it certainly seems that Mr Smith and his friends are doing much harm and little or no good by announcing that the disease can be cured, and that by high frequency electricity The facts about high frequency and cancer are that whereas some relief of pain and some temporary decrease of size in the tumour may be obtained by high frequency we are nevertheless baffled in the attempt to obtain anything which may be called a cure. Much more pains taking work has to be done before arriving at the goal and it is uncertain whether the desired result will be reached at all or not. Certainly it is not by proceedings like those of Mr Smith that success is to be found. The evidence in favour of the efficacy of the x rays is considerably stronger than any which can be adduced as yet for high frequency A few cases which have been reported of high frequency "cures" have proved to be fallacious and some at least of the patients reported as "cured" have died from a recurrence of their disease.

A QUESTION OF REMUNERATION UNDER THE POOR-LAW

A CORRESPONDENT who is medical officer to a workhouse, having received a letter from his board of guardians requesting him to attend at an early hour every day to examine the tramps in the casual wards before they leave, in order that cases of small pox may be detected in the earliest stage, asks us to give our opinion as to the amount of remuneration that he would be entitled to claim for the performance of so inconvenient, so constant, and, in this case of a gentleman engaged in general practice, so objectionable a duty It is somewhat beyond the limits of possibility to define the exact value of medical services and especially when they are of such a nature as those here indicated A knowledge of the appointments held under the board of guardians and of the class of the patients in the practice conducted by the surgeon concerned would be necessary for the making of a correct appraisement. The most important factor in the position will be found in the terms of the contract between our correspondent and his guardians At his appointment as medical officer were the casual wards put in his care? In other words, has he visited sick casuals as part of his duty at the workhouse? If the answers to these questions be in the affirmative then it will appear that the guardians, under the powers given by Article 207 of the general consolidated order can call upon him to visit the wards at the hours which they may fix and without payment other than the salary otherwise given. On the contrary, if the duty of visiting the patients in the casual wards has been added to the duties of the workhouse medical officer, or if the number of such visits was agreed upon originally and has now been increased, then our correspondent will have a right to claim further remuneration. To enable him to estimate the value of the extra services demanded from him it may be mentioned that many of the metropolitan workhouse medical officers have had to undertake an additional duty recently—namely, to visit once or twice a week, or when required, the new receiving homes for children, and that the salary added for these visits has been about £40 per annum

HASHEESH AS A CAUSE OF INSANITY AND CRIME

Dr John Warnock, medical director of the Egyptian Hospital for the Insane, Cairo records in the *Journal of Mental Science* for January last the results of his observations on "hasheesh," or cannabis indica, as an agency in the production of insanity and crime, drawn from an experience which is exceptionally large in this field of medicine. It is pointed out that Ibn Beitar, an Arabian physician, was the first to recognise an insanity from the use of hasheesh, A.D 1235 but the drug had then been in use probably for many centuries. At present the drug is largely consumed in Egypt, adds Dr Warnock, although its importation is prohibited by law The fact that about 16 tons of hasheesh were confiscated in Egypt during the year 1901 will give some indication of the extent of its use. "Most of the drug is consumed by smoking in the gozeh [an Egyptian pipe] and in cigarettes, but a considerable amount is eaten in pill form and in sweetmeats magoon, &c." The usual reason given by patients for using hasheesh is that it induces a general feeling of pleasure and content. When eaten in pills and sweetmeats it seems to be taken chiefly as an aphrodisiac Insanity from hasheesh belongs to the "toxic" group which includes insanities due to alcohol, opium, and cocaine. Dr Warnock classifies the insanities from hasheesh under the following types First there is the temporary intoxication from hasheesh which is attended with pleasurable exhilaration. Pleasant, half waking dreams not unlike those of the opium eater, occupy the mind, but active excitement as in alcoholic intoxication, is uncommon. Secondly there is a delirium from hasheesh, which is associated with hallucinations of sight, hearing taste, and smell. Great exaltation, restlessness, and sleeplessness are marked features, but there is an absence of the tremors and physical exhaustion of alcoholic delirium tremens The third variety is a more acute form of excitement attended with hallucinations, incoherence, destructiveness, indecency, and impulses towards violence Delusions of poisoning or of persecution are common in this affection. States of depression and terror may be intermingled with excitement. These cases tend to pass into a chronic condition which constitutes the fourth class Eventually there succeeds a

117 notified cases. The number of revaccinations increased from 156 in 1901 to 8688 in 1902, while the successful primary vaccinations increased from 1590 in 1901 to 2777 in 1902 As will be seen by a statement from our Dublin correspondent there are 16 cases of small pox in that city and on March 8th 1 patient died from the disease in the corporation isolation hospital.

ANNUAL DEBATE OF THE CHELSEA CLINICAL SOCIETY

THE members of the Chelsea Clinical Society commenced their annual clinical debate on March 10th at the Jenner Institute, Chelsea gardens, London, S W The subject was Diabetic and Non Diabetic Glycosuria and the debate was opened by Dr W Hale White, whose remarks will be found in full in this issue of THE LANCET, p 714 Dr Hale White was followed by Dr F W Pavy who in the course of his contribution to the discussion defined diabetes as "a more or less persistent defective assimilative action upon the carbohydrates of food resulting in glycosuria." A full report of the debate will be published in our next issue The two other speakers were Dr R. Saundby and Dr J Rose Bradford.

URÆMIC ULCERATION OF THE SKIN AND MUCOUS MEMBRANES

WE have recently in an annotation referred to the intestinal lesions of uræmia.[1] The cutaneous lesions of kidney disease resemble the intestinal ones in that they are also ill recognised and only in recent years have received attention. Erythematous, urticarial, papular, purpuric, and pustular eruptions have been described In connexion with a case of uræmic ulceration of the duodenum with hæmorrhage reported to the Société Médicale des Hôpitaux of Paris by M. Barié and M Delaunay (described in the annotation referred to), M P Dalché and M Henri Claude reported at the meeting of the society on Jan. 23rd an analogous and equally interesting case of hæmorrhagic ulceration of the skin and mucous membranes in uræmia. A woman, aged 36 years, was admitted to hospital Eight years before there was albuminuria during pregnancy which disappeared after labour During the next six years her health was fairly good. Then began headaches, gastro-intestinal troubles, and fugitive œdema of the legs and eyelids Dyspnœa, palpitation of the heart, and epistaxis appeared and three months before admission ecchymotic spots were observed on the limbs Hæmorrhages into the mouth, near the anus, and at the umbilicus followed in this order Hæmorrhage in the last position was present on admission The disease progressed rapidly and the patient died about a month after admission in a state of profound cachexia without having presented any acute symptoms of uremia, but cryoscopy showed progressive insufficiency of renal excretion. At the necropsy granular kidneys were found. M Dalché and M Claude laid emphasis on the characters of the hæmorrhages and ulcers which gave the case a special clinical aspect. On the limbs were purpuric spots and ecchymoses distributed almost symmetrically At the umbilicus and anus there was a slight oozing of blood the source of which was not evident. The saliva was constantly bloody and hæmorrhages occurred from the tongue and mucous membrane of the cheeks The tongue was yellowish white and at its sides were hypertrophied papillæ with fissures between them from which blood constantly oozed. A small hæmorrhagic ulcer and some purpuric spots were observed on the right side of the soft palate. On the mucous membrane of the cheeks two gangrenous patches appeared. Around the anus were small round ulcers with slightly elevated borders from which blood issued. In the week preceding death the buccal hæmorrhages became more and more abundant, the ulcers on the cheeks extended and became covered with a false membrane, the attempted removal of which increased the hæmorrhage. Ulceration gradually took place at the umbilicus, resulting in two bleeding ulcers of the size of a 50-centime piece with indurated and elevated borders In the last days of life they extended to the subcutaneous cellular tissue. In all the lesions the process seemed to be the same an extravasation of blood took place in the deeper layers of the skin or mucous membrane and was followed by destruction of the overlying tissues and hæmorrhage. The base of the ulcer had the characters of necrosis and not of inflammation. Histological examination confirmed this view, purely necrotic changes were found. Purpura is a well known manifestation of uræmia, but usually is not accompanied by hæmorrhage from the skin. M. Barié in 1889 described uræmic stomatitis, but in this affection the ulceration differed from that in the present case It was inflammatory and painful, the borders of the ulcers were not elevated, there was no hæmorrhage, and the tongue was not affected It is noteworthy that the ulcers occurred only on parts subject to friction—the tongue, mouth, umbilicus, and anus. In other parts, no doubt in consequence of the re-establishment of the circulation, the hæmorrhages were not followed by ulceration The cause of extravasation of blood in uræmia is doubtful. Amongst others alterations in blood pressure, in the vessels, and in the coagulability of the blood have been proposed. Schönemann has recently examined the mucous membrane of persons who died from uremia and had epistaxis. He found an increase in the number of the capillaries, which were so near the surface that some of them had perforated the basal membrane and insinuated themselves between the epithelial cells. Thus the capillary loops would be ruptured by the slightest injury In the present case the blood showed no loss of coagulability The necrotic lesions of uræmia described above show an interesting analogy with diabetes in which such lesions occur

STEAM TRAFFIC IN THE STREETS

IT is difficult of course to define sharply the difference between a motor car and a steam engine, but we are confident that the Locomotives on Highways Act of 1896 was never meant, at any rate in crowded cities, to license the running of a steam engine little short of the dimensions of a railway locomotive with a string of cars behind it through the streets Yet recently in certain thoroughfares in the West-end a steam engine drawing a number of cars, the whole train being much on the same scale as a goods train on the railway, has been a common spectacle Even down the narrow thoroughfare of the Strand at busy times of the day we have seen gigantic—there is no other word for it—steam boilers drawn along by a big powerful steam engine. The time surely has not come when our streets may be used with safety to the public as railroads. It seems to us to be placing a very elastic and audacious interpretation upon the meaning of the Act, which was intended for motor cars conveying persons in the same way as a carriage and not for heavy goods at all An accident occurred this week in which a coachman lost his life through the starting of a horse at the sight of one of these huge engines and its train of heavily loaded vehicles. If this engine and its cars are to be allowed the use of the streets without let or hindrance we may confidently expect further disaster The London County Council, by means of its by laws, should exercise the powers which it possesses in this matter We think that such traffic in the busy streets of London should be prohibited altogether of water really required for irrigation, washing or other purposes are treated once a week with kerosine oil for the destruction of larvæ (5) that the surface and rain water drainage of the premises is good and that the drains and roof-pipes are in proper repair (6) that the latrines are in good condition and well kept (7) that the drinking water is obtained and stored in a cleanly manner

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[1] THE LANCET Feb 14th 1903 p 458

The school also intends to arrange courses of lectures on the prevention of tropical diseases, to be attended by clerks, missionaries, and others, both male and female, not in the medical profession, proceeding to West Africa and other tropical countries Each course will consist of five lectures extending over two weeks, in the months of January, May, and November Particulars may be obtained from the honorary secretary of the school, Mr A. H. Milne, B10, Exchange buildings, Liverpool.

THE DISTRIBUTION OF PLAGUE

As regards the Cape Colony the medical officer of health of the Colony states that for the week ending Feb 14th 5 cases of plague were discovered at Port Elizabeth, 1 being a European male, 1 a Malay male and 3 native males, 2 of the latter being found dead The cases were discovered on the following dates 2 on the 8th, 1 on the 9th, 1 on the 10th, and 1 on the 12th. At the end of the week 3 cases remained under treatment at the Plague Hospital, Port Elizabeth. Plague-infected rats continued to be found in the town of Port Elizabeth during the week. Also at Graff Reinet plague-infected rats and mice were found during the week ended Feb 14th. No case of plague has been discovered in any other place in the colony As regards Egypt the Director General of the Sanitary Department states that since Feb 6th no cases of or deaths from plague have occurred throughout Egypt The 3 cases that were under treatment have been discharged from hospital recovered.

THE PATHOLOGY OF GIGANTISM

IN the *Revue Neurologique* of Jan. 31st Dr P E Launois and Dr Pierre Roy give an account of the pathological observations made post mortem on the French giant, P—— K——, whose height was 2 12 metres (6 feet 11¼ inches), and who recently died from cerebral tumour in a hospital in Paris at the age of 36 years It is stated that at the age of 18 years he had nearly attained his full stature. An interesting discussion is given concerning the clinical features observed in this case and their correspondence with the post-mortem findings and the conclusion is reached that the gigantic stature in this case was due to acromegaly Thus in the year 1900 the patient showed distinct signs of this condition, the lower jaws being then abnormally enlarged and elongated, the tongue and nose being hypertrophied, and the hands appearing huge and spade-like. A marked degree of glycosuria developed at this stage, and at the same time he began to suffer much from præcordial pain, palpitation, and paroxysmal attacks like those of angina pectoris. As the glycosuria progressed emaciation set in, and a steadily progressing hebetude made itself manifest. Occasional epileptiform convulsions occurred which led to the suspicion of cerebral tumour and owing to the associated condition of acromegaly being present it was possible to diagnose the tumour as being one of the pituitary body The patient died during one of his fits and the necropsy revealed the following conditions. The cranial bones were much thickened and the sella turcica or pituitary fossa was found to be enlarged and occupied by a tumour of the size of a large Barcelona nut, measuring one and three-fifths of an inch transversely The growth extended into the right lateral ventricle of the brain and also projected forwards slightly between the fronto-orbital gyri. It was a primary epithelioma of the anterior lobe of the pituitary body, its outline was well defined, and although it pressed upon the brain substance it did not infiltrate the latter "The pituitary tumour," add Dr Launois and Dr Roy, "explains at once the gigantism, the acromegaly, and the diabetes." Another feature of interest was the enlarged thyroid gland which weighed 250 grammes or ten times the normal weight—a condition which has been termed "compensatory hypertrophy" and which has been regarded by most observers as in some way associated with the destruction of the pituitary body Such a hypertrophy of the thyroid has been noted in 13 out of 34 cases of acromegaly collected and published by Dr G Hinsdale of New York in 1898 There was also in the present case evidence of tuberculosis at the apex of the left lung Dilatation of the sella turcica had been noticed in the skulls of giants by Tartuffi in 1877, and in a memoir on the skull and skeleton of the Irish giant MacGrath Professor D J Cunningham pointed out (1891) that a similar condition was present and that the bones also showed evidences of acromegaly Gigantism and acromegaly are now known to be closely related conditions, and Dr. Launois and Dr Roy conclude that they are both phases of a morbid process of bodily nutrition due to a lesion of the pituitary body

DREAM-FAITH

THE recent sad case of drowning at Shanklin with the sensational evidence given at the inquest by a fisherman's wife who found the corpse, will be treasured with avidity no doubt by large numbers of persons. Amongst all classes there are to be found plenty of individuals who 'believe in dreams" and a larger number still who, though not prepared to affirm their actual belief, yet think that probably there is "something in them" These people hold in fact, that mere coincidence will not account for such occurrences as that to which we are referring It will be remembered that the body of the unfortunate Miss Lumsden was found upon the rocks by a woman who stated at the inquest that she was led to search this spot by having on three successive nights dreamed that she saw there the corpse of the missing lady Such a statement is at once enough to convince the believer in dreams. It fulfils at a breath all his hopes and carries out to the full visionary aspirations which perhaps he has approached hitherto but has never seen definitely realised To such people it would be vain to ask how many other fishermen s wives in and about Shanklin dreamed of the unhappy lady lying cold and dead upon the rocks Scientific investigation of the foundation of their creed is not for dream believers, and though in a hundred cases the same dream were to occur—as it probably did in this instance—to different people the ninety nine where it proves false are ignored in the jubilant acceptance of the one case where the dream coincided with the facts. Generally speaking, indeed, the enormous numbers of dreams the thousands nightly that never, so to speak, ' come off, are entirely disregarded in the presence of the one that hits off the facts —or at any rate appears to do so afterwards. For with all the honesty in the world the imagination of a poor woman dwelling by the sea, fostered as are the imaginations of a sea shore folk by the winds and waves and suggestive sights and sounds of the waters, is flexible to the extreme and readily takes for true what suits its natural trend. The very number of times that the dream occurred is suggestive. Three is the favoured numeral of the superstitious and we can quite believe that if this fisherwife had but dreamed her dream on two occasions, or a night or two apart, these would have welded themselves in her imagination into three successive nights. The natural desire of humanity for communication with the supernatural has been a feature of the human race ever since the earliest times of which we have any record.

condition of permanent dementia with loss of memory, apathy, and degraded (wet and dirty) habits, a state of terminal dementia which ends in death. A fifth class includes 'degenerates" in whom there arise periodically strong cravings for hasheesh. Persons of this class, adds Dr Warnock, are "good for nothing, lazy fellows, who live by begging and stealing, the moral degradation of these cases is their most salient symptom. While in the asylum they are notorious for making false charges, refusing to work, and quarrelling Irritability, unconcern as to the future, malingering, and fervent promises of reform are all marks of this state." The craving for the drug in this affection is not so great as in dipsomania or morphinomania In the earlier stages such persons usually commit crimes and find themselves in gaol Later, when intellectual impairment becomes more marked, they are sent to an asylum. The similarity between this condition and that of dipsomania, adds Dr Warnock, is evident, while many of the differences are probably due to racial peculiarities. Suicidal attempts in insanity due to hasheesh are rare. The drug, however, appears, concludes Dr Warnock, to play a more important part in the production of insanity in Egypt than alcoholism in England, while as a cause of crime it appears to be as important in Egypt as alcoholic excess is in England.

THE ROYAL COMMISSION ON LONDON TRAFFIC

WITH the institution of a Royal Commission there is at least the beginning of a prospect that the streets of London may in the future provide something more than a notable example of the judicious exercise of police authority There is no more striking object for the foreign visitor to London than the policeman's outstretched arm—a silent symbol of recognised authority behind which are halted a score of patient omnibus teams which doubtless would, if they could, sympathise with the smothered imprecations of their own and neighbouring drivers The management of London road traffic by the London policeman is no doubt a fine spectacle, but no one will be sorry to see the difficulties removed, however eloquent a testimony to national character may be the manner in which those difficulties are at present met. We call the London policeman in face of London traffic a testimony to national character because no less conservative nation would have tolerated so long the overcrowded condition of London thoroughfares, nor, having such a state of affairs actually to deal with, would the police force of any other nation be able to control the situation with such equanimity and good nature —a good humoured acquiescence in accepting inconvenience common to the authorities and to those whom they control. The large number of street accidents in the metropolitan areas bears a close relation, there can be little doubt, to this condition of congested traffic We have many times attempted to stir the municipal authorities to a keener sense of the inadequacy of existing arrangements for the provision of first aid and of ambulances for the unfortunate victims of street accidents It will be a more drastic remedy than any such improved provision if future arrangements can actually diminish accidents instead of merely disposing of them more conveniently We shall be more content to endure our present ambulance arrangements, improving as they at least are, if a future system of underground railways, of wide streets, and of better division of traffic renders street accidents materially fewer Up to now the Central London Railway has been remarkably safe so far as injury to life and limb is concerned and in proportion as more traffic is diverted from the roads to the railways it is to be hoped that a greater safety will prevail among the travelling public in London. 'Motor" traffic is as yet an almost negligible factor on London roads It may fairly be anticipated that this will not be so within a very few years and that the Commission will consider the possibility of such a change. How far the substitution for horse power of electric and petrol engines will increase the public safety we cannot yet fairly judge. Electric shock mishaps have occurred with some frequency, it is true, yet they are fewer probably than is imagined, their somewhat sensational and novel nature leading every such incident to be recorded prominently and consequently to be impressed upon the public mind with an *éclat*, so to speak, that is not accorded to the mere victim of a runaway horse or of an overturned hansom We are presuming that underground railways and public motor cars will be a feature in the traffic arrangements of the future, but even if these innovations are delayed there is scope for much improvement in the regulation of London traffic. The Embankment is a wide road but it is not sufficiently employed, the river provides a melancholy spectacle of deficient enterprise, the omnibus is a cumbrous if useful vehicle that takes up far too much room, and cab traffic might well go through Hyde Park within certain hours When ideas such as these so readily suggest improvements to the interested spectator of London roads day by day it may well be hoped that extensive improvements may be evolved from the combined intelligences of a well chosen Royal Commission. We look forward to the day when a journey from Hyde Park Corner to the Strand, let us say, will be less than half occupied by waiting in the confines of various "blocks."

LIVERPOOL SCHOOL OF TROPICAL MEDICINE

IN accordance with the advice of Sir William McGregor, K.C.M.G. C.B., M.D., Governor of Lagos, West Africa, the Liverpool School of Tropical Medicine has drawn up a set of simple instructions for the prevention of malaria, primarily intended for the guidance of Europeans living in malarial or tropical countries and in the employment of British mercantile firms These instructions contain the results of the most recent observation and experience on the subject and they deserve the careful attention of all residents in malarial districts The opening paragraphs explain that malaria is contracted only from the bite of the anopheles, that black water fever occurs only in those who have suffered periodically from malaria, and that complete protection may be secured by observing certain precautions which, as above mentioned, are put in the form of regulations to be carried out on the premises of a mercantile house and relate to the use of mosquito nets and wire gauze screens, the taking of quinine, and the supervision of all collections of water

1 *Mosquito nets*—The senior should satisfy himself that all the European employes of the firm invariably sleep within mosquito curtains of a mesh of not less than 10 holes to the inch and kept free from rents. Rents are most easily mended by twisting up the net at the point of breakage and tying round with a piece of string The net should when in use be hung inside the poles and tucked in under the mattress When not in use the free sides of the net should be drawn together twisted somewhat and thrown across the top of the net. The net should not have a slit or join in the side. A mosquito is never found inside a properly used net It is wise to tack on a piece of material all around the net, above the level of the mattress so as to protect the limbs from bites through the net during sleep Mosquito boots to protect the ankles in the evenings may also be recommended

2 *Quinine*—All the European employes of the firm should take at least 15 grains of quinine per week and should report in writing to the senior that they are doing so

3 *Mosquito-proof room*—The senior should see that the quarters provided by the firm for their European employés possess at least one sitting room or portion of a verandah securely protected by screens of wire gauze against the entry of mosquitoes The room or portion of verandah selected for protection should be that which is commonly used by the inmates from sunset to bedtime

4 *Punkahs*—The senior should see that the office of the firm and the common dining room of the European employés are provided with punkahs or electric fans to be used during office hours and during meals respectively

5. *Details.*—The senior should see (1) that the premises of the firm are provided with at least one rubbish bin (with a cover) (2) that all cisterns tanks tubs and other vessels required for the permanent storage of water are furnished with accurately fitting covers and also with wire-gauze caps to the pipes for the purpose of excluding mosquitoes (3) that all useless pits pools tanks, disused wells and other unnecessary collections of water within the premises of the firm are filled up or drained away (4) that al open and permanent collections

to Thebes. Gout, rheumatism, and hydrophobia (before unknown) have become common of late years" Now that so many English people visit the Egyptian capital every year (to say nothing of the British colony, as it is called locally) it would be useful to inquire whether in reality the Cairene climate is less salubrious now than it was before the water company was established and gardens became common in the suburbs of the ancient city Formerly the only place where verdure was to be seen was at the Hôtel du Nil, off the Mouski. Then the Esbekieh gardens were created by Ismail Pasha, and soon afterwards gardens sprang into existence wherever there was room for them but especially in the new Ismailiyah quarter Two at least of the diseases mentioned by Sir Richard Burton are not commonly supposed to be due to excessive moisture, but there are no doubt complaints which increase in virulence, even if they do not originate *de novo*, when land hitherto arid and undisturbed has been subjected to the influence of irrigation. In Dr Engel Bey's latest publication dealing with meteorological subjects[1] the head of the statistical branch of the Egyptian sanitary department inclines to the belief that the climate of the Delta has undergone some modification in consequence of the "regularisation of the waters of the Nile' under English engineers. But before he can pronounce a definitive opinion on this question he says, in conclusion, it will be necessary to wait until a longer series of observations becomes available. So far the fringe of this interesting subject alone has been looked at, but so great is its importance to the country that in his opinion it urgently demands an exhaustive examination.

A PERNICIOUS HABIT

ON the labels of some boxes of cigarettes at present being sold to the public is a statement to the effect that the cigarettes are made of the purest tobacco and paper obtainable and that, therefore, the smoke from them may be inhaled safely and without irritating the respiratory passages. We do not hesitate to say that such a statement is highly mischievous and that the practice of inhaling smoke into the lungs is attended with considerable risk to the health of the smoker It is to be feared that the cigarette is responsible largely for the prevalence of this objectionable habit of inhaling tobacco smoke, the pipe- or cigar smoker is as a rule not addicted to it because probably the smoke is too strong or too irritating But the fact that the smoke of a cigarette may be unirritating does not minimise the evil effect of drawing the smoke into the lungs, for by this method the absorption of the poisonous constituents of tobacco smoke (and all tobacco smoke is more or less poisonous) is very rapid, these entering quickly into the circulatory system by way of the pulmonary capillaries Even in the mouth and nasal passages there is some amount of absorption, but this is trifling compared with that which takes place in the lungs. The practice of inhaling tobacco smoke is therefore strongly to be discountenanced and vendors of cigarettes should refrain from printing on the boxes mischievous statements such as that to which we have alluded. There is no reason for believing that smoking tobacco in a rational way is productive of harm, on the contrary, it is the common experience that when moderately indulged in it serves to allay restlessness and irritability, but the sequelæ to the habit of inhalation may indeed be dire, the heart and nervous system being chiefly affected. Yet many cigarette-smokers inhale the smoke into the lungs as may be seen from the fact that very little of the smoke which they draw from the cigarette is afterwards ejected. In the same way the smoke from the burning end of a cigarette from its close proximity to the nose is sometimes taken into the lungs, occasionally producing stupefying effects

THE WEIGHT OF EVIDENCE

IN THE LANCET of Jan 31st, p 344 we published under the heading, "The Risks of Medical Practice," a note upon a case heard at the January quarter sessions held at Margate The case was one in which a medical practitioner, William Herbert Ray, had been sentenced to six months' hard labour for unlawfully assaulting a girl The only evidence against the medical man was apparently that of the prosecutrix herself and we considered that it "opens up a dangerous vista if any medical practitioner can be convicted of outrageous conduct on the unsupported word of a patient.' A report of a somewhat similar case is before us in which a Guernsey journalist named Percy Edward Amy was sentenced at Guernsey on Feb 18th to ten years penal servitude on the mainly uncorroborated evidence of a girl. The charge, according to the evidence of the complainant was that on the evening of Jan 18th Amy enticed or persuaded her to go to his room at the office of the *Guernsey Evening Press* and there by saying that he could lock her up (she had been discharged on suspicion of dishonesty from her last place) and by saying that he would chloroform her persuaded her to undress He undressed himself and then whipped complainant with a cord or strap He then, we gather from the report of the trial in the *Guernsey Evening Press* of Feb 18th, raped her After this the complainant and the prisoner walked to church together Next morning she told her mother all that had happened. The medical evidence bore out the girl's story as to the whipping but, according to the report, there does not seem to have been evidence given as to the rape. For these reasons and considering that the jury only found the prisoner guilty by seven votes to four, we consider that the sentence should be revised. In Mr Ray's case, too, we consider that as the evidence of the girl was totally uncorroborated there is every ground for a revision of his sentence as well.

THE EFFECTS OF BORIC ACID AS AN INTERNAL MEDICINE

DR. G MERKEL of Nuremberg has published in the *Münchener Medicinische Wochenschrift* of Jan. 26th, an article dealing with the effects of boric acid as an internal medicine He also refers to the injurious effects of this drug when used as a food preservative, especially when such preserved food is given to invalids Attention was called to this subject some time ago when an annotation on the subject of cases of boric acid poisoning was published in THE LANCET of Nov 30th, 1901, p 1514, based upon the observations of Rinehart. Dr Merkel states that boric acid taken internally in medicinal doses produces irritation of the gastro-intestinal tract. His conclusions are based upon observations made on 11 patients suffering from various slight ailments, but in whom the gastro intestinal tract was normal. Boric acid was given in doses of from one to two grammes daily in aqueous solution. The longest period of administration was eight days and the shortest was two days In seven of the 11 patients disturbance of the gastro-intestinal tract commenced shortly after taking the drug The chief symptoms were formation of gas in the stomach and intestines, eructations, colic, pain in the epigastrium, and diarrhœa. As the patients were free from gastro-intestinal trouble before taking the boric acid the characteristic troubles which followed were, it is urged, undoubtedly due to the drug The use of this drug therefore, concludes Dr Merkel, is contra indicated in the case of invalids or persons in delicate health It should not, he thinks, be used as a preservative for milk and

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[1] Le Climat du Caire et d Alexandrie Cairo 1895

Such desire, unless safeguarded by some definite religious organisation, always leads to the wildest and most foolish superstitions We cannot wonder at uneducated persons believing in portents, in the malign influence supposed to be exercised by a comet, in ill luck and similar superstitions, when we find persons of education and men of the world apparently seriously guiding their life's course of action by means of warnings given through the medium of a piece of wood, a penny lead pencil, two pantograph wheels, and a piece of paper

THE SANITARY INSTITUTE

THE twenty first congress of the Sanitary Institute will be held at Bradford on July 7th to 11th, 1903, the Earl of Stamford being President The section of Sanitary Science and Preventive Medicine will be presided over by Professor T Clifford Allbutt, the section of Engineering and Architecture will be presided over by Mr Maurice Fitzmaurice, C M.G, M. Inst. C E, and the section of Physics, Chemistry, and Biology will be presided over by Professor C Hunter Stewart The usual popular lecture will be given by Mr J Slater, B A., F R I B A. Eight technical conferences will also be held in connexion with the congress, presided over by Mr W C Lupton, Professor Thomas Oliver, Dr J Spottiswoode Cameron, medical officer of health of Leeds, Mr T H Yabbicom, M. Inst C E Mr C Drabble, M R C V S, Mrs Moser, Dr James Kerr, medical officer to the London School Board, and Mr Isaac Young

WORKHOUSE MEDICAL OFFICERS AND REFRACTORY PAUPERS

A CORRESPONDENT addresses us as follows —

> I shall be greatly obliged if you could give me advice on the following A is medical officer for the workhouse and district but not police surgeon B is a pauper in the union a rowdy fellow with a bad heart who is periodically handed over to the police for assault &c., in the house One night lately he was arrested there and taken to the police-station After a time the officer on duty thought him ill and sent to the union to have the medical officer of the workhouse sent to see B in the cells A constable accompanied the messenger from the union to A's house As A has had some difficulty before with the police staff over similar matters he replied that B having been arrested and taken to the cells he was now out of his (A's) care as a pauper and that either they must send for the police surgeon or send him (A) a proper request from the police station not under cover of the workhouse A sat up till 1 A.M (the message came at 11 P.M) but no further communication came till yesterday when A got a letter from his board of guardians asking him to explain his refusal to attend unless the police paid him and enclosing a long letter to the guardians from the superintendent of police making the above accusation and asking for payment of 8s 6d, the police surgeon's fees for attending the case
>
> Was A justified in his line of action? or was he still responsible for the treatment of B? If so is he liable to be sent for to attend every drunken rowdy in charge who *may* be a pauper even without a relieving officer's note?

If the circumstances mentioned in the above letter include all the facts bearing on the incident and neither correction nor amplification be required, then it appears to us that our correspondent was legally justified in his line of action Two offices are held by him—one at the workhouse the other in the district Article 207 of the general consolidated order deals with the former of these appointments and states that the duty of the medical officer is "to attend *at the workhouse* at the periods fixed by the guardians and also when sent for by the master or matron" Clause 2 of the same article states that the medical officer shall "attend duly and punctually upon all poor persons *in the workhouse* requiring medical attendance" (The italics are ours.) There is no clause in the article quoted, nor can we find one elsewhere, which would enable the guardians or the master to call upon the medical officer of the workhouse to visit and to attend a person who had left the workhouse In connexion with this point it may be mentioned that it is within our knowledge that stipendiary magistrates on many occasions when refractory paupers were charged before them have asked the respective workhouse medical officers to examine the prisoners in the cells and that in each instance, so far as can be ascertained, a fee of 10s 6d was awarded. Evidently the magistrates were convinced that workhouse medical officers were entitled to remuneration for examining paupers at police-courts The obligations affecting the holder of the post of district medical officer may be read in Article 206 of the same consolidated order Briefly they are "To attend duly and punctually upon all poor persons requiring medical attendance within the district assigned to him whenever he may be lawfully required to furnish such attendance by a written or printed order of the guardians, of a relieving officer, or of an overseer" The two extracts from the consolidated order define the position clearly enough. The police have no legal basis upon which they can demand the attendance of the parish medical officer, as parish medical officer, upon a pauper in their custody There is a person expressly appointed for the purpose—namely, the police surgeon. Our correspondent must remember that it will be his duty under Article 205 to give to the guardians all the information that he is able to supply respecting the case. Whether it will be wise for him always to adopt the line of action legally justified is a matter for his consideration.

SUTURE OF THE PATELLA

M QUÉNU of Paris (as reported by our correspondent) has recently been making some researches into the strength of the union effected by suturing a fractured patella He has shown in the dead body that if a patella is united by a wire suture by any method a comparatively small weight can cause some separation of the fragments. We should think that the separation was probably due to stretching of the wire or to partial untwisting of the "knot." That weights of 100 and 150 pounds could give rise to an interval of a quarter of an inch between the fragments does not affect at all the question of the value of suturing fractured patellæ. The object of the wire is not to hold the fragments together while a force of 100 pounds or more is applied, but it is intended to resist the pull of the quadriceps muscle and to maintain the fragments in the best position for the formation of osseous union. On no account should the suture be relied on to withstand voluntary movements of the limb Thus M Quénu's experimental results, though of interest, are of but little practical importance, for no surgeon trusts to wire for permanently holding the fragments together The full time for bony union should be allowed to elapse before the patient is permitted to bear any of his weight on the affected limb Used in this way suturing is probably the best treatment for a fractured patella, but even without operation good results may be obtained if sufficient care be taken to bring the fractured surfaces into apposition. In the present issue of THE LANCET Mr G T Mockett of Burslem describes a method he employs which is ingenious. The chief point in his method is the employment of a sheet of lead with a hole in it just large enough to contain the patella. This is applied over the knee and thus the fractured surfaces are maintained in contact, strapping and bandages being also employed to fix the fragments.

THE CLIMATE OF CAIRO

IN a footnote on p 182 of his "Thousand Nights and a Night" (Library Edition) the late Sir Richard Burton gives it as his opinion that of late years the climate of Cairo has deteriorated. "Even as late as 1852," he says, "when I first saw Cairo, the city was girt by waste lands and the climate was excellent Now cultivation comes up to the house walls, while the Mahmudiyah Canal, the planting the streets with avenues, and over watering have seriously injured it, those who want the air of former Cairo must go came out as 1 to 922. In his opinion accessibility was the most important consideration in the selection of a site for a great general hospital. In the fourth district, where there was only one bed to every 1877 people, equally satisfactory results would have been presented if South London had exhibited the same interest in hospitals and the same desire to provide the population residing therein with hospitals as had been manifested by other districts of the metropolis. His own view was that habit governed such questions to a very great extent and the people of South London had grown up in the habit of relying upon Guy's Hospital for at least two centuries to provide them with hospital accommodation and because Guy's Hospital was an endowed institution they had never felt the need or realised the duty of contributing their share of the expenditure entailed by the upkeep of hospital beds for the accommodation of the population residing within their borders. There was evidence to show in District No 5 that the growth in population of a place like Tottenham, where the London County Council is moving from the congested parts of London to that district upwards of 40,000 people, should render the authorities fully alive to the necessity of providing additional hospital beds. He hoped that the Tottenham Hospital authorities would continue to press the London County Council and that as a result of such action a scheme might be possible whereby the County Council would consent to provide the money necessary to build additional wards upon the excellent site which the Tottenham Hospital authorities possessed to meet the hospital requirements of the population they were settling in Tottenham. The money to build such wards could be provided with a sinking fund and in any case two things should be secured in any such settlement. First, the enlarged hospital should be left under the management of the committee elected by the governors of the Tottenham Hospital and, second, the additional revenue for the maintenance of the new beds, provided for what may be termed the County Council population should be forthcoming through the free offerings of the new residents in the district whose requirements they are supplied to meet. He was aware that the London County Council had not at present any Parliamentary power vested in it to devote money to the erection of a pavilion or pavilions in connexion with the Tottenham Hospital to provide beds for the hospital requirements of the 40,000 people whom the County Council was about to move into the district of Tottenham. But he felt that the attitude assumed towards the housing question by the present members of the London County Council entitled the citizens to expect at their hands an intelligent recognition of the responsibilities which devolved upon them in regard to such wholesale removals into a particular district as those provided for under the Tottenham scheme. He put it to the London County Council and through them to the citizens of London. Was it right for the municipality to plant a population of over 40 000 souls in an outlying district of the metropolis without making any provision whatever for the hospital accommodation of the people who had been removed from centres where they could readily obtain such relief to a new centre where the existing population had already provided themselves with a reasonable amount of hospital beds, none of which could be made available for the newcomers introduced by the London County Council? This consideration led him to repeat that he hoped that the London County Council would seek the necessary powers and insure the provision of an adequate number of hospital beds in connexion with the Tottenham Hospital for the new population it was bringing into this district. Sir Henry Burdett continuing turned to the question of the removal of certain large hospitals in London to new sites in relatively congested districts. The districts in which the population was congested and which were without adequate hospital accommodation were practically three, South London Battersea, and Tottenham. Tottenham he had dealt with and there were left South London and Battersea. South London was said to be in negotiation with the King's College Hospital for the removal of that institution to Camberwell. That would leave Deptford, Greenwich and Woolwich unprovided for except by the Miller and the "Dreadnought" Seamen's Hospital. He suggested that the Miller Hospital might unite with the North West London Hospital, in which case a new site must be found. In regard to Wandsworth and Battersea there was the Bolingbroke Hospital but the ratio of beds was as 1 to 13,364 and the position should excite the sympathy of the wealthy and secure for the residents an adequate hospital. In regard to which of the large hospitals might be transferred to new sites it seemed to him that King's College Hospital might be moved and also Westminster Hospital. There was, in his opinion, no urgent demand for the removal of St. George's Hospital. With reference to Westminster Hospital he thought it could be moved to Wandsworth and amalgamated with the Bolingbroke Hospital. The speaker then observed that he had said nothing so far in regard to a hospital, St Bartholomew's, which had been much in evidence of late. St Bartholomew's was the only general hospital situated within the City boundaries and he could not conceive the City of London ever consenting to permit so representative an institution with eight centuries of history to be removed from its present site to any site except one which was closely adjacent to, or only just outside, the City boundaries. Such a site had been mentioned in St Luke's, but there were very serious financial and other difficulties involved, and he did not think that the question was ripe for public discussion nor could it be so discussed with advantage until the governors of St Bartholomew's Hospital, who were trustees for the estates of that institution, had looked at the financial aspects of the two sites from every point of view and, as men of business, had recorded and published their decision thereon. In regard to the removal of large hospitals from cities to the country the proposal seemed to him to be impracticable if due regard was to be paid to the interests of the patients and the circumstances which affected city populations and the great hospitals which ministered to their needs. Formerly convalescent institutions were buildings to which patients were admitted when their wounds were healed and they had arrived at that stage where disease had ceased and health had to be restored. To-day many of these so-called convalescent institutions were largely utilised by residents in towns who needed fresh air and rest and who were not really in the medical sense acutely ill or frequently suffering except from general debility due to want of fresh air and change. That circumstance had no doubt led to a new departure so far as the London hospitals were concerned. Several of the general hospitals now had convalescent hospitals of their own situated in the country to which they could send suitable cases with unhealed wounds to the great advantage of the patients. In his judgment that represented the best form in which large hospitals could keep their patients in touch with the country without incurring grave risks of adding to the sufferings and anxieties of the sick and their families in large centres of the population. It was most desirable that some reconsideration should take place in regard to the system of admitting patients to several of the great hospitals of London at the present time. The enormous growth in the number of surgical cases now admitted and of the operations which were performed, coupled with the important developments in methods of treatment, had tended to cause those who regulated the admission of in patients to give so much preference to acute and surgical cases that very many patients suffering from relatively chronic affections which used formerly to be found in hospital wards were now relegated in increasing numbers to the Poor law infirmary. He was inclined to think, having regard to the necessities of medical education and the claims of the suffering poor, that the present system of admitting patients to our hospitals must be reconsidered. In any case the time had arrived when the Poor law infirmaries, in the interests of the patients they contained, should be thrown open to medical instruction. In conclusion Sir Henry Burdett pointed out that with the exception of Wandsworth and Battersea, where the ratio of general beds to population was as one to every 13,364 people, and the district including Deptford where there was not a single hospital bed for upwards of 110 000 people, the population within the whole of the postal districts of London was in fact, well supplied with general hospital beds. Indeed, if they added to these beds the beds in special hospitals then every district, with the two exceptions just mentioned, showed that the ratio of all hospital beds to population was infinitely greater than that laid down by the accepted authorities as a basis for calculation—namely one hospital bed for every 1000 people in a given district. If, therefore, King's College Hospital removed to a site situated conveniently for the population of Deptford if the North-West London Hospital united its forces with the Miller Hospital and erected modern buildings on a site convenient for the residents in Greenwich Lewisham and Woolwich, and if the Westminster Hospital moved the question of hospital sites and population in London would be placed "canned" foods. Food "preserved' with it may be taken sparingly by healthy persons, but such food should never be given, in his opinion, to invalids

DINNER OF THE MEDICAL SOCIETY OF LONDON

THE 130th anniversary dinner of the Medical Society of London was held on March 7th at the Whitehall Rooms, Hôtel Métropole, Mr A. Pearce Gould, the President, being in the chair 176 Fellows and guests sat down to dinner, among the latter being the Lord Chancellor, Lord Sandhurst, the President of the Royal College of Physicians of London, and the Presidents of the Royal Medical and Chirurgical Society the Clinical Society and other learned societies After the usual loyal toasts "The Medical Society of London" was proposed by Sir William S Church, Bart., K.C B, who drew attention to the broad basis upon which the society had been founded by 30 physicians, 30 surgeons, and 30 apothecaries. The President replied. The toast of "The Guests" was proposed in a humorous speech by Sir Frederick Treves, Bart, C B, K.C V O, who mentioned the fact that long before the rest cure had been adopted by the medical profession it had been instituted under the ægis of the legal profession at Portland where the sea air and the regular hours and meals had promoted the health of the convicts The Lord Chancellor, in reply, mentioned that the medical and the legal professions had this in common that they both worked for the corporate welfare of the community The Hon R. P Porter, U S A., also replied for the guests and mentioned incidentally that the Medical Society had "started in business" before the United States of America, having been instituted in 1773 The toast of ' The President" was proposed by Sir Richard Douglas Powell, Bart, K.C V O, and Lord Sandhurst, in seconding, said that he wished to take the opportunity of paying a tribute to the devoted services which had been rendered by the medical profession in stamping out the plague in Bombay at the time when he was Governor Music and songs were contributed by Mr T G A Burns, Dr F G McCann, and Dr S Henning Belfrage The gathering was universally voted to be one of the most successful of those which have been held by this ancient society

COUNTRY HOLIDAYS FOR LONDON FEMALE WORKERS

THERE can be no doubt that an annual holiday is a physical and mental necessity for all who work and sleep amid the noises and distractions of a great city, to say nothing of the dust and smoke which are always present in the atmosphere of London, but the poorer workers in the metropolis are but seldom able to avail themselves of the benefits of the pure air of the country The Factory Girls' Country Holiday Fund was started some 15 years ago in the interest of girls who live and work in the neighbourhood of Saffron hill, London During the first year of the existence of the fund 38 workers were enabled to take a holiday, since then the work of the fund has grown year by year, until in 1902 no fewer than 3200 girls and women were sent to the country from all parts of London. This is a record of which the workers for the fund may well be proud, but the financial committee reports a deficit of £38, which we sincerely hope will be speedily cleared off when the matter is brought before the notice of the charitable public. As it is not possible to delay the payments for board, lodging, and railway fares the strain upon the finances of the fund is very great, especially as donations and subscriptions flow into the coffers of the fund slowly The Factory Girls' Country Holiday Fund is an unassuming and very valuable charity but the present times are hard for all charities Expenses generally are increasing, there is an oppressive income tax, while the rates rise with undeviating regularity, the London County Council having just announced an increase in its rate of 1¼*d* Nevertheless, there are many charities the operations of which might well be curtailed before those of the charity the claims of which we are now advocating Subscriptions and donations should be sent to the chairman of the committee, St. Peter's Rectory, Saffron hill, London, E.C., to the honorary treasurer at the same address, or to the London and Westminster Bank, Holborn Circus Branch, E.C

THE annual festival dinner of the Irish Medical Schools' and Graduates' Association will take place on St. Patrick's Day, March 17th, at 7 30 P M, at the Café Monico, Piccadilly circus, London, W Application for tickets should be made to Mr Charles Ryall, 51, Queen Anne-street, W

THE following gentlemen have been appointed Knights of Grace of the Order of St. John of Jerusalem in England — Surgeon Lieutenant-Colonel Matthew Baines, V.D (from Honorary Associate), Mr Reginald Harrison, F R.C S Eng, and Dr F M Sandwith (from Honorary Associate)

The annual general meeting of the members of the Medical Graduates' College and Polyclinic is to be held on Tuesday, March 31st at 5 30 P M, when Sir William H. Broadbent, Bart., will take the chair

THE laboratory meeting of the Pathological Society of London announced to be held at the Examination Hall, Thames Embankment, on Tuesday next, March 17th, will not be held.

Sir John Williams, Bart., who has retired from practice, is leaving London next week to take up his permanent residence in Wales.

THE HOSPITAL PROBLEM IN LONDON

AT a meeting of the Hospitals Association at Caxton Hall, Westminster, London, S W, on March 3rd, Sir TREVOR LAWRENCE (treasurer of St Bartholomew's Hospital) took the chair There was a full attendance to hear an address by Sir Henry Burdett, entitled "Hospital Sites and Population in London" The speaker discussed the problem as to whether any, and, if so, which, of the large hospitals ought to be moved from their present sites to new ones situated in congested districts or in the country

Sir HENRY BURDETT said that the best way of dealing with the facts briefly was to take the City of London as a centre and then to divide the area round into five districts. District No 1 comprised the City of London alone, and the ratio of beds to population in 1901 was in the proportion of 1 to 40 District No 2 comprised Stepney, Shoreditch, Finsbury, Holborn, City of Westminster, Southwark, and Bermondsey, with a ratio of beds to population of 1 to 418. The third district was composed of Poplar, Bethnal Green, Hackney, Islington, St. Pancras, St. Marylebone, Kensington, Paddington Chelsea, Battersea, Lambeth, Camberwell, and Deptford, with a ratio of beds to population of 1 to 1054 District No 4 included Stoke Newington, Hampstead, Fulham, Wandsworth, Lewisham, Greenwich and Woolwich, with a ratio of beds to population of 1 to 1877 The fifth district was in four home counties and was well outside the metropolitan boundary, but part of it was in the County of London. It included Essex (West Ham and Romford), Middlesex (Tottenham and Edmonton, Barnet, Hendon, and Brentford), Surrey (Croydon, Kingston and Richmond), and Kent (Bromley and Dartford) Here the population had increased nearly 93½ per cent. and the ratio of beds to population was 1 to 2482. The usual estimate in regard to hospital beds in general hospitals in relation to the needs of the population was as 1 to 1000 people and dealing with the five districts enumerated as a whole the ratio been relieved during the year from the ordinary income of the charity fund and 31 patients had been relieved by the Bevan Trust fund

In the absence of Dr T S Clouston through indisposition the report of the physician-superintendent was read by Dr J M. Rutherford, Dr Clouston's principal assistant. The total number of patients under treatment during the year had been 1385 There had been 423 admissions, of whom 189 were men and 234 were women. The number of patients discharged had been 297, of whom 130 were men and 167 were women. There had been 138 deaths, of whom 73 were men and 65 were women The number of rate-paid patients admitted was 358, which was eight more than the average of the past five years In consequence of the large number of pauper patients sent in, the wards of the West House had been in a chronic condition of overcrowding such as he (Dr Clouston) had never before experienced It was a state of matters which was bad for the discipline and quiet of the wards, as well as for the health of the patients

As to the cause of insanity in the cases admitted no fewer than 119 cases, or 28 per cent of the admissions, were put down as due to intemperance in the use of alcohol. This was the highest number that had ever been sent there from that cause. Of the 423 admissions 56, or 13 per cent., were cases of general paralysis. This was, with the exception of last year, the largest number of cases of this disease that had ever been sent in and this confirmed his remarks in his last year's report as to the distinct increase of this disease in this district Their admission rate in this disease was now the highest in Scotland Of the 297 patients discharged 134 were recovered. One-third of the admissions were incurable from the beginning, being cases of advanced senility and gross brain lesions The number of deaths had been the largest that had ever occurred in the institution and the death rate was also somewhat larger than they had ever experienced. The causes of the high mortality were (1) the large number of cases of general paralysis, organic brain diseases senility, and general weakness, (2) the overcrowding of the wards, and (3) an outbreak of asylum dysentery or colitis. This epidemic occurred among the female patients There were 27 cases in all with seven deaths Only three of the patients attacked were however, in fair bodily health at the time, 18 of the cases having occurred in the female hospital of the West House and six in No 1 female ward where the patients were of a class weak in body

The drainage system of the West House had been thoroughly renovated four years ago, but part of the old system had at that time been left for the purpose of draining some deep cellars. After the epidemic of dysentery began it was found that some of those old drains had not been properly disconnected from the building and were undoubtedly dangerous Two of the cats in the ward had contracted the disease and had possibly acted as carriers of infection. When this was discovered the cat life of the institution came to an abrupt termination. Dr Clouston, in concluding his report, referred to the treatment of incipient cases of insanity in the wards of a general hospital. He believed that it would be a humane and perfectly practical proceeding if such a step were taken by the Royal Infirmary

THE PREVENTION OF CONSUMPTION AND OTHER FORMS OF TUBERCULOSIS

CORK

As already mentioned in detail by our Cork correspondent in THE LANCET of March 7th, p 690, the preliminary steps have been taken for the formation in that city of a branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis. The meeting convened for the purpose was attended by a number of influential persons the Church the medical profession, the county families, and various public bodies being represented

WINSLEY SANATORIUM

Progress is being made with the scheme for the erection of a sanatorium at Winsley, near Bath, for the counties of Wilts Somerset, and Gloucester The site, on high ground overlooking the Avon valley, has been levelled and tenders are being invited for the erection of the buildings Liberal contributions to the fund that is being raised have been received from the men employed at the locomotive works of the Great Western Railway Company at Swindon, as well as from the Trowbridge Coöperative Society Up to the present time £9607 have been subscribed towards the fund. Of this sum £3649 have been expended on the purchase of 50 acres of land levelling the site for building, and other preliminaries The maintenance of 12 beds is already provided for—four by the corporation of Bristol, two by Bath and Swindon respectively, and one each by Gloucester by Mr J Clark, by Mr and Mrs. W Clark, and by Messrs. Fry and Sons The first part of the building to be erected includes the administrative block for the institution and 20 beds. The cost of this will be about £6500 The completed scheme will be for 60 beds at an estimated cost of £20,000, while £4000 will be required for maintenance

A PROPOSED SANATORIUM FOR EMPLOYES OF THE GENERAL POST OFFICE.

At the conference of the Postal Telegraph Clerks' Association held in Leeds on March 7th a motion was adopted appointing a committee to investigate the means of providing sanatorium accommodation for postal employés. In the course of proposing the motion Mr C H Garland (London) said that the Post Office established staff in 1899 was 82,172 and there were 62 deaths and 83 retirements caused by consumption, a total loss of 145 persons. The total staff at present numbered over 179,000 and there was no reason to suppose that the rate of loss was less among the unestablished staff than among the established, so that it might be reckoned that from 300 to 350 persons per year fell victims to the disease The indoor staff was almost certainly the staff that suffered most, the loss being at least 2 per 1000 per annum Mr Garland then quoted at some length medical opinions as to the advantages of sanatorium treatment, making reference also to the "Report of the Association of British Postal Medical Officers on the Prevalence of Tubercle among the Employés of the Post Office during the year ending Dec. 31st, 1900" He then continued as follows —

> The cases of superannuation and death from consumption show that nearly two of every 1000 employés suffer seriously from this disease each year It is usual to reckon about ten times the number of deaths in order to arrive at the number of the sick, but I believe such an estimate would be much too high in the Post Office and it will be sufficient for our purpose to suppose that among the indoor staff about 4 per 1000 require treatment each year The last Postmaster General's report showed that the number in class H. or Counter Clerks and Telegraphists Sorters Sorting Clerks and Telegraphists and Telegraphists was 30 330 Among this body we can assume then that some 120 persons require treatment each year Each bed in a sanatorium would supply treatment for three or perhaps four patients each year Let us suppose only three, and to treat 120 persons we should require 40 beds. It is estimated that the cost of erection per bed is £200 so we can reckon that we want roughly £8000 for erection. The cost of maintenance would not exceed £65 per bed per annum. This would provide medical attendance nursing food, and medicine at no expense to the patient So that our financial requirements would be an initial outlay of £8000 and a yearly income of £2600 How are we to get this? If 30 000 persons consented to have 1*d* a week stopped from their salaries it would provide £125 weekly or £6505 per year So that if we could get the indoor staff to subscribe 1*d* per week for 64 weeks or about 15 months we should have our £8000 for erection and if they would then continue to subscribe a halfpenny per week it would yield about £3250 per year for maintenance.

In conclusion, Mr Garland said that he felt certain that no more than a very small percentage of the officials concerned would refuse to subscribe to such an object and that no serious difficulties would be encountered in collecting the subscriptions.

MEDICINE AND THE LAW

Private Bills affecting the Medical Profession.

AT this early period of the Parliamentary session there are already several Bills printed and awaiting the opportunity for their further introduction to the House of Commons which directly or indirectly affect the medical profession or some branch of it Some of these appear for the first time and some do not. Private members' Bills, it is well known do not form a large proportion of the legislative output of the year owing to various causes which need not be gone into, but it is well that their provisions should be known to those whom they concern Assistance may thus be obtained for useful proposals, the introducers of which can hardly be sorry to receive the support of expert opinion outside the House, and improvements or modifications may be suggested in matters of detail by those best qualified to express upon a basis adequate to supply efficiently all the needs of the residents within the county of London

The Hon. SYDNEY HOLLAND said that one difficulty in procuring the combination of hospitals was the objection raised by the medical staffs He failed to understand what Sir Henry Burdett intended as regards the Tottenham Hospital being helped by the London County Council. It appeared to him that the course proposed would municipalise the hospital. Turning to the suggestion that the Poor law infirmaries should be thrown open for medical instruction he expressed his opinion that these infirmaries were of no use for such a purpose He did not see any objection to the chronic cases going to Poor law infirmaries—the patients did not lose their right to vote in consequence of such a measure and they were not called paupers

Sir HENRY BURDETT, replying, said that a medical man in practice had to treat all sorts of cases and there was a vast amount of material for medical education which was wasted in the Poor law infirmary If medical students were admitted into the Poor law infirmaries it would be a great aid to their efficiency in actual practice afterwards.

Mr T B CAMPBELL said that in considering the question of moving hospitals they must recollect that they were dealing with voluntarily supported institutions He spoke from his own experience of the Westminster Ophthalmic Hospital.

Mr F S FRANKLIN said they had heard that it was the intention of King Edward's Hospital Fund to bring pressure to bear upon certain hospitals to induce them to move into other districts The mere ventilation of their views at that meeting would not do much

Mr C W THIES, of the Royal Free Hospital, said that the general hospitals from the very nature of their work were obliged to concentrate their attention on acute cases The chronic cases had to be drafted off. It had been stated that 23 per cent. of the cases that were termed "interesting" were sent up from the country Such cases were always welcome on account of their use in medical education and because in the country there was no satisfactory accommodation for their treatment.

Dr T GILBART SMITH said that the London County Council accepted as one of its duties the supply of bands of music for the amusement of the people In his opinion it was also the duty of the London County Council to supply hospital accommodation at Tottenham for the population it moved there With reference to the value of Poor law infirmaries for medical instruction he asked whether they would ever have learnt of Charcot's disease unless Professor Charcot had been a physician in an institution in Paris corresponding to a Poor law infirmary

Sir E HAY CURRIE said that the question of moving the hospitals must be approached in the most gentle manner possible He was of opinion that accommodation should be supplied for the incurable cases of consumption and the neglect of that precaution would be disastrous in the future

Sir TREVOR LAWRENCE said that he disagreed with Sir Henry Burdett concerning his figures of the populations in and about London Sir Henry Burdett had said that the people who came into London day by day might be taken as healthy, but it had been estimated that there was a daily influx to the meat and other markets surrounding St Bartholomew's Hospital of about 40,000 He was afraid that they were not all healthy Many of them had to do their work and earn their daily bread even if they were only able to move about. He further pointed out that if the census had been taken on a Monday morning instead of on Sunday night, when everyone was out of the City who could be the result would have been different In dealing with the question of moving the hospitals the desirability of economising the time of the physicians and surgeons who gave their services to the hospital should not be overlooked. Reference had been made to the patients being sent up to the London hospitals from the country districts. These patients were sent by medical men who had studied at the great metropolitan medical schools and they advised these patients to come from the country for the purpose of receiving the highest medical advice He could not conceive of any worse service to the poor and suffering than the placing of obstacles in the way of their receiving advice from leading physicians and surgeons. In regard to the London County Council and the Tottenham Hospital he thought that the proposed step would be the first advance of that ambitious body towards acquiring control over the hospitals He suggested that the London County Council should concern itself with relieving the hospitals from the rates and he would remind it that in consequence of the hospitals great relief was afforded to the ratepayers

A vote of thanks to Sir Henry Burdett for his address was moved by Mr TIMOTHY HOLMES, seconded by Mr P MICHELLI, of the "Dreadnought" Seamen's Hospital, and duly carried.

Sir HENRY BURDETT, in replying, denied that the proposals in regard to the London County Council and the Tottenham Hospital carried them a step further towards the municipalisation of hospitals

The meeting concluded with a vote of thanks to the Chairman, proposed by Sir HENRY BURDETT and seconded by Mr THOMAS BRYANT, which was carried with acclamation and suitably acknowledged

ROYAL EDINBURGH ASYLUM FOR THE INSANE

THE statutory annual meeting of the corporation of the Royal Edinburgh Asylum for the Insane was held in the City Chambers on Feb 23rd The annual report of the managers stated that the average number of all classes of patients under treatment during the year was 947, an increase of seven on the average number during the previous year In addition to this the asylum authorities had been obliged to find accommodation in other asylums for 123 patients sent to them by the Edinburgh parish council whom it was impossible to accommodate in the asylum itself These patients had been boarded out in the asylums of Hartwood, Larbert, Kirklands, and Rosewell. The constantly increasing number of pauper patients sent to the asylum by the parochial authorities was a source of much trouble and anxiety to the asylum officials Towards the end of last year the matter reached an acute stage, for the wards of the asylum became much overcrowded, while at the same time there was little or no prospect of further relief being obtained by boarding out This state of affairs was the result of the failure of the District Lunacy Board to complete the new asylum at Bangour within the stipulated period of five years. It was impossible to say at what time the Bangour Asylum would be ready for occupation, but the District Lunacy Board, on the solicitation of the managers of the Royal Edinburgh Asylum, supported by the General Board of Lunacy, had agreed to erect a temporary structure capable of accommodating 150 persons. This temporary accommodation would be ready in about four months' time and would to some extent relieve the existing congestion in the Edinburgh Royal Asylum. The large number of rate paid patients at present in the asylum excluded, as had been often pointed out, the poorer class of patients not dependent on parochial relief, for whom the West House was primarily intended. It was interesting to note that there had been 22 voluntary patients under treatment in the asylum during the year under the provisions of the Lunacy Act of 1862.

The ordinary revenue for the year had been £60,089 10*s* 5*d*. and the ordinary expenditure £55,075 3*s* The gross surplus revenue was thus £5014 7*s* 5*d* Deducting from this £1909 18*s* 8*d*, the annual instalment towards liquidation of the debt on the West House, there remained a free surplus of £3104 8*s* 9*d* Of that surplus £2300 9*s* 4*d* were derived from Craig House, £42 2*s* 7*d* from intermediate patients, and £761 16*s* 10*d* from pauper patients The cost of maintenance per head in Craig House was £131 1*s* 7*d*., nearly £6 more than in the previous year This rise was due partly to an increase in the number of patients paying high rates of board, and consequently demanding more expensive diet and more attention, and partly to the expenditure of £850 for the renewing of the cooking apparatus as well as £408 10*s* 8*d* for the purchase of accumulators in connexion with the electric battery The cost of maintenance per head of the intermediate patients had been £41 10*s* 7½*d* rather less than the amount for the previous year The cost of maintenance per head of pauper patients had fallen to £31 15*s* 8½*d*, as compared with £33 2*s* 4*d* in 1901. This decrease was due to a fall in the cost of provisions, fuel, furnishings, and repairs The managers proposed to reduce the rate of board for patients paying the lowest rate and for pauper patients to £32, or £30 exclusive of clothing

During the year the debt on Craig House and the West House had been reduced by £5010 14*s* 8*d* 34 patients had covered, and that an additional minimum fee of 1s per mile should be paid for each journey over two miles for each mile or part of a mile.

5, 6, and 7 These resolved that school children should all be compelled to produce a certificate of successful vaccination that there should be compulsory revaccination between the ages of 10 and 14 years and that "successful" vaccination should be defined in any future legislation.

8. That in the public interests all the institutions for the provision of calf vaccine in this country should be open to Government inspection and that no imported lymph should be used from any institution which is not recognised by the English Government

9. That there should be a Government vaccination station for the supply of lymph in all numerous centres of population.

10. That "efficient" vaccination should be defined as at present fixed by the Local Government Board as four insertions and half a square inch of cicatrix, and that the number of insertions and successful pustules be named in the certificate and registered by the vaccination officer.

11. That every medical practitioner not acting as public vaccinator who forwards a certificate to the vaccination officer of any efficient vaccination be paid a fee for the certificate provided that such certificate gives the number of insertions and successful pustules, and that such fee should not interfere with that charged for the operation

Public Health and Poor Law.

LOCAL GOVERNMENT BOARD

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD

On Epidemic Small pox in the Union of Orsett 1901–02 by Dr G S BUCHANAN [1]—The Union of Orsett which has a population of some 33,000, is situated in South Essex and extends from west to east about 14 miles and from north to south about seven miles the Thames forming its southern boundary throughout The most populous portions of the union are the riverside neighbourhoods between Purfleet on the west and Tilbury on the east. The town of Grays lies midway between Purfleet and Tilbury and forms the Grays urban district, the rest of the union is comprised in the Orsett rural district. During the ten months from September 1901, to June, 1902, small pox appeared in 12 out of 17 parishes in Orsett rural district, the attacks per 1000 of the population in those parishes being 18 5, while in Grays urban district 16 per 1000 of the population suffered from the disease. The epidemic was thus of great severity It may be contrasted with the London borough of Holborn which suffered most heavily during the recent outbreak in the metropolis, where the attacks of small pox per 1000 during 11 months ending June 1902, were no more than 7 2. Dr Buchanan gives tables showing the incidence of small-pox week by week on the population and on dwellings in various subdivisions of the union. The epidemic had its beginning (from September to November, 1901) among the small community of Purfleet and in persons living elsewhere in the union where the attacks could be referred to infection from others who had contracted infection at Purfleet. From the middle of November, 1901 onwards the disease became prevalent over the whole of the southern portion of the union, its incidence being especially severe upon the villages of West Thurrock and South Stifford, which lie between Purfleet and Grays and upon the parish of Aveley which adjoins Purfleet on the north. The report deals in detail with the condition of the population of the union at the beginning of the epidemic in regard to vaccination Since 1891 neglect of infantile vaccination had increased and from 1895 to 1900 more than one third of the children whose births were registered had not been vaccinated With the exception of certain special communities (which entirely escaped small pox) comparatively few persons of ten years of age or upwards were already revaccinated when the epidemic began Having regard to the large number of unvaccinated children it was fortunate that no instances occurred of the spread of small pox in schools such as happened in Gloucester in 1896. Nevertheless, it is noteworthy that out of a total of 519 cases admitted to the local small pox hospital no fewer than 100 were unvaccinated children under the age of ten years and that 22 of these children died. During the same period only 11 vaccinated children under the age of ten years were admitted each suffering from discrete small pox, and no death occurred among them. An instructive table prepared from data obtained by Mr Rea Corbet shows with regard to adults that the fatality from small-pox in the unvaccinated was much greater than in the primarily vaccinated and this, not only at ages from 10 to 25 years (unvaccinated rate 14 3 per 100 primarily vaccinated rate 3 9), but also at ages over 25 years. 18 cases were admitted in which revaccination was stated to have been successfully performed at some period or other before infection by small-pox. In four cases this period was less than ten years, in one instance no more than six years. The progress of the epidemic caused a complete change in the attitude of the majority of the population towards vaccination. By March, 1902, as many as 6763 persons had been recently revaccinated and many children over one year had been recently vaccinated by the public vaccinators, while a large amount of revaccination and vaccination was performed by medical practitioners who were not public vaccinators. No case of small pox occurred among persons recently revaccinated save those who were already incubating small pox at the date of revaccination. The most striking facts of the epidemic, however were the severe and long continued prevalence of small pox in Purfleet and the evidence obtained which referred small pox in other parts of the union to infection contracted in Purfleet. In this village throughout the epidemic cases kept on occurring week after week and month after month, altogether 41 out of the 110 dwellings in the place were affected During the whole epidemic period in Purfleet and elsewhere there was no failure in the arrangements for isolation, cases of small pox being removed within 24 hours of notification, "contacts" were kept under observation, and disinfection, on the whole, was satisfactory There was little or no evidence that small pox in Purfleet was maintained by undetected cases or by supposed chicken pox. Moreover revaccination in Purfleet was freely resorted to On a liberal estimate those inhabitants who at the end of March, 1902, were not vaccinated children revaccinated or recently vaccinated adults, or persons who had suffered from small-pox did not exceed 40 Nevertheless, cases of small pox subsequently occurred among these 40, while other later cases in Purfleet were persons newly arrived in the place. These considerations, along with a number of others in the report which space does not allow us to summarise, are important in their bearing on the question of the convection of small pox infection from the Metropolitan Asylums Board's small pox hospital ships which are moored in the Thames off the Kent shore opposite Purfleet, from which they are separated by nearly half a mile of water There was no personal communication between the ships and Purfleet throughout the epidemic and in considering the influence of the ships, as Dr Buchanan puts it, 'we have to choose between aerial convection or nothing'

> As to the latter alternative I would say at once that if the presence of the small pox ships in Long Reach had no concern with the Purfleet epidemic, then, while making every allowance for opportunities of local spread of the disease I am nevertheless quite unable to suggest any reason for the extraordinarily heavy and long sustained prevalence of small pox there. If, on the other hand the ships did exert influence on the epidemic, infective particles being from time to time, under favouring meteorological conditions conveyed to the area of Purfleet and there reinforcing small pox already prevalent, or setting small-pox going anew then not only is the Purfleet experience intelligible but the hypothesis invoked to explain it is one that has been shown to be necessary in our present knowledge if the characteristic peculiarities in the distribution of small pox in the neighbourhood of small pox hospitals are to receive anything approaching a sufficient explanation.

Those who are interested in the question will note with interest the abundance of circumstantial evidence given in the report that the ships were responsible for disseminating infection in their neighbourhood in the way in which the London hospitals of the Metropolitan Asylums Board used to do when they received acute cases of small pox. Instances were traced, for example, in which members of the crew of vessels moored for a while in Long Reach sickened with small pox about 12 days afterwards. It is, of course, impossible to test the matter in this case by looking for graduated intensity of incidence of small pox in dwellings near the hospital ships, there are practically speaking no dwellings within a mile of the ships save those in Purfleet and the Dartford marshes to the south of the ships are uninhabited. But during the period under consideration large numbers of workmen were employed opposite the ships on the Kent shore in the erection of temporary buildings and among these men cases of small pox occurred almost by the score. Unlike the inhabitants of Purfleet these men may have had opportunities of mediate infection by association undetected by the authorities with members of the opinions. On the other hand, attention may be called to suggested measures which are likely to prove futile or obnoxious and their failure to become law may thus be rendered more certain.

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[1] London Eyre and Spottiswoode East Harding Street Edinburgh Oliver and Boyd Dublin E. Ponsonby Price 1s 6d.

Medical Acts Amendment Bill

The private members' Bill before the House of Commons which is of most importance in that it concerns the medical profession more or less as a whole is introduced by Sir John Batty Tuke, while it further bears the names of Sir John Gorst, Mr James Campbell, Sir Richard Jebb, Mr Talbot and Sir Michael Foster Its principal objects are to give the General Medical Council power to erase from the Medical Register for a limited period the name of a registered practitioner who has been guilty of a crime or who has been adjudged guilty of infamous conduct in a professional respect, and to enable the medical authorities—that is to say, the universities and other bodies entitled to grant medical diplomas—summarily to deprive a practitioner whose name has been erased from the Medical Register of the medical diploma obtained from that authority A third provision orders that, notwithstanding the provisions of any Act in force or hereafter to be passed, all fines and penalties recovered under the Medical Acts or the Dentists Act, 1878, shall go to the General Medical Council to be applied in aid of the expenses incurred by the Council in putting into force the Medical Acts. The changes proposed to be made require but little comment or commendation. At present the General Medical Council can inflict but one penalty, the erasure of the name of the person brought before it from the Medical Register The power to modify and to regulate the penalty to be imposed is a highly desirable one for any punitive body to possess, for many reasons One of these is that where the necessary penalty is not one of extreme severity offences are more likely to be complained of and punished than where the accusation, if successful, must necessarily involve the professional ruin of the accused The second proposed change enables the bodies which grant medical diplomas to withdraw them subject to their possible future restoration where the General Medical Council has exercised its powers of removal from the Register, this power to withdraw diplomas is not now possessed by all the bodies which may grant them. The third proposed change is due to the fact that in London the penalties referred to are claimed by the Receiver of Police under the Metropolitan Police Courts Act, 1839

A Public Health Bill

The full title proposed for this measure is "The Public Health (Officers' Tenure of Office and Superannuation) Act of 1903" It is introduced by Sir Francis Sharp Powell and is supported by Sir Walter Foster, Mr Talbot, Dr Farquharson, Mr Henry Hobhouse Mr Cripps, Mr Heywood Johnstone, Sir Michael Foster, and Sir John Batty Tuke. Its main objects are to insure that none but those properly qualified shall be employed as officers of health (a definition in which are included medical officers of health, sanitary inspectors, and inspectors of nuisances), to give to these as far as is reasonable security of tenure in their offices, and to enable them by definite contributions proportionate to their salaries, paid to a central fund, to provide for themselves superannuation allowances to assist them in the event of old age or disablement. The memorandum prefixed to the Bill calls attention to the highly technical duties performed by sanitary inspectors and points out that as the law stands urban and rural sanitary authorities may appoint officers of health on such conditions as to qualifications, tenure of office, and other matters as they deem fit. The body of the Bill would enact that no person should be appointed an officer of health unless he either is the holder of a certificate of the Local Government Board or of some body for the time being approved by that Board, gained by examination, or unless he has for three years before the passing of the Act served as an officer of health This portion of the Bill is, no doubt, to a large extent designed to obtain the appointment of competent sanitary inspectors, the qualifications of these for their posts being less easy to appreciate in existing circumstances than those of medical men who offer themselves for the posts of medical officers of health. It also proposes to do away with the term "inspector of nuisances," substituting for it the more euphonious one of "sanitary inspector" Conditions of superannuation are proposed, followed by a scale of superannuation allowances These range from fifteen sixtieths of the average annual salary of the last five years of service, payable after a service of ten years, to forty sixtieths, a maximum only to be obtained after 35 years service. The proposed deductions from salary as contributions towards these allowances are graded from 2 to 3 per cent according to the time of service. Contribution by those already holding office is to be according to choice and various matters of detail financial and otherwise, are considered in various sections devoted to them. Enough has been said to show that the measure is one of considerable importance to the two classes directly affected by it.

An Anti Vaccination Bill

A brief Bill, containing but one operative section, would order that "a vaccination officer shall not take proceedings against a parent or other person under section 29 or section 31 of the Vaccination Act, 1867, except with the express sanction and authority in each case of the guardians of the union or parish for which he acts." This attempt to repeal the Vaccination Acts locally at the option of a more or less uneducated majority of the enfranchised population embodies the present ambitions of the anti vaccinationist, as already shown in a succession of defences to prosecutions and subsequent appeals. It is, perhaps, not likely to receive the serious consideration of the House of Commons, and it is to be hoped that if it does its rejection will be decisive. It is introduced by Mr Channing and is supported by Sir John Rolleston, Mr Goddard Mr Cremer, Mr Brigg, Mr Broadhurst, Mr Corrie Grant, and Mr Bell

An Anti Vivisection Bill

This Bill seeks to amend 39 & 40 Vict. c. 77, the statute which already regulates and controls the performance of experiments upon live animals Its main object appears to be the abolition of the existing provisions for the performance of certain experiments under certificates, which without such certificates are not permissible. Those especially aimed at are no doubt those in which it may be desired to dispense with the administration of an anæsthetic. There is also in the Bill a section ordering that "there shall be present during and throughout the whole course of the experiment an inspector," "and no such experiment shall at any time be performed or continued save in the presence of such inspector as aforesaid." Power is given to the Secretary of State to appoint a sufficient number of inspectors for this purpose Their duties would, however, obviously be such as only highly qualified members of the medical profession could adequately perform and the questions to be decided by them are now safely left in the hands of the highly qualified members of the medical profession whose experiments at times under the existing Act lawfully include those upon live animals These experiments are already subject to conditions with regard to inspection and other matters, the stringency of which it is proposed, should be increased in other directions besides those to which we have called attention. Members of Parliament who have considered the existing Act and are acquainted with the statistics relating to its subject matter will for the most part be satisfied that the protection which it affords to dumb animals is sufficient without the additional restrictions proposed in a Bill which is brought in by Sir Frederick Banbury, Colonel Lockwood, and Mr MacNeill.

MEETING OF PUBLIC VACCINATORS AT PLYMOUTH

A MEETING was held in the room of the Plymouth Medical Society on Feb 28th to elect a district council from among the public vaccinators of South Devon and North and East Cornwall (including members and non members of the Association of Public Vaccinators of England and Wales) Mr G Jackson of Plymouth presided The following resolutions were adopted unanimously —

1 This resolution referred to the constituting of a district council.

2. That the Local Government Board should be the authority to which the administration of vaccination should be intrusted.

3. That failing the entire transference of administration from boards of guardians to the Local Government Board it is absolutely necessary in the public interests that the public vaccinator should be as independent in position as the vaccination officer

4 That the minimum fees cannot be fairly reduced and in many country districts they are inadequate on account of the distance to be

been three, three, and five in the three preceding weeks, declined again last week to three. The fatal cases of diarrhœa, which had been four, one, and four in the three preceding weeks, decreased again to two last week. The 202 deaths in Dublin last week included 34 of children under one year of age and 59 of persons aged 60 years and upwards, the deaths of infants showed a slight excess over the number in the preceding week, while those of elderly persons showed a considerable increase. Six inquest cases and six deaths from violence were registered, and 76, or more than a third, of the deaths occurred in public institutions The causes of 18, or nearly 9 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES

ROYAL NAVY MEDICAL SERVICE.

Staff Surgeon Bassett Charles Edward Fitzgerald Gunn has been promoted to the rank of Fleet Surgeon in His Majesty's Fleet. Dated Feb 26th, 1903.

The following appointments are notified —Staff Surgeon E. A. Penfold to the *President*, additional for three months' course of hospital study Surgeons W R. Harrison to the *Boscawen* for the *Wanderer*, J G Peebles to the *Boscawen* for the *Dolphin*, W G Edwards to the *Boscawen* for the *Seaflower*, F E Bolton to the *St Vincent* for the *Martin*, S S. H. Shannon to the *Impregnable* for the *Nautilus*, R. L. Jones to the *Impregnable* for the *Pilot*, R. H. Atkins to the *Lion* for the *Liberty*, all lent for cruising season, E T P Eames to the *Torch*, and on recommissioning, and T W Miles to the *Jupiter*

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel E H. Fenn, C E I, from the Seconded List, to be Lieutenant-Colonel. Dated Feb 19th, 1903

The undermentioned Lieutenants are confirmed in that rank —A. B Smallman, W F Tyndale, C M G, P Davidson D S O, W F Ellis (on probation), J McKenzie, W B. Taylor, H. D Walker, A. H. Hayes, H J Crossley, R. B Ainsworth, C A. J A. Balck R Storrs, R L V Foster, F A. H Clarke, G A. K H Reed, G W Smith, J W S Seccombe, J M H. Conway, S M W Meadows, H. V Bagshawe D S Skelton, C N B Stanley, H G S Webb, W W Browne, F L Henderson (on probation), R. Rutherford, W D C Kelly, N E. J Harding, W C Rivers, and R. J Franklin.

INDIAN MEDICAL SERVICE.

The King has approved of the following appointments — To be Colonel, Bengal Establishment Lieutenant-Colonel Henry Hamilton. Dated Oct. 1st 1902. This cancels the notification of this officer's promotion made in the *London Gazette* of Jan 16th, 1903. Bombay Establishment Lieutenant-Colonel Arthur Henry Cole Dane. Dated Oct 30th, 1902 To be Lieutenants (dated Sept. 1st, 1902) John Hanna Murray, Frederic Percival Mackie, Arthur Tregelles Pridham, John O'Leary, Samuel Rickard Christophers, Harry Emslie Smith Hugh Reginald Dutton, Vincent Blumhardt Nesfield, Henry Martyn Brown, Francis Peter Vieyra, Arthur Frederick Pilkington, Philip George Easton, Wilfrid Wynne Jeudwine, Thomas Charles McCombie Young, George Adam Jolly, Henry Coddington Brown, Abdurrahman Khan Lauddie, Walter Julius Collinson, Cuthbert Lindsay Dunn, Herbert Michael Henry Melhuish, Horace Harvard Kiddle, Richard Francis Chetwynd Talbot, Raghuber Dayal Saigol, Cecil Edward Bulteel, John Lumsden Lunham Frederick Collen Rogers, Maung Ba Ket George Frederick Humphreys, and Clayton Alexander Francis Hingston

The King has also approved of the retirement from the service of the undermentioned officers —Lieutenant Colonel Maneckjee Eduljee Reporter, Madras Establishment. Dated Nov 27th, 1902. Lieutenant-Colonel Alexander William Mackenzie, Bengal Establishment. Dated Jan 31st, 1903

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon Captain Henry Waite, 2nd West Riding of Yorkshire Royal Engineers (Volunteers), to be Surgeon Captain Dated March 11th, 1903.

VOLUNTEER CORPS.

Rifle 1st Volunteer Battalion the Royal Scots Fusiliers Supernumerary Surgeon Lieutenant J O Taylor, *from the* 9th Lanarkshire Volunteer Rifle Corps to be Surgeon Lieutenant. Dated March 7th, 1903. 4th (Nottinghamshire) Volunteer Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiment) Arthur John Helm Montague to be Surgeon-Lieutenant. Dated March 7th, 1903. 1st Volunteer Battalion the King's Own (Yorkshire Light Infantry) George Symers Mill to be Surgeon Lieutenant. Dated March 7th, 1903 21st Middlesex (the Finsbury) Charles Allen Casterton Smelt to be Surgeon-Lieutenant. Dated Feb 24th, 1903. 1st (Hallamshire) Volunteer Battalion the York and Lancaster Regiment Captain D G Newton, from the South Yorkshire Volunteer Infantry Brigade Bearer Company, to be Surgeon Captain. Dated March 7th, 1903.

VOLUNTEER INFANTRY BRIGADE BEARER COMPANY

Welsh Evelyn John Robert Evatt to be Surgeon Lieutenant Dated March 7th, 1903

CHURCH LADS' BRIGADE MEDICAL CORPS.

We have received a new and enlarged edition of the manual for the Church Lads' Brigade Medical Corps published at the headquarters of the brigade, 13, Craven street, Charing Cross, London, W C The manual is based upon the manual of the Medical Staff Corps and contains a brief outline of the structure and functions of the human body and its organs and instruction for first-aid to the injured. Special attention has been given to drill which has been brought into line with the present army medical regulations and it is suggested that the manual will be found of value to cadet corps, schools, and similar organisations where military drill and ambulance teaching are utilised. The section dealing with poisoning is short and to the point, but we cannot entirely indorse the "Table of Special Poisons and their Treatment." The class for whom the manual is written will rarely, if ever, meet with cases of poisoning from several of the poisons there specified, while, on the other hand, all reference to food poisoning is omitted. Emetics are recommended in the table in cases of carbolic acid poisoning, without any reference being made to the anæsthetic or corrosive actions of that substance. On the other hand, on p 59 carbolic acid is classed with the corrosive poisons and emetics are forbidden

THE REFORM OF THE ARMY MEDICAL DEPARTMENT

In the course of his statement in the House of Commons on army reform on March 10th Mr Brodrick said that the present year had been a notable one in the reorganisation of the Army Medical Corps. He believed that the House of Commons owed a large measure of gratitude to those eminent civilian surgeons and medical men who had joined, on public grounds, the Advisory Board Sir Frederick Treves, Bart, K.C V O, C B, Mr A D Fripp, C V O, C B, Dr E C Perry, Dr J Galloway, Sir Charles B Ball, and others, had given immense time to the public service. While previously a sufficient number of candidates to fill vacancies could not be obtained at the first examination under the new system there were three times as many candidates as vacancies— the class of candidates being of a very high order A medical staff college had been established in London which would enable officers returning from foreign service to utilise to the best advantage that leave for study which they have never had hitherto and without which it was impossible to keep up their scientific attainments Specialisation in the Army Medical Service would be encouraged and everything would be done to bring the medical and surgical equipment of the army up to date.

DEATHS IN THE SERVICES.

Surgeon-Major Vere Edward Hunter, R.A.M C, at Bombay, on March 2nd He entered the Army Medical Department in 1883 and was promoted to the rank of surgeon major in 1895, He served for some years in Burma, where he joined the army on field service in 1887–88

THE TORQUAY WATER-SUPPLY —Referring to the leading article on Moorland Waters and Lead Poisoning, published in THE LANCET of Feb 28th p 596, Mr J Bentall Endean writes to us from Torquay on the subject of the water supply of that town. He says that the Torquay corporation supplies water to more than 45 000 consumers, that this water is derived from moorland gathering grounds including peat and bog that it is "peaty," and that all of it is delivered to the consumers without filtration. He is doubtful as to the wholesomeness of this water and calls attention to the prevalence of ulcer of the stomach, anæmia, and cancer, mentioning that out of a total of 504 deaths in Torquay in 1901 there were 44 due to cancer ships' staffs who had not changed their clothing or otherwise had failed to carry out the hospital rules as to disinfection. But the presumption that the bulk of the small pox among these workmen was attributable to aerial convection is very strong Dr Buchanan quotes also the instructive figures which Dr J C Thresh prepared for the Epidemiological Society on the incidence of small pox in the Orsett Union in previous years and which show that since the ships began to take acute cases of small pox in 1894 the place where small pox has again and again made its first appearance has been Purfleet or neighbouring portions of the parish of West Thurrock It will be remembered that Dr Thresh[2] when dealing with data obtained during the earlier periods of this epidemic gave reasons for inferring that infection conveyed aerially from the ships was responsible in considerable measure for the prevalence of small pox not only in Purfleet but also in parts of the Orsett Union distant from two to five miles in a direct line from the ships and that the incidence of the disease might be related to the direction of the prevalent winds. Dr Buchanan discusses this question in some detail and arrives at the conclusion that the evidence of the conveyance of infection to such distances is hardly sufficient in view of the impossibility of eliminating the factor of personal communication and traffic between Purfleet and other parts of the union. He points out that on theoretical grounds it is easier to realise the operation of aerial convection on still foggy days, when the large volume of warm air derived from the wards, accompanied by suspended particulate matter, rises steadily upwards from the ships and the particulate matter thus conveyed gets wafted by gentle air, currents without much dispersion, "ultimately to settle now, for example, on Purfleet, now on the Dartford marshes, at one time towards Erith, and at another on the surface of the river A moderate or strong wind, on the other hand, ought to be expected to cause rapid dispersion and removal of particulate matter rising from the ships." The report is illustrated by maps and contains appendices giving notes regarding the prevalence of small pox in the Dartford Union and meteorological data

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN 76 of the largest English towns 8693 births and 4790 deaths were registered during the week ending March 7th. The annual rate of mortality in these towns, which had been 17 1, 16 7, and 16 6 per 1000 in the three preceding weeks, was again 16 6 per 1000 last week. In London the death rate was 16 4 per 1000, while it averaged 16 6 per 1000 in the 75 other large towns. The lowest death rates in these towns were 6 3 in Handsworth, 6 7 in Newport (Mon), 8 1 in Wallasey, 8 8 in Barrow in Furness, 9 3 in Northampton, 9 8 in Smethwick, 10 0 in Hornsey, and 10 1 in Great Yarmouth and in Burton on Trent, the highest rates were 20 1 in Wigan and in Rotherham, 21 8 in Tynemouth, 22 1 in Newcastle-on Tyne 23 0, in Manchester, 24 2 in Preston, 25 7 in Swansea, and 27 5 in Coventry The 4790 deaths in these towns last week included 501 which were referred to the principal infectious diseases against 452 in each of the three preceding weeks, of these 501 deaths 142 resulted from measles, 142 from whooping cough, 77 from diphtheria 52 from scarlet fever, 42 from diarrhœa, 30 from "fever" (principally enteric), and 16 from small pox. No death from any of these diseases was registered last week in Brighton, Ipswich, Norwich, Burton on Trent, Walsall, Handsworth, King's Norton, Barrow in Furness, Rotherham, or Newport (Mon), among the other towns the highest death rates from the principal infectious diseases were recorded in West Ham, Hanley, West Bromwich, Wigan, Bolton, Salford Tynemouth, and Swansea The greatest proportional mortality from measles occurred in Nottingham, Wigan, Bolton, Manchester, and Swansea, from scarlet fever in Great Yarmouth, from diphtheria in West Ham, Bristol, Hanley Coventry, Salford Huddersfield, and Bradford, from whooping cough in Croydon, East Ham, Hanley, Oldham and Preston, and from diarrhœa in St. Helens. The mortality from "fever" showed no marked excess in any of the large towns Six fatal cases of small pox were registered in Liverpool, two in London, two in Birmingham and one each in Leicester, Bootle, Bury, Oldham, Leeds, and Cardiff, but not one in any other of the 76 large towns. The number of small pox patients under treatment in the Metropolitan Asylums hospitals, which had been six, eight, and five on the three preceding Saturdays, had risen again to six on Saturday, March 7th, two new cases were admitted during the week, against one, seven, and one in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 2528 to 1851 at the end of the ten preceding weeks, had further decreased to 1791 at the end of last week, 194 new cases were admitted during the week, against 246, 205, and 197 in the three preceding weeks The deaths referred to diseases of the respiratory organs in London, which had been 267, 274, and 271 in the three preceding weeks, further declined last week to 251, and were 316 below the corrected average number Influenza was stated to be the primary cause of 31 deaths in London last week, against 24, 25, and 15 in the three preceding weeks The causes of 49, or 1 0 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner All the causes of death were duly certified in West Ham, Bristol, Leicester, Salford, Leeds, and in 45 other smaller towns, the largest proportions of uncertified deaths were registered in Reading Liverpool, St Helens, Blackburn, Sunderland, and South Shields.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had declined from 21 7 to 17 7 per 1000 in the four preceding weeks, rose again to 18 5 per 1000 during the week ending March 7th, and was 1 0 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in these eight Scotch towns ranged from 13 2 in Paisley and 16 8 in Glasgow to 21 4 in Dundee and 22 1 in Edinburgh The 606 deaths in these towns included 32 from whooping cough, 21 from diarrhœa, 15 from measles, four from scarlet fever, two from "fever," and one from diphtheria, but not one from small pox. In all, 75 deaths resulted from these principal infectious diseases last week, against 85, 76, and 59 in the three preceding weeks These 75 deaths were equal to an annual rate of 2 3 per 1000, which was 0 6 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping cough, which had been 32, 26, and 23 in the three preceding weeks, rose again last week to 32, of which 18 occurred in Glasgow, five in Dundee, four in Edinburgh, and four in Leith. The deaths from diarrhœa, which had been 18 and 13 in the two preceding weeks, increased again to 21 last week, and included 10 in Glasgow, four in Edinburgh, four in Paisley and two in Aberdeen The fatal cases of measles, which had declined from 20 to nine in the preceding weeks, rose again last week to 15, of which seven were registered in Aberdeen, three in Glasgow, three in Edinburgh, and two in Leith. The deaths from scarlet fever, which had been eight, seven, and five in the three preceding weeks further declined to four last week and included two in Glasgow and two in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns which had declined from 183 to 92 in the six preceding weeks, rose again last week to 97, but were 133 below the number in the corresponding period of last year. The causes, of 35 or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN

The death rate in Dublin, which had been 25 0, 20 6, and 25 9 per 1000 in the three preceding weeks, further rose to 27 8 per 1000 during the week ending March 7th During the past four weeks the death rate has averaged 24 8 per 1000, the rates during the same period being 16 8 both in London and in Edinburgh. The 202 deaths of persons belonging to Dublin registered during the week under notice showed an increase of 14 over the number in the preceding week and included nine which were referred to the principal infectious diseases, against 14, 18, and 14 in the three preceding weeks, of these, three resulted from whooping cough, two from diarrhœa, and one each from measles, scarlet fever, diphtheria, and "fever" These nine deaths were equal to an annual rate of 1 2 per 1000, the death rates last week from the same diseases being 2 0 in London and 2 1 in Edinburgh The deaths from whooping cough, which had saving of larger fees in important cases has not been brought to public notice I have an idea that there may be legal difficulty in paying proper fees to expert pathologists, but the same may be said of paying any fees at all to them

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[2] THE LANCET, Feb 22nd 1902, p 496 and April 26th 1902, p 1172.

3. This brings me to my third point, which is that the position of Dr Freyberger is anomalous He has been appointed by the London County Council to perform post-mortem examinations in special cases The interpretation of the word "special" is left to Mr Troutbeck, but there can be no doubt that all inquests must resolve themselves into those where advanced and special pathological knowledge is required and those where the usual pathological equipment will suffice. In the latter cases the general practitioner is perfectly able to make the post-mortem examinations and to give the necessary evidence and Dr Freyberger's assistance at two guineas per case is an unnecessary extravagance In the far fewer cases where great special knowledge is required, Dr Freyberger may be able to fill the part, but the London County Council should not have appointed for the fulfilment of such important functions, the first gentleman who offered his services cheaply The post should have been advertised and application publicly invited In this way the public and the medical profession would feel that an attempt had been made to obtain the best man for an arduous appointment. The anomalousness of Dr Freyberger's position is that in most cases he is not wanted and that in the few cases where the expert pathologist is wanted the public has not a sufficient guarantee of his skill The Control Committee of the London County Council have recommended that the services of other experienced pathologists should be obtained and hope for the coöperation of the Royal Colleges of Physicians of London and Surgeons of England and of the big London hospitals in obtaining competent men. This is a real step forward. The recommendation has been adopted by the London County Council. It now remains to be seen, firstly, if any expert pathologists will be tempted by the small fee to offer their services and, secondly, if the coroners will be content to use their help only in *special* cases I am, Sirs, yours faithfully

M B

LUNACY AND THE LAW—"SINGLE CARE"

To the Editors of THE LANCET

SIRS,—The able articles which have recently appeared in the medical journals from the pens of Dr E. W White and Dr T Outterson Wood and the letter of Dr H. Rayner in THE LANCET of March 7th, p 681 are well worthy of perusal by, and the serious consideration of, every member of the medical profession, be he alienist or consultant physician or engaged in the ordinary every-day practice of his profession, for they have raised a timely and a warning note, which is not to be disregarded, on this very important subject It is, perhaps, not too much to say that many of the communications which have appeared in the press lay and medical, on the law as it affects single care in the certificated, the uncertificated, or the so-called border line cases betray ignorance of the most elementary necessities and precautions which must be used in dealing with persons of unsound mind in whatever stage of the disorder, and that some of the suggestions set forth in all seriousness tend directly to the revival, or rather the establishment, speedily of all the evils which it has been the province of the various lunacy Acts, *ab initio*, to render impossible.

Amid much that is irrelevant and impracticable in the discussion hitherto there stands forward prominently and with unanimity one opinion and that is that only fully-trained, qualified, and experienced persons are fitted for the exceedingly delicate and tactful task of properly tending and ministering to the unsound in mind, whether the manifestations of the unsoundness be of the mildest or of the most exaggerated type To secure and to retain this trained intelligence for the care of the mentally unsound and to insure its exercise under the most favourable conditions for the patient is the problem of the hour which awaits solution It is acknowledged on all hands that many of those who now assume responsibility for cases under single care are not persons who come up to the standard indicated here. Surely a disordered brain and nervous system are in at least as much need of the specially trained physician and nurse as is a broken limb in need of the surgeon and his specially trained surgical nurse or some severe internal malady of the physician with similar aid to suit his requirements.

How are the desirable conditions herein set forth to be best attained and with as little disturbance as possible to the existing state of the law? At the present moment cases of mental unsoundness in any of their stages or varieties can be treated in hospitals for the insane or in private houses adapted for the purpose and licensed by the Commissioners in Lunacy or by magistrates, either during voluntary residence in one or other of them or under order and medical certificates, whilst the poor or pauper class are cared for in the various county or borough asylums. It may be taken for granted that in any of these institutions trained medical and nursing skill will be amply provided Why not, then, go a step further in the same direction and authorise by law that "single care" be constituted on similar lines under licence by Commissioners in Lunacy or magistrates who in granting such licences would hold themselves responsible for the suitability of the provision made for single care in every respect, as well as for skilled medical and nursing treatment? Such a provision would at least insure that none but properly qualified persons and suitable premises and exercising grounds were provided, for licences would be granted to none other Single patients or boarders would thus also with certainty be brought under the very necessary supervision of commissioners and magistrates, evasions of the law would be more easily detected, and serious abuses of any kind would certainly be abolished or minimised. Physicians who have hitherto felt themselves debarred from the single care of their patients by fear of being brought under the operation of law while so doing would thus be placed at rest and feel in tranquil security on this point whilst engaged in their duty

I am, Sirs, yours faithfully

West Malling March 7th 1903 JAMES ADAM.

THE LIMITATIONS OF THE GENERAL MEDICAL COUNCIL

To the Editors of THE LANCET

SIRS,—As in your leading article under the above heading in THE LANCET of March 7th, p 671, you were good enough to refer to myself, I shall be glad if you will allow me to write a few words in reference to the question as to school board certificates which I submitted to the Executive Committee of the General Council of Medical Education and Registration You express some surprise that medical men, including myself, should have brought before the Council inquiries concerning the etiquette and conduct of the medical profession. Now, Sirs, I do not question for a moment the accuracy of your definition of the powers and duties of this body, but if the supreme authority on all matters pertaining to medical education and registration has no power to make regulations or to give advice concerning medical etiquette and what does or does not constitute improper or "infamous" conduct, I should like to inquire from what quarter a perplexed medical man can hope to obtain guidance in regard to the various thorny problems which members of the profession are liable to encounter To take, for instance, the various questions referred to in your article. All these, I think it will be admitted are matters concerning which it is desirable there should be some authoritative standard of conduct by which medical men may shape their course and it is, I think, evident from your comments that in regard to none of them is there any accepted regulation at the present time If, therefore, the General Medical Council has no power to decide on such matters, is it not much to be desired that its sphere of work should be extended in this direction or that some other body should be vested with the required authority? I do not wish now to go into the particular question as to school board certificates which I submitted to the Council, but I may remark that I was induced to put it by the discovery that there is a wide divergence of practice and opinion among metropolitan medical men on the subject —surely a very unsatisfactory state of affairs.

I am, Sirs, yours faithfully,

DENNIS VINRACE.

Alexander-square South Kensington S W March 9th 1903.

⁂ We did not intend to indicate exactly surprise that Mr Dennis Vinrace should have sought the views of the General Medical Council in the particular circumstances. We meant rather to express the opinion that medical men as a body do not appreciate what the General Medical

Correspondence.

"Audi alteram partem."

THE MEDICAL MAN, THE CORONER, AND THE PATHOLOGIST

To the Editors of THE LANCET

SIRS,—The crux of the matter is What are the circumstances requiring a specialist and who is to decide when he is to be employed? I must confess that I thoroughly distrust the seeming concession of the London County Council Their original idea was that there were too many inquests and that the sum paid was excessive, and that by removing what they considered the principal motive for which medical men refused certificates—namely, the fee—they would effect an economy of some £20 000, and it was to carry out this policy that Mr Troutbeck was appointed The fee to be paid to Dr Freyberger was to be two guineas and we are asked to believe that the local man will be called to give evidence as to facts and so swell the cost to three guineas for the medical evidence I do not believe it for a moment, the whole thing is a red herring drawn across the trail, and in support of what I say I inclose a statement of the post-mortem examinations held in the Battersea mortuary since Nov 22nd, which speaks for itself You will observe that more post-mortem examinations have been given to Dr Freyberger since the deputation to the London County Council than before

Mr Troutbeck has stated publicly that "general practitioners are not fit to make post-mortems and that no barrister would profess to know all the branches of his profession." Now I am not concerned as to the legal qualifications of barristers, though I am inclined to agree with Mr Troutbeck about their limitations, but I repudiate Mr Troutbeck as an authority on medical qualifications and as long as he holds the view that a general practitioner is not fit to make a post-mortem examination and acts up to it there can be no *modus vivendi* I take it that the London County Council instructions were communicated to all the metropolitan coroners, but not one of the others is acting as Mr Troutbeck does and even he confines his operations to Battersea and leaves Westminster alone In the circumstances I think we had better reserve judgment for some little time

I am, Sirs, yours faithfully,
LEONARD S MCMANUS, M D R U I.

St. John's hill March 10th 1903

[INCLOSURE.]

Date.	Total number of post mortem examinations	Number performed by Dr Freyberger
Nov 22nd 1902 to March 5th 1903	58	35
Jan. 1st to March 5th 1903	36	20
Feb 16th to Feb 28th, 1903	5	5
March 1st to March 5th 1903	5	4

To the Editors of THE LANCET

SIRS,—It is earnestly to be hoped, in the best interests of the medical profession that the discussion concerning the introduction of the special pathologist as a regular feature at coroners inquests will not be allowed to drop, although the London County Council have shown a conciliatory disposition Questions of vital interest are involved in Mr Troutbeck's procedure and they must not be lost sight of because the unfortunate tendency to personality makes discussion difficult or because the London County Council do not desire further trouble in the matter There are three things that must strike all those who have followed the controversy as being the particular ones that call for consideration. The first is the legality of Mr Troutbeck's attitude, the second is the economy under which may be included the efficiency, of employing the so called expert pathologist in any save very special cases, and the third is the anomalous nature of Dr Freyberger's position.

1. Mr Troutbeck has accepted an appointment at the hands of the London County Council, agreeing with them to employ Dr Freyberger to perform post-mortem examinations in special cases It appears to many well informed persons (apparently, Sirs, to yourselves) that by the Coroners Act Mr Troutbeck has not the discretion to instruct and to pay Dr Freyberger to perform post-mortem examinations for the purposes of inquests held upon persons whom he has not attended in a district where he does not reside. The Act may be wrong, but, if it is, Mr Troutbeck has no power to amend it He can, and does, plead that he is carrying out the wishes of the authority to which he owes his appointment, but he must not obey that authority, however absolutely he may agree with its views, to the point of breaking the law The legality of Mr Troutbeck's procedure should be raised immediately in the usual way—by calling the attention of the public auditor to Dr Freyberger's fees and asking to have them surcharged Any ratepayer in the district can do this and this is the first thing to be done. The London County Council acknowledge their inability to appoint an expert pathologist with a salary, but it is not at all clear that Dr Freyberger's services are requisitioned in a legal manner

2. Economy has been put forward by Mr Troutbeck as an argument for the employment of Dr Freyberger to perform post-mortem examinations in special cases. As was recently pointed out in THE LANCET, it is difficult to see where the economy of the innovation comes in. Dr Freyberger has offered to perform post mortem examinations for the London County Council at coroners' inquests in return for the statutory fee of two guineas But for two guineas the coroner can have the evidence of the medical man who had been in attendance upon the deceased *as well as* a report of the post mortem examination It will therefore be seen that the coroner cannot have medical evidence bearing upon the condition and circumstances of the deceased while alive, *as well as* a report upon the post mortem appearances, unless he pays three guineas. An economical procedure which involves the spending of three guineas instead of two guineas could hardly escape criticism, and Mr. Troutbeck has seemed to design to dispense entirely with the evidence of the medical practitioner, so that although he saves no public money by the employment of Dr Freyberger he may at least lose none. I venture to think that his method of securing economy is as perilous as it is ineffective, it saves no money and lays the community open to grave risks which I mention, though to do so is to repeat what I have often read in THE LANCET The medical man who sees the circumstances in which the deceased was placed before death, the domestic environment, the behaviour of the relations, the state of the death chamber, and, perhaps, the position of the corpse before removal to the mortuary, must have opportunities of judging concerning the cause of death which will be quite denied to the specialist who is merely paid to make a post-mortem examination It must not be taken for granted that, because the employment of Dr Freyberger appears illegal, uneconomical, and futile in many cases, there is never any room for an expert pathologist at a coroner's inquest. While every qualified medical man possesses the ability to make a post-mortem examination in an every day case, it can easily be seen that circumstances will arise when the range of ordinary professional knowledge does not suffice for the giving of evidence which may be fraught with consequences of the gravest importance to other parties. In such cases it is quite right that the coroner should be assisted by having the necropsy conducted by some scientific man of known pathological and forensic attainments. Such expert witnesses are not numerous and it should be no more possible to offer them a fee of two guineas for their services than it would be to offer, say, Sir Edward Clarke the same sum as a fee with brief The real economy of the innovation which it is being attempted to introduce into coroners' practice by Mr Troutbeck, in agreement with the London County Council, is the dispensing with the services of the highly paid expert. By the payment to Dr Freyberger of two guineas for his services at so called special cases (the special circumstances of some of the cases where Dr Freyberger has been employed are not very obvious) the payment of proper fees to expert pathologists in cases of serious difficulty is eluded. It is not certain that the community would consider that such economy was worth having if they understood its meaning, and it is noticeable that, whereas the necessity of saving the guineas to be paid for the medical evidence of the general practitioner has been insisted upon by Mr Troutbeck, the

with a form of application for membership to each police surgeon whose name I have been able to find in the Constabulary Almanack As, however, this does not contain a complete list, and as I am anxious to secure the membership of every police surgeon willing to join, I will send a copy to any who will forward to me his name and address.

I am, Sirs, yours faithfully,
FRED W LOWNDES Honorary Secretary
40, Knight-street Liverpool, March 5th 1903.

THE CULTIVATION OF ANAEROBIC BACTERIA

To the Editors of THE LANCET.

SIRS,—Will you permit me to thank Dr. Klein for drawing my attention to his method of anaerobic plate culture as set forth in the medical officer's report for 1897–98. I am quite familiar with this method, as also with those of Gabritschewsky, Botkin, Hammerl, and other investigators who have worked at this subject. But in my hands these methods have not given uniformly satisfactory results, as, for instance, in the plate culture of such a strictly anaerobic micro-organism as bacillus tetani.

Dr. Klein's method and mine are the same in principle but in apparatus they differ I use a chamber having a very small air space provided with most efficient seal, whereby the vacuum created by the absorption of oxygen by the pyrogallic solution is maintained. In apparatus of the bell glass pattern having a large air space I have found that this is not always the case.

I am, Sirs, yours faithfully,
H S. FREMLIN.
Government Lymph Laboratories, Chelsea Bridge, S W
March 9th 1903

A DISCLAIMER.

To the Editors of THE LANCET

SIRS,—The report of an interview which appeared in the *Daily Telegraph* of March 3rd was published entirely without my authority or knowledge. I was quite unaware that the gentleman who engaged me in casual conversation in the office of the secretary of the hospital was a reporter

I am, Sirs, yours faithfully,
Cavendish-square W March 9th 1903. DUNDAS GRANT

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Indiscriminate Sale of Cocaine in India —Paralytic Affections among Men and Cattle in the Central Provinces —The Cremation Society of Bengal.—The Plague Epidemic —Reorganisation of the Health Department in Bombay

THE Bombay High Court in a test case instituted at the instance of the Government of Bombay has held that cocaine is not an intoxicating drug within the meaning of the Excise Act. The effect of this ruling will apparently be that no licence such as has been insisted on by the Governments of Bengal and Bombay will be necessary for the sale of cocaine and that the law as it now stands is powerless to check the cocaine habit which, as I have previously reported, is spreading rapidly in many parts of India.

In consequence of the spread of a paralytic affection attacking human beings as well as cattle in parts of the Central Provinces an official inquiry is to be held The complaint is due, it is believed to the eating of certain classes of dhal, more particularly that known as kasari dhal, or latri. As the botanical name for this is lathyrus sativus the complaint will probably turn out to be a long recognised one. The natives recognise its poisonous properties in both themselves and their animals but partake of it on account of its cheapness. Horses and bullocks lose control over the hind limbs becoming paralysed. This grain is also said to produce dyspnœa and roaring in horses when put to work Many years ago a widespread occurrence of paralysis in Sindh, after a season of extensive inundations in which kasari was grown on an exceptionally large scale, drew attention to it, and in the Azamgarh district, where paralysis is common, kasari forms an important article of diet.

The Cremation Society of Bengal, which now numbers nearly 100 members, is being registered under the Companies Act and hopes to obtain the control and management of the crematorium which the corporation proposes to erect.

The plague mortality continues to increase Last week 25 870 deaths were reported throughout India, against 24 500 in the previous seven days and 15,165 in the corresponding week of last year The Bombay Presidency returns 11,922 deaths, the Bengal Presidency 2817, and the Madras Presidency 592 Then we have the Punjab with 3735 deaths, the Central Provinces 206 the United Provinces 2599 the Mysore State 694, the Hyderabad State 932, and Berar 462 Bombay city reported 612 deaths from plague alone, Calcutta 142 Poona 849 and Karachi 33 When it is borne in mind that Poona contains only a little over 100,000 inhabitants the frightful mortality going on there will be recognised. Dr Shave, one of the plague medical officers now at Sholapur, has been selected for appointment to the Indian Medical Service

The health department of the Bombay municipality has been rearranged. Bombay is now divided into three divisions, each under the charge of a health officer For purposes of registration the city has been divided into ten registration districts, in each of which there is a municipal dispensary At each office there are a qualified native medical man and three hospital assistants who inquire into the cause of every death, investigate cases of infectious disease, and take action for removal to hospital. They also treat cases of sickness at the homes of the people in poor and urgent cases A nurse who is a qualified midwife is attached to each district. Dr J A. Turner is the executive health officer and Dr C H. Cayley, Mr W Venis, and Dr Sorab C Hormusji are the divisional health officers.

Feb 12th

THE
ORGANISATION OF THE PROFESSION

(FROM OUR SPECIAL COMMISSIONER.)

The Situation at Cardiff —The South Wales Colliery Surgeons and the Poundage System, the Satisfactory Payments obtained —The Question of Concentration or of Subdivision in Medical Practice

THOUGH, as recently described, a notable effort has been successfully made to organise the profession at Swansea it must be admitted that, taking South Wales as a whole, but little has been done. The only other organisation brought to my notice was the East Glamorgan and Monmouthshire Colliery Surgeons' Medico-Ethical Society At Cardiff, for instance, which is the most important town in South Wales, there is no medical union and this notwithstanding the presence of Mr T Garrett Horder who has made praiseworthy efforts in regard to the question of hospital abuse Nevertheless, there seems to be a total absence of public spirit among the members of the profession at Cardiff Some of the practitioners appear to fear having to subscribe to yet another institution and they complain that there are already so many calls made upon them. Nor is there any indication that they have realised that under its new constitution the British Medical Association, which is to meet so near to them this year, should be able to take economic questions in hand. It is doubtful if anyone has prepared any sort of statement or proposal or has fully grasped the leading potentialities of the new conditions and methods of organisation. On the other hand, there is this excuse—namely that the rate of payment for contract work at Cardiff is higher than it was at Swansea. The members of clubs for the most part pay 1*d* per week and these are not family clubs It will be remembered that at Swansea the average pay was 1½*d* per week, or 6*s*. 6*d*. per annum for family clubs. Such family clubs as exist at Cardiff pay I am told from 10*s* to 13*s* per year per family Nevertheless, the dockers medical aid organisation only pays 8*s* 8*d* per family, however, this latter and smaller figure is not lower than the terms accepted at Swansea. But, as one of the local practitioners explained, it is not so much the amount the members pay as the habits that prevail among them. In some societies or clubs the members may be impressed with the very just idea that as they pay so little they should only seek the advice of their medical officer when there is really need of

Council can and cannot do The General Medical Council is frequently blamed for supineness in situations where it has no possible power or discretion to act. Of course, the Medical Acts require amendment in the interests of the public and amendment in some directions might take shapes that would render the Council more practically useful to the medical profession.—ED L

COLLECTIVE INVESTIGATION OF PUERPERAL ECLAMPSIA

To the Editors of THE LANCET

SIRS,—The request of the Clinical Society of Manchester for reports of cases of eclampsia is meeting with a hearty response from medical men all over the country The committee would like to point out that a diminution in the excretion of urea is coming to be regarded as an important physical sign of the pre-eclamptic state, more important, perhaps than albuminuria The vital point is one on which they hope their investigations will throw much light and reports which give quantitative estimations of urea and daily quantity of urine will be doubly valuable for this reason

The use of the hypobromite process with Southall's ureometer is very simple and the apparatus is inexpensive (it can be obtained through any druggist for about 3s) It may perhaps be hoped that those who are favouring us with reports of cases will find time to furnish data enabling us to correlate the output of urea with the gravity of the case

We are, Sirs, yours faithfully,
T ARTHUR HELME,
President.
J PRICE WILLIAMS
Honorary Secretary for the Investigation
J HOWSON RAY,
Honorary Secretary Clinical Society
22 St John street Manchester March 4th 1903.

THE LARGE INTESTINE AS AN INTERMITTENT SYPHON

To the Editors of THE LANCET

SIRS,—Quite apart from any opinion as to the theoretical merits of Dr R. W Leftwich's ingenious views as expressed in THE LANCET of Feb 7th (p 374) and 21st (p 552), clinical observation supplies us with a demonstration of the fact that the colon is capable, when its lumen is patent, of transmitting fluid by gravitation—using that term in the usual sense—more rapidly than by longitudinal and annular peristalsis. My first observation five years ago and many subsequent ones were made in patients suffering from typhoid fever and led to my adopting a method of treatment which I described under the heading of "postural treatment" in a note on "Suggestions for the Practical Treatment of Typhoid Fever" published in THE LANCET [1] I found that when the right loin was heavy and "dull" with fluid fæces, and the left loin resonant with gas, the cæcum and the sigmoid flexure could be made to exchange their contents and the character of their percussion note within a very few minutes by suitably tilting the bed or more simply the patient's body Moreover, the same exchange could be subsequently reversed by reversing the lateral decubitus—a point of some importance in treatment, as it enables the cæcum to be charged with irrigation fluid after it has been cleared of fæces. In cases of that kind my present practice, which I may describe as the "empty bowel treatment," is to empty the cæcum by posture into the sigmoid flexure where the fæcal fluid is within reach of the long tube or of an evacuating enema and then to irrigate the colon by means of a double tube with water containing charcoal powder in suspension. I now regard this daily toilet of the colon as belonging to the sanitary treatment of most cases of typhoid fever The other details of the treatment concern the upper bowel and do not bear upon the point now under discussion

I still consider that the rapid transmission of fluid through the length of the colon is mainly due to the alteration in the respective levels of the fluid and of the gaseous contents of an abnormally patent and atonic bowel, though I am prepared to admit that syphonage may come into play if at any moment the transverse colon and its flexures should become charged with an exclusively fluid column. The mechanism by which this syphonage might be brought about by posture and by other favouring circumstances might perhaps be illustrated by a simple schema consisting of a glass tube shaped like the colon (interrupted in the middle by a short length of indiarubber tubing) with one end tightly fitted into the neck of a flask containing water and the other end fitted into a flask containing air But no schema can teach us the complex working of the living bowel. It is possible that the gas contained in the cæcum may act under the influence of lateral pressure like the compressed air in the ordinary indiarubber hand ball pump in propelling the contents of the colon and sometimes in charging the transverse colon with a continuous column of fluid capable of syphonage However this may be, it is probable that our knowledge of the mechanical functions of the colon is far from complete, and Dr Leftwich's suggestive investigation has helped us to realise more clearly the many sided resources of the living bowel which may combine some of the properties of rigid tubes with the advantage of contractility I am, Sirs, yours faithfully,

Curzon street, W , March 8th 1903. WILLIAM EWART

THE VENTILATION OF SCHOOL BUILDINGS

To the Editors of THE LANCET

SIRS,—I should be very much obliged if you would allow me through the medium of THE LANCET to ask for an opinion upon the medical aspects of the following point in connexion with ventilation Certain systems of warming and ventilation are so arranged that the heating of the rooms is entirely done by the admission of hot air—that is to say, fresh air is propelled into the rooms but at a sufficient temperature to obviate the need of any further direct heating This plan is becoming more common and it would be very useful to have some opinions upon the hygienic aspects of breathing air which, to allow for the cooling effects of the windows and walls, must be when admitted very considerably above the required temperature of the room. Would not such conditions tend to have an enervating and depressing effect upon the vitality of the children, to weaken their powers of resistance to colds, &c ? It has been suggested to me that one result of this would be a tendency to adenoid growths, the system is very largely used in America, so that it would be interesting to know whether the complaint is more prevalent in that country than here where the plan, although in use in many places, has not been adopted to anything like the same extent I am, Sirs, yours faithfully,

FELIX CLAY

Buckingham street Strand W C March 4th 1903.

ADENOMA OF THE RECTUM

To the Editors of THE LANCET

SIRS,—In your leading article on this subject [1] you make the suggestion that an adenoma of the rectum may be a papilloma. I have examined a fair number of these growths and I have found that the greater number of them have no papillæ but are composed of tubes lying in a connective tissue stroma. If they have no papillæ how can they be papillomata? The commonest simple tumour of the rectum is the adenoma. The villous tumour, which is not so common, contains both papillæ and tubes and is an adeno-papilloma. I have never met with a pure papilloma of the rectum, although it is not improbable that they occur I have entered into the question of the nomenclature of these epithelial tumours in the Erasmus Wilson Lectures for 1902 [2] and in a communication to the *Journal of Pathology and Bacteriology* [3] a reprint of which I inclose.

I am, Sirs, yours faithfully,
CHARLES POWELL WHITE.
St Thomas's Hospital March 3rd 1903.

UNITED KINGDOM POLICE SURGEONS ASSOCIATION

To the Editors of THE LANCET

SIRS,—Will you kindly allow me to inform all those of your readers who are police surgeons of the following statement? I have forwarded a copy of our last annual report individual practice. This opens out an interesting scientific, practical, and economical problem. Is it better to have two leading men employing on the wages system six assistants and concentrating the responsibility and the work in their own hands, or else to have eight independent practitioners, each with his own individual practice and his small income to carry it out! Thus among the colliers and in regard to the methods obtaining for their treatment in sickness has the economic struggle between the rival principles of collectivism and individualism manifested itself. This is one of the several ways in which the economical evolution affects medical practice as it affects all the other economic conditions of modern civilisation.

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[1] THE LANCET, Dec 8th 1900, p 1644

[1] THE LANCET Feb 28th 1903 p 597

[2] THE LANCET Feb 15th (p 423) and 22nd (p 491) 1902.

[3] The Pathogenesis of Tumours, Journal of Pathology and Bacteriology June, 1901.

MANCHESTER

(FROM OUR OWN CORRESPONDENT.)

The Royal Infirmary

ALDERMAN SIR JAMES HOY, the late Lord Mayor, has prepared a report on the question of the Royal Infirmary site and its proposed purchase by the Manchester City Council. It has been approved by the subcommittee and will be presented for approval to the special committee appointed some time ago by the council to consider the question. It may be remembered that the late infirmary board fixed the price at £400,000 and the present board is not likely to accept less for it considers that it is worth far more than the £20 a yard at which it is offered. It could be, indeed, very well do so as it is stated that it has had a definite offer by a syndicate of £700,000 which puts the lowering of the price below the £400 000 out of the question. This sum indeed, is much less than what it would accept from any purchaser but the city itself. If the city council fails to secure this Piccadilly site, the finest in Manchester, for a great civic purpose it will illustrate once more the timidity and short-sightedness which lost it Trafford Park. That lesson, however was a severe one which it may be assumed is not yet quite forgotten. The report has not been made public but is said to contain suggestions forming an admirable basis of agreement It is desirable that, while there is no ill judged haste, there shall be no waste of time, for the pressure on the infirmary is very great. Indeed, Mr. John Thomson, the chairman of the board, said publicly on March 5th that 'he had only that day consulted with the doctors as to the practicability of erecting a temporary corrugated iron annexe." He hoped that the Corporation would buy the site and so enable a large and better infirmary to be built elsewhere

Manchester and Salford Sanitary Association

The annual meeting of the Manchester and Salford Sanitary Association was held in the town hall on Feb 27th After the adoption of the report, which gave an account of the previous year's work, a motion was passed approving of the efforts of the association ' to spread among the people a knowledge of the laws of health, to promote cleanliness temperance and thrift, to obtain a purer atmosphere, to improve the dwellings of the poor, and to preserve the lives of their children,' and declaring that these efforts "deserved a more adequate support from the general public" Major General Sir F Maurice addressed the meeting on the subject of the national health

The Salford School Board and the Physical Training of Children.

The Salford School Board has for some time devoted much attention to the physical welfare and training of the children in its schools and more especially since the appointment of a medical officer to the board in 1898 Careful inquiries are made as to the eyesight and hearing of the children and the medical officer makes a personal examination of those below the normal standard. Where glasses are advisable the parents are recommended to seek medical advice, and so also in many cases of defective hearing medical advice is suggested The head teachers of the older scholars have been directed to arrange for a course of instruction on the laws of health A syllabus of lessons has been drawn up by the medical officer, including air supply, water-supply, food, sunlight, cleanliness, clothing, exercise, rest, dwelling house, and the avoidance of active causes of disease. The state of the young adults of the Manchester population, as shown by the rejection of 8000 out of 11 000 would be recruits, has been noted by the Salford School Board and it seems to be making an earnest effort to do what it can to arrest the decadence that has already become so alarming A record is being taken by a committee of the board of the weight and measurement of the children at different ages and of the committee of four three are medical men. Three schools have been chosen for the inquiry as they are typical of the different classes of children coming under their care. The records are taken by the medical officer with the coöperation of the committee, but it is intended to have the teachers instructed so that they can carry out the work. The height, weight, chest measurement, and circumference of the head are taken and inquiry is being made as to there being any correlation between the physical condition of the children and their home circumstances All this is preliminary to the further consideration as to whether anything can be done, in addition to what is now done, to improve their physical condition. At present physical training is given in all the board schools in accordance with the model scheme of the Board of Education which the adult teachers have become competent by special training to carry out. It is to be hoped that with the new Education Act without neglecting the mind more attention will be given throughout the country to the bodies of the children for hitherto they have had less than they have deserved

Food Inspection in Manchester

Although from the hygienic point of view the destruction of unwholesome food is necessary yet when the tendency to rise in price that seems to prevail almost universally is considered it is deplorable that there should be so much loss year by year as is shown in the report of the market committee of the city council. Last year 176 754 pounds of meat were condemned and destroyed in Manchester. Of this enormous quantity there were 117 498 pounds of beef, 48,312 pounds of fish 31,195 pounds of shell fish, 5901 rabbits, besides hundreds of hares grouse, pheasants, quails, poultry, &c. With the exception of 913 pounds of meat, 1078 pounds of fish, and some tins of preserved food stuffs which were exposed for sale all was surrendered after being condemned by the inspectors The meat and fish were discovered at the wholesale and retail markets, at railway stations, shops, on hawkers' carts, at farms, in the cold air stores, and other places. The hawkers' carts, however, were not bad by comparison. The great bulk of the meat was condemned at the abattoirs and markets Of the rabbits and game condemned at the Smithfield Market the former are the more numerous, as one would expect Black currants seem to bear transport and to keep worse than most other fruits, nearly 1000 boxes having to be destroyed. It seems curious that no mention is made of partridges, though quails and ortolans (93) pigeons, turkeys, &c., come in for condemnation. In addition to the inspection of the abattoirs and markets, 3916 visits were made to the private slaughter-houses, of which there are still a number in Manchester, 14 059 carcasses were examined, and 5829 visits were made to shops in the poorer districts of the city This is a very brief and imperfect sketch of the work done by the inspectors, but enough has been said to show that supply and demand do not adjust themselves automatically and that food preservation and distribution still leave room for improvement and better organisation. That it would be worth while to do what can be done to mend matters is evident from the fact that all this waste takes place in one town, with a population of less than 600 000 and that there is no reason to suppose that Manchester differs from other parts of the country in being careless and improvident. The loss of food that must be going on in a population of about 41,000,000 is deserving of more attention than we often give to it, and perhaps none the less so because it must be difficult to prevent.

Legacy to the Salford Hospital.

The late Mr William Hatton of Manchester has by his will left a sum of £6500 to the Salford Royal Infirmary

A Presentation Portrait

A number of friends have subscribed for a portrait of Mr E S Heywood who was for many years the chairman of the Royal Infirmary Board. It will be presented to the infirmary and hung in the board room It has been painted by Mr Ralph Peacock and is described 'as a characteristic and faithful likeness of the sitter and as a singularly vigorous and attractive painting' Mr Heywood, it may be remembered, together with most other members of such assistance. Others, on the contrary, fancy that they have a right to call on their medical officer for the most trivial ailment and are constantly coming for medicine when there is really nothing the matter with them. Such clubs do not pay whatever the amount of their subscription

Some time ago an insurance company attempted to establish itself at Cardiff and it introduced a medical practitioner This company employed a woman canvasser who went from house to house extolling the advantages of insuring and the virtues of the medical officer who was to attend all those persons who took out a policy This woman canvassed the patients of different practitioners. One well established practitioner told me that some of his patients asked him whether he kept a club The advantages of joining a medical aid association had, they said, been explained to them by a lady who had called They felt that, in justice to themselves, they ought to join some such organisation, but rather than subscribe for the medical man whom the lady canvasser had mentioned to them they would prefer to join a club with which my informant might be connected In other words, they did not wish to change their medical adviser, but they preferred paying *1d* per week instead of the usual fees as private patients. As most of these people can afford to pay the usual fees it will be seen what a demoralising effect such canvassing must have upon those who are ever anxiously hunting in all directions for cheapness They can pay for medical attendance, but they are nevertheless only in receipt of modest incomes and would not at all object to reduce the cost of medical attendance just as they would with equal eagerness gladly accept free seats at the theatre Of course, such persons are advised by their usual medical attendants not to join any club or medical aid organisation, but such advice would have much more force if it could be shown that the medical practitioners of the town were organised against the encroachments of clubs or insurance companies and their lady canvassers. Fortunately, however, for the practitioners of Cardiff the medical officer whom the insurance company had introduced into the town sold his practice It was bought by a medical man who, to his credit be it said, disapproved of the whole system, so that the lady canvasser and the insurance company disappeared from the field

From Cardiff I went to Aberdare where I found that exceptionally favourable conditions prevailed. The payment at the collieries in this valley and in the Rhondda valley is based on what is denominated the "poundage" system Instead of paying a fixed sum per week the charge is, like the income-tax, so much in the pound This is a very fair arrangement, because those who have low wages pay little and those who have better wages pay a proportionately larger sum. The only difficulty is to agree as to what that proportion shall be Fortunately for the medical practitioners the miners have from the first shown no disposition to drive a hard bargain. I appears that at Ynysybwl, Abercynon, Treharris, Merthyr Vale, in Monmouthshire, and in the whole of the Rhondda Valley, the miners pay *3d* in the pound for medical attendance. Nor is this a recent arrangement due to special endeavours on the part of the medical profession, for the custom has prevailed now for more than half a century All that has been necessary of recent years has been to extend this system to a wider area. Therefore meetings of local practitioners were held during 1899 at Aberdare and the Aberdare Valley Colliery Surgeons Society was formed—as a branch of the Medico Ethical Society mentioned above—with Dr E J Trevor Jones as the secretary All the local practitioners, with only two exceptions, joined. These two practitioners are not opposed to the movement but their practice is of a different nature. They deal with the town rather than with the colliery population, but the clubs formed by artisans, shop assistants, small tradesmen, &c, were affected by the example of the *colliers*, and instead of paying from 8*s* 8*d* to 13*s* per annum per family, as at Cardiff and Swansea these clubs pay £1 1*s* per annum and this directly to their medical officer Nevertheless, the general feeling among the majority of the medical practitioners is against clubs of any description. They argue in favour of poundage and no intermediaries So much per pound should be deducted from the wages paid by the employer and forwarded directly to the medical officer selected. There is no need of committees, clubs, or other organisations

In the Aberdare district the amount thus paid was, however, only *2d* in the pound Consequently, the local practitioners, after meeting and agreeing together, gave notice and even placarded the district stating that they would not attend the colliers and their families for less than *3d* in the pound of wages received Apart from the usual arguments in regard to the increase in the cost of medical education, of qualified assistants, of drugs, instruments, &c., which apply to medical practice in all parts of the kingdom, there is the fact that with the poundage system work has sometimes to be done for nothing and this for a considerable period of time Most of the colliery surgeons, for instance, experienced very severe losses during the great strike of the South Wales miners As the miners then received no wages there was no payment for medical attendance, but the medical practitioners had to continue to pay for their drugs, for their medical assistants, and for their usual domestic necessaries It required some years of prosperity to recoup this loss Then the local practitioners do more under the poundage system than under the club system For instance, they provide cod liver oil, castor oil, and linseed meal, and, what is more important, attend confinements without extra charge The latter, it is pointed out, is a great benefit and the miner need not endanger the life of his wife during this critical period by the fear of having to pay an extra fee. When the poundage was *2d* this did not include midwifery cases but the medical officers were really called in for confinements and found it a matter of difficulty to obtain extra fees for such attendance. It would, therefore, they urged, be better for the miners as well as for the medical practitioners if everything was included in the one payment and so that this might be done they proposed that the payment should be raised from *2d* to *3d* in the pound. After some discussion this proposal was accepted by the miners, so that all parties are satisfied and there is no grievance on that score Whatever difference of opinion may exist now relates rather to the distribution of the money paid than to the amount that should be paid. It may be said that the miners, generally speaking, do not begrudge the *3d* in the pound which they pay, and on the other hand, the medical practitioners recognise that in the circumstances this is a sufficient payment But some miners have remarked that they do not like the manner in which newly qualified assistants are employed They come down among the miners, the latter become acquainted with them and learn to like them, and then just as they begin to appreciate each other the assistant disappears and some other young gentleman comes to take his place. The miners have wondered whether there might not be a little bit of sweating going on within the ranks of the medical profession itself and whether in the employment of qualified assistants there is not a tendency to get rid as soon as possible of the more able and popular of these assistants for fear that they might settle down as independent practitioners in the district Ought we, said the miners, to pay our *3d* per week in such a manner as to create a monopoly of medical practice?

The other side of this question is ably represented by Mr Evan Jones and his son, Dr E. J Trevor Jones of Aberdare. Mr Evan Jones from the first has laid down that it is better to pay £1000 a year to one or two medical practitioners of the very highest standing who would employ qualified assistants than to pay £500 separately to eight practitioners. The eight practitioners at £500 a year each cannot have all the instruments, operating tables, and means of treatment that can be provided at one central and better equipped surgery It must be remembered, also, that in this neighbourhood there is no general hospital available, but only a small private cottage hospital supported mainly by the Marquis of Bute Yet fearful accidents occasionally occur in the mines which necessitate the most difficult operations Mr Evan Jones urges that considering the great responsibility this involved there should be one chief surgeon and no other The miners should be free to elect whom they pleased, but once elected his authority should be undivided If many medical officers are appointed they can have but small incomes and will be too poor to secure proper assistants and to undertake every sort of work. They must therefore send the more serious cases to the hospitals and these are too far away Mr Evan Jones and Dr Trevor Jones have between them some 10 000 miners on their list and they employ six qualified assistants. Also they can fall back upon the cottage hospital established by the Marquis of Bute This, then is in itself a huge organisation and it is maintained that this sort of collective medical combination gives better results than the splitting up of the work into *des moyens fragiles*) By using a simple apparatus he had been able to exercise traction upon sutured patellæ by means of weights. In a patella sutured in the ordinary way a weight of 43 kilogrammes brought about a slight separation of the fragments, while a weight of 70 kilogrammes separated the fragments by one centimetre. When the broken patella was united by the wire being made to run around the fragments (*avec cerclage*) six kilogrammes brought about a slight separation and 20 kilogrammes a separation of one centimetre. M. Quénu accordingly was of opinion that flexion is a dangerous movement in a case of fractured patella and that a patient who has fractured his patella should take the greatest care not to walk too soon, for a simple movement or flexion exerts a tractive force upon the fragments equal to a weight of 100 kilogrammes Finally M. Quénu brought before the society a special method of suture of his own which he termed ‘ transverse suture." The wire is passed through both fragments transversely in the shape of a U This method gives a firmer union than "*cerclage*," but one not so firm as the ordinary method. When the fragments are more in number than two, or being two only one of them is very small, the wire can be passed through the tendon in either the upper or the lower fragment, thus making a "*hemi cerclage*" and M. Quénu added that he had employed this method with success in the case of a woman, aged 63 years. M. Lucas Championniere considered that the ordinary method of suture gave the most satisfactory results. He asked whether M Quénu's results were applicable to cases of fracture in a living subject, for he had employed healthy patellæ in his experiments, whereas a patella which breaks is always in some way altered from the normal

The Alcohol Question.

I have upon previous occasions given your readers full information as to the debates upon the alcohol question which have taken place at the Academy of Medicine [1] At the meeting of the Academy held on Feb 24th a somewhat confused discussion took place between those members who were in favour of a general answer being returned to the question propounded by Parliament and those who were in favour of a definite and detailed scheme of regulations concerning alcoholic drinks. M. Laveran was of opinion that the following points should be insisted upon—that flavoured alcoholic drinks are doubly dangerous, first from the alcohol and, secondly from the essences used for flavouring Flavouring essences should be classed in the order of their toxicity The Academy should not proscribe certain flavouring agents and issue regulations only for the use of others, for it would then appear that the Academy approved of the latter In order to bring about a lessened consumption of flavoured alcoholic drinks it would seem well to lessen the number of shops where they could be bought, to tax such drinks both according to their alcoholic strength and according to the flavouring essence or essences which they contained, and finally, to appoint a special scientific commission to draw up a scale of taxation. M Magnan reminded the meeting that epileptiform convulsions had followed the use of *spirits* flavoured with the following essences, absinthe meadow sweet (*reine des pres*) *spiræa ulmaria*, and hyssop The essences derived from these three plants should be absolutely forbidden. The best means of diminishing the consumption of such drinks would be a heavy tax levied upon them Alcoholism was on the increase. After the trials of the war of 1870 the number of alcoholic cases among the patients admitted to the hospital of St. Anne was 26 per cent. A few years later this proportion fell, it then commenced to increase and at the present time the proportion was 50 per cent. For the female patients the figure was 21 per cent. M Joffroy pointed out that the Academy could not issue any regulations as to the alcoholic or essential strength of liqueurs without opening the door to the drinker saying that he drank under the ægis of the Academy All flavouring essences were dangerous and if a list of prohibited essences were published it would have to be enlarged year by year M. Bouchardat agreed with M. Laveran and thought that the classification of flavouring agents made by M Laborde was open to criticism No division for legal purposes could be drawn between the essences of anise, star anise and fennel, for chemically they were indistinguishable As for essence of noyaux, it contained only a microscopical quantity of hydrocyanic acid Many other instances could be adduced to show that the classification of the committee was premature. M Prunier agreed with M. Bouchardat and said that the idea of legislative regulation was chimerical. He would like the Academy to issue a public notice of its own which would settle the question. M Hanriot said that the public would consider any liqueur flavoured with an essence not condemned by the Academy to be one authorised by the Academy He insisted that the question of the alcohol should be dealt with on the same grounds as that of the flavouring essences. M Laborde consented to alter his report against the next meeting of the Academy, the alterations to include the opinions which had been put forward It would contain only one list of essences and they would be all prohibited. He hoped that that would be the end of the matter

Obituary

On March 9th there died quite suddenly M Louis Leblanc, a member of the Academy of Medicine He was formerly President of the Central Association of Veterinary Surgeons of France, head of the sanitary department of the Prefecture of the Seine, and practised for many years in Paris with great success as a veterinary surgeon. He made numerous reports to the Agricultural Society of France and to the committee for dealing with epizootic diseases, and these reports, together with his researches into various epidemic diseases, were considered of great value. The Academy of Medicine held him in great esteem and the general charm of his character won for him many friends

March 11th

BERLIN

(FROM OUR OWN CORRESPONDENT)

Ankylostomiasis in Prussia.

SOME anxiety is being caused by an epidemic of ankylostomiasis (*Wurmkrankheit*) which is prevailing in the mining districts of Westphalia and the Rhine Province. The ankylostomum duodenale was introduced some years ago by Italian miners and the number of patients has recently undergone an enormous increase. In the year 1896 only 107 cases were notified and in 1899 only 94, but in 1900 there were 275 in 1901 there were 1130, and in 1902 there were 1355. The disease often proves fatal and as a rule has very serious sequelæ, such an anæmia, dropsy, cachexia, and sometimes amaurosis. The mining population are therefore in something like a state of panic and the Socialist party is demanding that the Imperial Government should make more liberal grants of money for the purpose of combating the disease. A commission under Professor Loebker, the chief medical officer to the miners' hospital at Bochum, has been sent to Hungary, where the disease was prevalent some years ago, for the purpose of gaining an acquaintance with the methods adopted by the local authorities there. It is stated that the number of patients is exceptionally great in the mines where the air temperature is high and that the quality of the water used for sprinkling is a matter of importance, for in the mines where water of good quality is supplied the disease is less prevalent than in those where the ground water is used. It has therefore been suggested that the sprinkling of the mines should be quite discontinued until the epidemic has ceased.

Post-graduate Instruction Free of Charge

Post-graduate study has been much extended during recent years and has undergone various developments which are in the interest of the medical profession. Post-graduate courses of instruction for which fees had to be paid have for a long time been a feature of almost every German university, but as they were held only during the university vacations and were rather expensive the attendance was not large and consisted chiefly of medical men who could afford to leave their practices for several weeks. Civilian medical men therefore felt themselves to be placed at a disadvantage as compared with the medical officers of the army who had the benefit of post-graduate instruction provided for them free of charge by the army medical department, and the civilians have long been desirous that similar facilities should be open to them. The first step in this direction was taken in the year 1900 when a series of lectures on tuberculosis and its modern treatment were delivered in Berlin, chiefly with a view the board, resigned his position when by the vote of the trustees it was decided not to rebuild the infirmary on the Piccadilly site. It is well that the infirmary should possess this memorial of one who so long and faithfully rendered valuable and ungrudging service "to the cause of Manchester's great charity"

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[1] THE LANCET July 5th, 1902, p 49 and Feb. 21st, 1903 p 557

New Infirmary at Stockport

The Stockport guardians yesterday decided on the erection at Stepping Hill of the new infirmary The Local Government Board has approved of the plans and sanctioned the borrowing of £44,000 in order that the building may be proceeded with

March 10th

WALES AND WESTERN COUNTIES NOTES

(FROM OUR OWN CORRESPONDENTS.)

Public Health Matters in Barry

THE annual health report of the urban district of Barry is of interest from the fact that the district council has displayed commendable zeal in providing the town with such necessary equipments as a bountiful water supply, a complete sewerage system, a refuse destructor, public slaughter houses, and an isolation hospital The addition of a separate small pox hospital is strongly urged by the medical officer of health (Mr George Neale) and with the erection of this very desirable institution the town of Barry will stand as an example not only to Welsh towns but to many in England A local Act, passed in 1896, contains important provisions requiring the occupiers of laundries and dairymen to furnish the medical officer of health in certain cases with a list of customers and requiring dairymen to furnish a list of the sources of their milk supply and also to notify cases of infectious disease occurring among their servants. The population of Barry which was 500 in the year 1881 is now estimated at 27,507 The birth rate in 1902 was 39 2 per 1000, the death rate was 11 9 per 1000 and the infantile mortality rate was equal to 103 per 1000 births.

Notification of Pulmonary Tuberculosis in Cardiff

In his report for the fourth quarter of 1902 the medical officer of health of Cardiff (Dr E. Walford) states that he received 44 notification certificates of cases of pulmonary tuberculosis and that 50 deaths were registered from the disease during the quarter It would appear, therefore that only a small proportion of the cases come to the notice of the health department. The health committee has decided to engage the services of a female sanitary inspector or health visitor whose duty it will be to visit and to inspect the houses in which consumptive persons reside

Merthyr General Hospital

In the autumn of 1902 Sir William Thomas Lewis, Bart, offered to build a children's ward in connexion with the Merthyr General Hospital on condition that certain additions were made to the men's ward, the cost of which, amounting to £1000, should be borne by the governors of the hospital A shilling fund was at once inaugurated by the high bailiff of the town (Mr Cornelius Biddle, L R.C P Lond, M R.C S Eng) and has accumulated £500, while nearly £500 have been subscribed by the colliers and ironworkers of the district. When the contemplated additions are completed the number of beds available will be increased from 30 to 50 and an additional annual income of £1000 will be required Since the establishment of the hospital in 1887 the managers have kept the expenditure well below the income and at the end of 1902 had a balance of £250

Royal West of England Sanatorium, Weston-super Mare

The annual meeting of the subscribers to this convalescent home was held on Feb 28th The medical report stated that during the first four months of 1902 no patients were received at the sanatorium owing to the remodelling of the drainage system which had been carried out at a cost of about £2000 The patients admitted during the remaining eight months numbered 1668 (865 [illegible] and 803 women) 6330 warm sea baths were taken [illegible] the patients The financial statement showed that the [illegible]ceipts for the year amounted to £3092 and the or[illegible]ry expenditure to £3090

March 10th.

SCOTLAND

(FROM OUR OWN CORRESPONDENTS.)

Death of the Librarian of the Royal College of Physicians of Edinburgh

By the death of Mr J Mathieson Shaw, M.A., the Royal College of Physicians of Edinburgh has lost a valuable and esteemed official and the Fellows one who was ever ready to help them in their literary investigations He had a good knowledge of modern languages and although not a medical man had an excellent acquaintance with medical literature He has left funds to found a lectureship to be called the Mathieson Shaw Lectureship, the object of which is to bring before medical practitioners and students of medicine the most recent advances and developments in the science of medicine and allied sciences. The fund is vested in the President and Council of the College.

The Morison Lectures of the Royal College of Physicians of Edinburgh.

Dr G A. Gibson delivered the second series of the Morison Lectures last week in the hall of the College on Monday, Wednesday, and Friday The lectures were devoted to the motor affections of the circulation He dealt with the nervous supply and the causes of the heart's pulsation. He considered the disturbances of cardiac movements under rate, rhythm, and force. The remainder of the first lecture was devoted to disturbances of rate The second lecture dealt with disturbances of rhythm, while the third dealt with alterations of force. The lectures were well attended and the lecturer gave a clear and pleasant exposition of the facts and theories bearing upon the subject with which he dealt.

Sir William Muir

On March 5th Sir William Muir was presented with an illuminated address from the students of the University of Edinburgh on the occasion of his retiring from the Principalship of the University The presentation took place in the McEwan Hall and was largely attended.

March 9th

IRELAND

(FROM OUR OWN CORRESPONDENTS.)

Small-pox in Dublin

THERE are now 16 small pox patients in Dublin, one being a student of Trinity College. The patients are all being treated in the corporation isolation hospital and one death from the disease occurred there on March 8th

The Nomenclature of Disease

Dr Ninian McIntire Falkiner, President of the Section of State Medicine of the Royal Academy of Medicine in Ireland briefly reviewed the Nomenclature of Diseases and Causes of Death from the period of William Cullen of Edinburgh up to the year 1901 at a meeting of the section held on Feb 20th. At this date Dr J F W Tatham's modification of the nomenclature of diseases (1896) was adopted for the official reports on vital statistics for these countries. In the course of his address Dr Falkiner appealed to the medical profession to consider the importance of giving a well defined and accurate "cause of death" when framing the certificate, as it was on this testimony, and this testimony alone, that the value of the medical statistics of the nation depended After the conclusion of the address the following motion was proposed by Dr Bewley, seconded by Dr Parsons, and carried unanimously —

> That in the opinion of the Section of State Medicine of the Royal Academy of Medicine in Ireland it is advisable that the department of the Registrar General of Ireland should be represented on the Nomenclature of Diseases Committee at present sitting in London.

March 11th

PARIS

(FROM OUR OWN CORRESPONDENT)

Suture of the Patella

AT the meeting of the Society of Surgery held on Feb. 18th M Quénu gave an account of some researches which he had made into ordinary methods of suture of the patella These methods he affirmed had not much inherent strength ([illegible]

Obituary.

WILLIAM HENRY CROSSE, M.D. DURH., M.R.C.S. ENG., L.F.P.S. GLASG., L.S.A.

LATE PRINCIPAL MEDICAL OFFICER, ROYAL NIGER COMPANY.

It is with deep regret that we record the death of Dr. W. H. Crosse, late principal medical officer of the Royal Niger Company, which took place at his residence, 37, Albemarle-street, W., on Feb. 24th. For many years past he had been in indifferent health, advancing emphysema, chronic bronchitis, an enormously hypertrophied spleen, and never absent œdema of the legs—souvenirs of his nine years' sojourn on the West Coast of Africa—being among the factors that rendered the latter years of his life a veritable battle against Atropos. The attack of bronchitis which proved fatal began on Feb. 14th and, in spite of careful nursing and the ministrations of his friends, Dr. W. Hale White, Mr. Charters J. Symonds, and Mr. E. Reynolds Ray, rapidly overpowered him. Increasing dyspnœa, only temporarily relieved by a copious venesection, rendered his sufferings terrible to witness. This was followed by three or four days' complete unconsciousness and the end came on Tuesday morning, Feb. 24th.

The son of the Rev. Marlborough Crosse, William Henry Crosse was born in Norfolk in 1858. He entered at Guy's Hospital as a student in 1878, passing out three years later with the L.S.A. qualification, to engage in general practice in Cubitt Town, Isle of Dogs. Here he rapidly built up an extensive and lucrative connexion, which, however, he relinquished five years later in order to return to Guy's Hospital to obtain further experience and to take out additional qualifications. In 1886, having obtained the Membership of the Royal College of Surgeons, he joined the Royal Niger Company of England and proceeded to the West Coast as its medical officer. Here he remained on active service for a period of nine years, taking part in all the expeditions (for which he received the Company's active service medal) and permitting himself but very little leave, although he suffered severely from malaria and had at least three attacks of blackwater fever. His duties during this time were many and diverse and as he often jokingly remarked, "W. H. C. embodied in himself the various offices of principal medical officer, governor of the gaol, chief justice of the peace, agent, machine gunner, and, *in posse* at any rate, lord high executioner." All along the coast he made a name for himself that is remembered with love and affection, men recognising him as a friend and brother and one to whom they could turn for sound advice and ready help. In 1895 Dr. Crosse returned to London, when the urgent representations of his friends persuaded him to relinquish his post (the directors of the Niger Company, however, retaining him as their London medical adviser) and to settle in practice in London, which he did first in Half Moon-street and then in Dover-street, Piccadilly, from which latter address he only moved last year to the house in Albemarle-street which he occupied at the time of his death.

His work-a-day habits were so methodical that in spite of failing health the cares and worries of practice were insufficient to occupy his mind completely. Hence his restless and indomitable energy and almost boyish enthusiasm prompted him again to turn to preliminary studies and hospital work, with the result that in 1900 he took the M.D. degree of the University of Durham. Of Dr. Crosse it might truly be said that he was always a student and his was a familiar figure not only in the post-mortem rooms but also in the laboratories of Guy's and Charing cross Hospitals, where his keen interest and extensive acquaintance with the clinical aspect of malaria and other tropical diseases stimulated him to examine critically the many diagnostic aids advocated from time to time by many research workers. He was a recognised authority on blackwater or hæmoglobinuric fever and his contributions on this disease to the Pathological and Epidemiological Societies were of real importance and practical value. The paper read by him before the Epidemiological Society was published in THE LANCET of March 25th, p. 821, and April 1st, 1899, p. 885, while he contributed another admirable paper on the Histology and Prevention of Blackwater Fever to our columns which, with a coloured illustration, appeared in THE LANCET of Jan. 6th, 1900, p. 11. His death at the comparatively early age of 45 years leaves a void that, so far as his intimate friends are concerned, can never be filled.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the necessary examination and conformed to the by-laws have been admitted Members of the College:—

Ernest Beadon Dixon Adams, St. Bartholomew's Hospital; William Munro Anderson, L.D.S. Eng., Charing Cross Hospital; Ernest Edward Argles, St. Mary's Hospital; Walter Seymour Armstrong, St. George's Hospital; Oliver Francis Haynes Atkey, King's College Hospital; George Washington Badgerow, M.B. Toronto, Toronto University and University College Hospital; Frederic Barker, Medical Department, University of Birmingham; Charles John Battle, St. Thomas's Hospital; Kenneth Harold Beverley, University College and Royal Infirmary, Bristol; Frederick Michael Bishop, St. Bartholomew's Hospital; William Frederick Box, Guy's Hospital; David Bridges, Charing Cross Hospital; Henry Neville Burroughes, B.A. Camb., Cambridge University and St. Bartholomew's Hospital; Arthur Robertson Brailey, B.A. Camb., and Stanley Child, B.A. Camb., Cambridge University and Guy's Hospital; Norman Carpmael, St. Thomas's Hospital; Victor Albert Chatelain, London Hospital; William Henchman Cole, Guy's Hospital; Herbert Ernest Corbin, B.Sc. Lond., St. Mary's Hospital; Philip Claude Tresilian Davy, University College Hospital; William Henry Dickinson, Cambridge University, Liverpool, and St. George's Hospital; Robert Donald, M.A., B.Sc. New Zeal., *University of New Zealand* and *London* Hospital; Norman Edwin Dunkerton, King's College Hospital; Daniel Cyril Evans, University College, Cardiff, and St. Bartholomew's Hospital; Francis William Fawssett, Guy's Hospital; Charles Breame Fowler, Aberdeen University and Charing Cross Hospital; John Douglas Hope Freshwater, Cambridge University and St. George's Hospital; William Thomas Frizzell, M.B. Toronto, Toronto University and University College Hospital; George Brittan Gill, Bristol, Durham, and Westminster Hospital; Walter Leigh Mackinnon Goldie, St. Mary's Hospital; Peter Gow, University of New Zealand and Middlesex Hospital; Archibald Montague Henry Gray, University College Hospital; Thomas Guthrie and Walter Lidwell Harnett, B.A. Camb., Cambridge University and St. Thomas's Hospital; Gustav Hamel, C.V.O., M.D. Bern, Kiel, Berlin and Bern Universities; Arthur Francis Hamilton and Thomas Henry Harker, St. Bartholomew's Hospital; Philip William Hamond, Guy's Hospital; William Trengweath Harris, L.S.A. Lond., and Lionel Swinton Hooper, St. Thomas's Hospital; Norman George Harry and Arthur George Harvey, Cambridge University and Middlesex Hospital; Henry William John Hawthorn, L.D.S. Eng., Medical Department, Birmingham University; Geoffrey Seccombe Het, University College Hospital; Thomas Lewis Ingram, Cambridge University and London Hospital; William James Deacon Inness, St. Mary's Hospital; Alfred William Iredell, Guy's Hospital; Ivor Davenport Jones, Middlesex Hospital; Henry Michael Joseph, B.A. Camb., B.Sc. Lond., Cambridge University and Charing Cross Hospital; Rustamjee Maneckjee Kalapesi, L.M. & S. Bombay, Grant Medical College, Bombay; Henry Wynyard Kaye, B.A. Oxon., Oxford University and London Hospital; Kenneth Harrison Alloc Kellie, Cambridge University and St. George's Hospital; Ernest Henry Kenderdine, Medical Department, University of Birmingham; Henry Ratcliffe Kidner, B.Sc. Lond., St. Bartholomew's Hospital; Ronald Outram Lee, B.A. Cantab., Cambridge University and Middlesex Hospital; Robert Robinson Lewis, Middlesex Hospital; Allan Douglas Low and Nelson Low, St. Mary's Hospital; Godfrey Holland Latham, Charles de Zouche Marshall, and Albert Francis Miskin, St. Thomas's Hospital; Samuel Harvey McCoy, B.A., M.B. Toronto, Toronto University; Henry Richmond Minkley, St. Mary's Hospital; Robert Vernon Gerard Monckton, St. Bartholomew's Hospital; Archibald Trevor Moon, London Hospital; David Morrow, L.S.A. Lond., Queen's College, Belfast, and Middlesex Hospital; Stanley Parkes Mummery, L.D.S. Eng., St. George Hospital; Henry Bailey Mylvaganam, L.M. & S. Ceylon, Ceylon Medical College and London Hospital; John Sherwood New, University College Hospital; Eugene Joseph O'Neill, M.B., Ch.B. New Zeal., Otago University, New Zealand; Edward Daniel Parsons, St. Thomas's Hospital; Charles Burnage Penny, Guy's Hospital; Arthur Pick, M.D. Germany, M.D. Austria, Breslau University; Egerton Llewellyn Pope, B.A. Kingston, Canada, M.D., C.M. McGill University of McGill College, Montreal, and University College Hospital; James Houston Porter, London Hospital; John Llewelyn Pritchard, Royal Infirmary, Liverpool, and Glasgow; George Herbert Richard, St. Mary's Hospital; Edmund Arthur Roberts, King's College Hospital; Lorne Forbes Robertson, B.A., M.D., C.M. McGill University of McGill College, Montreal; John Norman Robins, M.A. Camb., Cambridge University and London Hospital; Thomas Rose, Middlesex Hospital; Christopher Wilfred Sharpley, Yorkshire College and General Infirmary, Leeds; Walter Stansfield, Owens College and Royal Infirmary, Manchester; James Batson Stephens, St. Mary's Hospital; Edward Franz Adolf Schamer, M.D. Leipzig, Leipzig University; Walter Mersh Strong, M.A. Camb., Cambridge University and St. Thomas's Hospital; Leonard Robert Tosswill, St. Bartholomew's Hospital and Devon and Exeter Hospital; Eugene Dunbar Townroe, St. George's Hospital; Charles William Turner, Durham University, Owens College, and Royal Infirmary, Manchester; John Charles Veneoski, M.D., B.S. Durh., Durham University, St. George's, and University College Hospital; Vernon Montague Wallis, Guy's Hospital; John Wells, Medical Department, University of Birmingham; Alfred Landon Walter Whitehouse, L.D.S. Eng., Westminster Hospital; Fielding Charles Whitmore, Dublin University College and Royal Infirmary, Bristol; Charles William Tuthill Woods, Cambridge University and St. George's Hospital; and Harry George Keith Young, B.A. Camb., Cambridge University and Middlesex Hospital.

to popularise and support the movement in favour of sanatoriums These lectures were a great success, so that in the autumn another series were delivered on venereal diseases No fees were payable for attendance on these lectures, which were delivered under the auspices of the Government by professors, *privat docents*, and other specialists About the same time similar lectures were delivered in various universities and some of the larger towns and everywhere met with the approval of the medical profession. In 1901 a central committee was formed in Berlin for the purpose of organising gratuitous post-graduate courses on a greater scale throughout Prussia. This committee, of which Professor von Bergmann is the chairman has now instituted such courses in 23 towns and has, moreover, acquired a collection of medical books, tables, pathological specimens, microscopes, and instruments to be used in connexion with the lectures and especially to be lent to the local committees in small places where such means of instruction are not sufficiently available This collection was exhibited a few months ago in Berlin and is well supplied with the necessary material, a good deal of which has been presented to the committee by hospitals, clinics, and other medical institutions. A building will be erected in Berlin to serve as the headquarters of the organisation in Prussia, it will contain lecture rooms, laboratories, rooms for the storage of the collection of objects already mentioned, and offices for various purposes In memory of the late Empress Frederick, who always took a great interest in the subject of post-graduate instruction for medical men the building will be called the Empress Frederick House for Post graduate Training The Emperor recently received Professor von Bergmann, the chairman of the committee, the Minister of Public Instruction being also present and His Majesty then expressed complete approval of the plans of the committee

March 9th

EGYPT

(FROM OUR OWN CORRESPONDENT)

Acute Febrile Jaundice (? Weil's Disease)

DR VALASSOPOULO of Alexandria prepared an interesting report upon this disease for the Cairo Medical Congress which he has since published. The disease is practically never seen in Cairo and most other parts of Egypt, but it is found every year in Alexandria either as an epidemic in certain parts of the town or as producing sporadic cases It begins in the month of April and disappears about September The specific organism of relapsing fever (spirochæta Obermeieri) has never been found in these cases, and though it is obvious that the disease belongs to the infectious group and must be microbic, the specific microorganism has not yet been discovered While mentioning other microbes Dr Valassopoulo only cursorily refers to Jaeger's bacillus proteus fluorescens He wishes the disease to be called "typhus bilieux" or "ictère infectieux fébrile." He believes that the fever is undoubtedly caused by the bad drainage system of Alexandria, and points out that the disease was unknown in that city until 1870, one year after the paving and drainage of the streets was begun, also that the quarters of the town most infected are exactly the lowest, where the drains remain full of sewage because there is not sufficient fall, and in the summer months because there is no rain to flush them It is noteworthy that the fever has disappeared from one small street since the drain has been changed for the better and also that the fever is never found in the suburbs of the town which are neither paved nor drained. It is suggested that flies may convey the poison from the drains to the surface soil and to food. Dr Valassopoulo believes, after studying the fever for 25 years that it is not contagious for though treated in the general wards of the hospital it has never spread to other patients or to nurses As it is generally stated in European text-books that the disease is confined to workmen and butchers I may mention that in Alexandria there have been several cases among bankers, merchants, lawyers and medical men. The statistics at the Greek Hospital for the last ten years show that only nine women but 144 men were attacked, while during the whole 25 years not a single child under 15 years had the disease, it is also rare after the age of 40 years. Dr Valassopoulo firmly believes that the disease is not the same as the "bilious typhoid" which Griesinger described in Cairo, for this seems to have been a form of relapsing fever, but that the Ale andria fever is exactly analogous to that described in Europ as Weil's disease He strongly recommends the municipali of Alexandria to devote money for a proper drainage syste of the town to drive out this disease as has already bee done at Nauplia in Greece At Smyrna this disease h been known for about 100 years, but at Nauplia there only a record of a serious epidemic in 1886, when dur the space of four months 185 people were attacked out the 4500 inhabitants In both of these towns the disease believed to be due to imperfect drainage and the fever chiefly confined to the lower parts of the town where t drainage system is at its worst. The incubation of t disease must be short, for there are several cases on reco of healthy people being attacked two or three days aft they reached Alexandria. The onset is sudden and oft ushered in by rigor and rise of temperature to 102° 104° F, accompanied by vomiting, general pains, a albuminuria, with injected conjunctivæ insomnia, a enlarged painful liver The jaundice does not begin un three or four days later, the urine then diminishes rapid in quantity, and there are epistaxis, hæmatemesis, petechiæ of the skin As the patient convalesces t quantity of urine is increased to eight or even 10 pin in the 24 hours, and after the twenty first day t temperature becomes normal, the jaundice disappears, a there is no important symptom left except great weakne Very mild cases, however, begin their convalescence early as the eleventh day At the necropsy of fatal case besides dark liquid blood and general congestion everywher there are well marked petechiæ in the small intestine, colo kidney, and sometimes in other organs The mortality about 32 per cent in the Greek Hospital and probably mu more outside Death takes place between the sixth and eigh day of the disease from cardiac weakness or from uræmi Dr Kartulis of Alexandria does not believe that the bilio typhoid fever of his city is identical with Weil's disease, which he has seen cases in Germany His own statistics the mortality of the former disease are 60 per cent., whic contrasts strangely with the German mortality of from 2 to per cent in Weil's disease. Alexandria has not a comple monopoly of this interesting malady for Dr Legrand h published two cases at Suez and Dr F M Sandwith r cognised five cases in Cairo in 1899

Typhoid Fever

Sporadic cases of typhoid fever still occur every winter i Cairo and Alexandria, generally in English families where th greatest precautions are taken to prevent it The water ca hardly be the cause, but it is fair to suspect the milk suppl because the dairies are not yet under any Government supe vision Professor Chantemesse of Paris during his recen visit to Cairo drew the attention of physicians here to hi method of treating the disease by anti typhoid serum. H compared 1478 cases treated in 15 Paris hospitals during th last two years by cold bathing and ordinary symptomat treatment, which gave a mortality of 19 3 per cent., wit 186 cases treated at his hospital during the same time wit only 3 7 per cent of deaths The only difference in the treatment was that he used serum in addition to cold bathin and other means. The serum does not, however, prevent pe foration, for death occurred in three of his cases from th complication He is extremely anxious to inaugurate on necessary reform in Paris which he was pleased to find alread existing in Cairo, that typhoid fever cases should be treate in special wards and not in general wards with too careles disinfection of excreta. Dr T Courmont of Lyons claim to have discovered the bacillus of Eberth in the blood o typhoid fever patients even when the Widal reaction is no positive. In 33 cases he has now found it at times varyin from the fifth day to the twentieth day, but he has neve found it in any patient later than the third week. Th method is simplicity itself, a culture is made of from tw to four cubic centimetres of suspected blood in from 300 t 500 cubic centimetres of broth. A positive report can generally be given in 24 or 48 hours, but it is not safe to giv a negative report until the fifth day of the culture.

Antipyrin.

Dr Gonzalez Alvarez of Madrid praises highly antipyri for diseases in hot countries and suggests that it should be tried to kill worms in the body such as bilharzia and filaria. He insists on the harmlessness of large doses such as 120 grains per day and states that even doses of 300 grains only produce deep sleep.

Cairo Feb 22nd

THE LONDON HOSPITAL—The general court of governors was held at the London Hospital on March 4th, when the Hon Sydney Holland presided The report stated that during the last year 13,160 in patients were treated in addition to 162,147 out-patients The number of children under 12 years of age who were treated as in patients was 3499, while 1404 Hebrews were treated as in patients with due observance of their religious scruples. The total expenditure on the maintenance and management of the hospital was £87,550, whilst the extraordinary expenditure amounted to £92 239 Of this extraordinary expenditure about £3000 constitute a certain expenditure which is sure to recur every year and therefore may be considered as ordinary expenditure, making the total of the ordinary expenditure over £90,000 The ordinary income has amounted to £65 700, and in addition there has been a grant from the King Edward's Hospital Fund of £8500, and the legacies which have been received during the year amounted to £23,641. All of these legacies had to be used to meet current expenditure. The hospital is making this year a special quinquennial appeal for funds to carry on the work during the ensuing five years. It is estimated that £167 000 more must be spent on the improvement scheme which is being carried out, and for this sum an appeal is made, whilst to place the hospital on a sound financial basis an increase of at least £25 000 per annum in ordinary subscriptions and donations is necessary Mr Ernest W Morris was appointed secretary to the governors in the room of Mr G Q Roberts who has retired.—In response to the Lord Mayor's appeal on behalf of the hospital the following donations, among others have been received or promised The Grocers Company and the Clothworkers' Company, £1000 each , Sir Horace Brooks Marshall £262 10*s* , the Capital and Counties Bank (Limited), £250 , Messrs. Bass, Ratcliffe, and Gretton (Limited) and Messrs L and R Morley, £105 each , Messrs Clark, Wilson, and Co £10 10*s* , Messrs O Tennant, Sons, and Co , £52 10*s* , Messrs Price and Peirce, £100 , Messrs D and W Murray (Limited) and Messrs A Barsdorf and Co , £10 each , Messrs. Twiss and Brownings and Messrs. Coutts and Co £10 10*s* each , Messrs Bulloch and Co , £52 10*s* , Messrs F Giesler and Co , £10 , Messrs Jacob Waller and Co £21 , Hon. Mrs. Farquhar, £20 , Mr J A. Davis £10 10*s* , Mrs. Louisa A. Ferguson, £5 , the London and Edinburgh Shipping Company and Mr P W De Keyser £52 10*s* each , and De Keyser's Royal Hotel Company (Limited), £25. Further donations should be sent to the Lord Mayor at the Mansion House.

Parliamentary Intelligence.

HOUSE OF COMMONS

WEDNESDAY MARCH 4TH

Employment of Children Bill

The HOME SECRETARY introduced his promised Bill to make better provision for regulating the employment of children and he had the gratification of being complimented by both sides of the House In 1901 his predecessor appointed a committee to inquire into the question and the Bill, he explained is based on the recommendations of the committee. It proposes to give powers to county and borough councils to make by laws for regulating the employment of children by prescribing the age below which employment is illegal by prescribing the hours between which it is illegal and by prohibiting the employment of children in certain specified occupations which may be shown to be dangerous either to health or to morals. The by laws will not apply to children already protected in their employment by the Factory Acts or the Mines Acts or to children over 12 years of age who in pursuance of the Education Acts are wholly exempted from obligation to attend school. The Bill also gives power to make by laws for the regulation of street trading under the age of 16 years and the prohibition of such labour under the age of 11 years It will apply to Scotland as well as to England In the course of the discussion the Home Secretary was strongly urged not to allow the proposals to be whittled down.

Sale of Adulterated Butter

The text of the Bill which Mr HANBURY introduced to amend the law with regard to the sale of adulterated butter has been printed It provides that (1) it shall be unlawful to manufacture to sell to expose for sale or to import any butter or butter mixture containing more than 20 per cent. of water and every person who manufactures sells exposes for sale or imports any butter or butter mixture which contains more than that percentage shall be liable on summary conviction to the penalties imposed by Section 4 of the Margarine Act 1887 as amended by Section 17 Subsection 2, of the Sale of Food and Drugs Act, 1899 and that (2) the provisions of the Sale of Food and Drugs Act 1875 to 1899 relating to margarine shall apply to any article to which this section applies but subject to the following provisions: (*a*) the expression "adulterated butter" shall be substituted for the expression "margarine" on any brand mark label or wrapper required by the provisions applied by this Act and for all other purposes of those provisions (*b*) section 8 of the Sale of Food and Drugs Act 1899 (which restricts the amount of butter fat in margarine) shall not apply The Bill applies to butter to which any substance has been added whereby the amount of water in the butter is increased but not to the article known as Irish salt firkin butter or to margarine as defined by the Margarine Act 1887 Any water in excess of the proportion prescribed for genuine butter by the regulations in force for the time being under Section 4 of the Sale of Food and Drugs Act 1899 which is found in any butter or butter mixture shall for the purposes of this section be deemed to be due to the addition of some substance unless it is proved to be due to the ordinary process of making butter —The Bill was very well received

THURSDAY MARCH 5TH.

Applecross Medical Officer

Mr WEIR asked the Lord Advocate, in view of the fact that applications are invited for the appointment of medical officer and vaccinator for the Applecross district of the parish of Applecross Ross shire would care be taken that the medical officer appointed possessed the Public Health Diploma required under the Public Health Act 1897?—The LORD ADVOCATE replied: No such diploma is required for the appointment in question which has already been made.

Report of Poisons Committee

Colonel LONG asked the First Lord of the Treasury whether his attention had been drawn to the report of the departmental committee of the Privy Council in Schedule A of the Pharmacy Act, 1868, and whether in view of its effect on agriculture the Government proposes to bring in a Bill to give effect to its recommendations —Mr BALFOUR replied The report is under consideration with a view to legislation at the earliest opportunity

Treatment of Harmless Lunatics

Mr HAMMOND asked the Chief Secretary to the Lord Lieutenant of Ireland having regard to the restrictions placed upon boards of guardians in Ireland in the treatment of harmless lunatics if he would favour the proposal for the assimilation of the law in Ireland to that in Scotland under which it is practicable to have these persons boarded and cared for in the homes of the peasantry —Mr WYNDHAM replied: The question of making better provision for the treatment of harmless lunatics in Ireland is receiving consideration

Uncertified Deaths

Mr CORRIE GRANT asked the Secretary of State for the Home Department whether he would state the number of uncertified deaths in England and Wales during 1897 1898, 1899 1900 and 1901, in completion of the figures given by Sir M W Ridley on May 24th 1897 —Mr AKERS-DOUGLAS replied The numbers of deaths of which the causes were not certified are as follows 1897 11 103 1898 10 441 1899 10 745 1900 11,257 and 1901 9936 The matter is dealt with on p xxix of the Registrar-General's report for 1902. The figures for 1901 represent slightly under 2 per cent of all registered deaths

Infectious Diseases in Ross and Cromarty

Mr WEIR asked the Lord Advocate in view of the fact that the report of the South western District Committee for Ross and Cromarty dated 26th July last shows that there were cases of typhoid fever and other infectious diseases in the district during the year which necessitated the closing of three public schools for periods varying from three weeks to two months whether he could now state the cause of the outbreak and what steps had been taken to prevent a recurrence of fever?—The LORD ADVOCATE replied The medical officer is unable to state the cause of the outbreak He assures the Local Government Board that the affected houses have been cleansed and disinfected as carefully as possible.

TUESDAY MARCH 10TH.

Spread of Small pox

Sir JOSEPH LEESE asked the President of the Local Government Board whether the attention of the Local Government Board had been called to the outbreak of small pox in many of the large centres of population of Lancashire and Yorkshire and to the fact that the spread of the disease from town to town had been invariably found to be caused by persons of the tramp class and whether the Board intended taking any and if so what action with the view of controlling or licensing the movements of persons of the tramp class as a precaution against the spread of small pox and other infectious diseases —Mr LONG I am quite aware of the outbreak of small pox in the districts mentioned by the hon Member I do not think that the spread of the disease from town to town has been invariably caused by persons of the class referred to but I am fully alive to the risk of diffusion of small pox by this means I am not in a position to take action of the kind contemplated in the last part of the question but I last month issued a circular letter to boards of guardians drawing attention to the danger of infection being conveyed by tramps and urging them to secure as far as practicable the vaccination or revaccination of all persons relieved in the vagrant wards and to cause a daily medical inspection of all the inmates I am also advising the sanitary authorities of the districts concerned through the medical inspectors of my department as to the adoption of all practicable precautions against the spread of small pox from this source.

Army Medical Service.

Mr BRODRICK in introducing the Army Estimates for the year made reference to the reorganisation of the Army Medical Department He congratulated the public and the service on having obtained the assistance of those distinguished civilian medical and surgical experts who constituted the Advisory Board and stated that he had placed upon this board the responsibility of selecting candidates for the Royal Army Medical Corps of examining the condition of home and foreign hospitals and of carrying out the great changes which were proposed in the Army Medical Department. At the first examination for the Royal Army Medical Corps there were three times as many candidates as vacancies and the candidates he was informed, were of a very high class The right hon gentleman also explained the steps which have been taken for establishing and carrying on the Medical Staff College at Millbank and for encouraging members of the Royal Army Medical Corps to engage in special work, particularly sanitary work He said that courses of lectures on sanitation had been started at Woolwich at Sandhurst and at the staff colleges in the various districts. The principle of selection by merit had been established in the Royal Army Medical Corps. Names, he said, were submitted to the Advisory Board

University of Cambridge —At the Congregation held on March 7th the following degrees were conferred —

M D—L C P Phillips Caius

M.B and B C—J F H Dally St John s and J M Twentyman Christ s

M B—J W Wharton St John s and T St C Smith Trinity Hall

Dr Anningson and Professor Sims Woodhead have been appointed University delegates to the Congress of the Royal Institute of Public Health to be held at Liverpool in July —Dr S West has been appointed an examiner in medicine in the place of Professor Greenfield and Mr G E Wherry an examiner in surgery in the place of Mr E B Owen.

Royal College of Physicians of Ireland —At a meeting of the President and Fellows of the College held on March 6th Mr Owen Gilmore, L R.C P & S Edin., &c , was admitted a Licentiate in Midwifery of the College.

Royal Institution —The Friday evening discourse at the Royal Institution on March 6th was delivered by Professor J G McKendrick of Glasgow University, the subject being Studies in Experimental Phonetics A short account was given of the various methods that have been employed for obtaining graphic records of sounds, especially the Edison phonograph, and curves traced on long slips of glass by such means were shown on the screen as lantern pictures. Professor McKendrick said that the vowels owed their special quality to the resonance of the primary laryngeal tone creating mouth tones which were added to the laryngeal tone or might even overpower it. In the production of consonantal sounds such as *p*, *b*, or *m*, the form of the vowel curve, whatever the vowel might be, was modified by the manner in which the lips were either opened or closed in uttering the various sounds

The Carnegie Trust for the Universities of Scotland —The second annual meeting of the Carnegie trust was held on Feb 23rd at the Westminster Palace Hotel London, Lord Elgin presiding The report of the executive committee for the year 1902 stated that in August, 1902, the King had been pleased to grant a royal charter of incorporation whereby ' the Carnegie trustees for the Universities of Scotland" were constituted one body corporate and politic. Orders had been given for the making of a common seal to be used as the charity directed At a meeting of trustees held in July, 1902 a recommendation of the executive committee was adopted, in consideration of which the executive committee would during the season 1902 03 continue to accept the examinations qualifying for admission to the various Faculties at the universities with a view to graduation, but after due notice publicly given an approximately uniform test of preliminary education would be applied to all beneficiaries of the Carnegie trust at as early a date as possible The committee approved and adopted a scheme of allocation for five years of an annual grant of £40,000 as from Jan. 1st, 1903 The scheme, which is described in Appendix A of the report, besides making a contribution of £100,000 to buildings and permanent equipment and of £20,000 to libraries, would at the close of the period of five years have increased the resources for teaching in the four universities by permanent endowments amounting to £70,500, while at the same time it would have made during those five years an addition of £1900 a year to the income of two of them. A common scheme dealing with the institution of scholarships, fellowships, and grants had been established, the administration of which would be retained in the hands of the committee. The nominations and applications under this scheme would be referred to an advisory board, consisting of the chairman, the four representatives of the universities and three other members of the trust. Details of the regulations for those scholarships, fellowships, and grants had now been made public With regard to the payment of fees there had been paid by the trust for the summer session 1902, the sum of £11,976 13*s* , on behalf of 1595 students, representing the fees of 4522 classes , and for the winter session 1902 03 the sum of £28,275 5*s* , on behalf of 2867 students, representing the fees of 8806 classes—making in all, for the year ending Dec. 31st, 1902, the sum of £40,251 18*s* The committee realised the danger of applicants demanding class fees without proper consideration of the number and subjects of classes applied for A student might apply for the fees of more classes than he could properly attend, or for the fees of a haphazard choice of classes which had no educational relation to each other, or, again, for the fees of re-attendance upon classes because of an unsatisfactory attendance previously The committee consequently had drawn up regulations which it hoped would place a check upon indiscriminate claims in relation to the payment of class fees More detailed information with reference to the administration of the trust is to be found in the seven appendices to the report.

The After-Care Association —The annual meeting of the members of the After Care Association, of which Princess Christian is patroness and the Earl of Meath is president, was held at the house of Sir William Church and Lady Church on March 4th The chief objects of this association are to facilitate the readmission of poor persons discharged as recovered from lunatic asylums into social life (1) by obtaining for them when needful an interval of change of scene and air under proper care and supervision , (2) by giving them grants of money and clothing , and (3) by assisting them to obtain suitable employment. The annual report stated that the work of the association had again been most encouraging During the past 12 months there had been 221 cases (149 those of women and 72 those of men) before the council, whereas in 1901 the number was 214 The income had increased to £772, but an appeal was made for increased funds to meet increased weekly payments for maintenance

The Training of Plumbers —An indenture or agreement of apprenticeship framed by the Plumbers' Apprenticeship Board of London has been adopted in substance by the National Association of Master Plumbers and the United Operative Plumbers' Association of Great Britain and Ireland as well as by the London Master Builders' Association The material points of agreement are (1) the art of sanitary plumbing taught under the indenture is defined as "technical knowledge of water fittings and other sanitary appliances and skill to construct and adjust the same in such manner as to prevent the contamination of air or water in dwelling houses or other buildings by emanations from drains and sewers" , (2) the apprentice is required to attend approved evening classes of technical instruction , and (3) to attend periodical examinations in technical knowledge and workmanship during the term, the final examination qualifying for registration by the Plumbers' Company or any statutory body established for maintaining a national register of plumbers in the public interest. The form has been adapted to the requirements of Scotch law Thus, the modern method of technical training will be assimilated to the old system of apprenticeship.

Institute of Chemistry —The twenty-fifth annual general meeting of this institute was held on March 2nd, Professor John Millar Thomson, LL.D , F R S , the President, being in the chair In his address the President described how the growing appreciation of the science of analytical chemistry from the utilitarian point of view, led to the necessity for an organisation for maintaining a standard of qualification on the part of analytical and consulting chemists The real origin of the institute was a suggestion put forward in 1872 by the late Sir Edward Frankland at a dinner given to Professor Cannizzaro on his appointment as Faraday lecturer Later, in 1876, he proposed to the council of the Chemical Society that a class of Fellows to be styled Licentiates (or some analogous title) should be created for the purpose of distinguishing between competent professional chemists and those who professed an interest in chemistry as a science and not as a means of earning a livelihood The idea was not adopted, but it was decided to found a new society, the Institute of Chemistry being formally incorporated under the Companies Act on Oct. 2nd, 1877 Among those active in founding the institute were Mr Carteighe, Professor Hartley, the late Mr Frederick Manning, Mr C Tookey and the late Dr Alder Wright. Professor Thomson himself was also a keen worker for the institute in its earliest history He proceeded to relate its progress under the successive presidents Sir Edward Frankland Sir Frederick Abel, Dr William Odling, Dr James Bell, C B , Professor W A. Tilden, Dr W J, Russell, F R.S , and Dr Thomas Stevenson He dealt with the regulations as to training and examination of candidates for the associateship of the institute, showing how the standard of the requirements for membership had been steadily raised and he commented on the consequent increasing recognition of the qualifications "A I C" and "F I.C" by Government and municipal authorities and by the leaders of industry throughout the kingdom.

Notes, Short Comments, and Answers to Correspondents.

A QUESTION OF ETHICS

To the Editors of THE LANCET

SIRS,—You state that when a practitioner is called to supersede his professional brother it is his duty to ascertain that the former medical adviser has been properly informed that his services are not longer required." From the above I presume that a medical man is justified in taking on a case where another man is *at the time* in attendance, provided the patient has sent him notice that he is not longer required. May I express my utter astonishment if this is so? I have been in practice 20 years and during this time have been frequently sent for by patients whom other medical men have been attending and told that the other medical man has been written to and, in some cases, paid I have always positively declined unless I met the man in attendance in consultation and then the patient can decide whom he wishes to have. The reason I give for doing this is that we medical men are not shopkeepers or tradesmen whom the public can as they think run from one to another without us first meeting in consultation I have always been under the impression that a medical man taking on a case where another is in actual attendance without first meeting him commits a gross breach of medical etiquette. I am, Sirs yours faithfully

March 7th, 1903. A COUNTRY PRACTITIONER.

*** Our reply to our correspondent's previous letter referred to particular points in that letter It did not lay down general rules and general rules cannot be laid down to meet all conceivable situations. "A Country Practitioner's" deductions from our words are quite wrong The view which utterly astonishes him has never been expressed by us nor do we understand how a man can be at the same time in attendance" and not longer required." Of course, it is far preferable that the superseding practitioner should do so with the full approval of the previous practitioner and after a consultation with him, but sometimes these desirable circumstances cannot be obtained. It is common to find that the first medical attendant will not discuss amicably the patient's case with the second medical attendant and we wonder whether A Country Practitioner if he were the superseded practitioner would be willing to do so. Members of the medical profession have to look after the health of the public. If a patient declines absolutely to see A and asks to see B what is B to do if (1) there is no other medical attendant in the neighbourhood but himself and A, or if (2) he is assured that whether he B attends the case or not A will not be asked to attend again? In our view B must attend the patient. The situation is a regrettable one but it is B's public duty to visit the sick. Certainly he should attempt to adjust the matter amicably with A, both in the interests of the patient and of the medical profession It is good for the patient that B should be made aware of symptoms discovered by and treatment employed by A and it is good for the medical profession that there should be no bickering over such matters But if A will not meet B what is to be done? Our correspondent, in a covering letter says that he has seen books on medical etiquette taking a considerably different view to ours, but those books have not come into our hands We thoroughly approve of the high professional attitude which he takes up but we must point out to him that in certain cases the attitude is unpractical. When a patient has decided to make a change of medical attendants the situation must be dealt with as one which the patient has every right—however foolish the action—to bring about —ED L.

FRACTURED PATELLA.

To the Editors of THE LANCET

SIRS —Allow me to bring under notice a very ready and effective means of treating ordinary fractures of the patella when to resort to hooks pins or wires can only be considered meddlesome unless in severe cases or those that have been neglected with extensive inflammation or suppuration more especially in debilitated or strumous subjects where the joint requires to be opened. The quadriceps extensor femoris is relaxed in the ordinary way and the parts are disinfected, then a strip of Leicester or Johnson's plaster is taken at least one inch wide and two yards in length is fixed firmly over the head of the tibia and encircled below the knee twice then it is carried up over the external lateral ligament so as to bind down the upper and outer portion of the bone to secure the quadriceps muscle and tendons binding it down over the inner portion. Over this an ordinary gauze bandage is applied in the same way and it is passed over the cap so as to compress the injured surfaces level. The parts being thus thoroughly secured the bandage is passed over to an assistant and having at hand a piece of sheet lead already prepared—i.e. about seven inches square, the central portion carefully cut out with exactness from the opposite bone, reversed trimmed and bevelled to avoid uneven surface or projection of cut edges—this is applied to encase the cap. Again, the bandage is taken and secured by a few more turns, the back splint is put on and the operator finishes up with what bandage he has left Subsequent treatment such as lead and opium lotion, glyco-gelatin, plaster-of Paris &c. can be used without disturbance.

These accidents although rare, require very prompt treatment and vary greatly with regard to age and constitution in gravity and as all the requirements I mention can be readily carried in the surgical bag without apparent increase of bulk the means are at hand to facilitate immediate action in emergency for the relief of the patient whilst it gives both temporarily and permanently a satisfactory result, as the metal frame does not yield like leather and should not allow displacement to show deformity by ill matched ligamentous union

Of course all injuries to joints may be more or less complicated with pain, inflammation synovitis or suppuration it is therefore very necessary daily to note these conditions.

I am, Sirs, yours faithfully

Burslem Feb. 24th 1903. G T MOCKETT.

LYING ADVERTISEMENTS

A CORRESPONDENT sends us a page from *Answers* of Feb 14th 1903. The page is page i of the supplement and contains an advertisement of the usual lying type concerning an electro-galvanic belt. The advertisers are A. M. Richardson and Co They give a testimonial from Dr Archer Farr L.R.C.P L.S.A. L.F.P & S G five years Medical Officer of Health Lambeth London who writes under date Jan 2nd, 1903. Curiously enough we are unable to find Mr Archer Farr's name in the Medical Register for 1902, although it is in the Medical Directory for the current year Possibly Mr Archer Farr does not know of the use which is being made of his name. In the Medical Directory his address is given as Bath House Putney On referring to Kelly's Suburban Directory we were, however unable to find the name of Archer Farr That gentleman would do well to dissociate himself from a firm such as that of Messrs. A. M. Richardson who send out a filthy pamphlet entitled, Important Facts for Men Only"

LIFE INSURANCE OFFICES AND FEES FOR MEDICAL EXAMINATIONS

To the Editors of THE LANCET

SIRS —I should be glad if you will advise me whether it is usual or reasonable for a life assurance company to require its medical referee to make *re examinations* gratuitously Having examined a candidate and advised unfavourably against him I was called upon in a month's time to make another examination not certainly less searching than the first and I am now refused any fee for this second examination The initial fee was 10*s* 6*d*. for a £200 assurance.

I am, Sirs, yours faithfully

March 7th 1903 LIVE AND LET LIVE.

*** Assurance companies vary in their treatment of their medical referees. Seeing how tiny the fee was for the original examination we should have thought a second fee might well have been paid. There are no definite rules.—ED L.

EXPECTORATION OF A TOOTH 13 MONTHS AFTER INHALATION INTO THE LUNG

To the Editors of THE LANCET

SIRS —I have read Dr W E. Carnegie Dickson's notes on the above case in THE LANCET of Feb. 28th p 584 with great interest but think it was a great pity that the x rays were not called in to help the diagnosis even though it was thought to be a case of early phthisis because it is very probable that the true condition of affairs would by this means have been made apparent From my experience of x rays in pulmonary diseases I feel sure that if all suspicious cases were examined by the screen and then photographed pulmonary tuberculosis would be discovered in many instances before the ordinary physical signs denoted its presence and that many cases in which the stethoscope revealed only a slight amount of mischief would by this method of examination be found to be more extensively involved.

Now that early diagnosis of pulmonary tuberculosis is of such vital importance to the individual and to the community such a valuable aid to its diagnosis as the x rays should always be made use of.

I am, Sirs yours faithfully

Lincoln March 6th. STANLEY GREEN

A FORMALDEHYDE INHALER.

To the Editors of THE LANCET

SIRS —Under the above heading in THE LANCET of Feb 21st p .62, there is described a simple appliance" for the inhalation of formalin but whether it is intended for use in an institution or as an article to be used anywhere and everywhere the writer of the paragraph does not say It may be all right to sit or to lie about in the wards of a sanatorium with a zinc muzzle over the mouth and nose, but one could hardly call it "simple" if intended for wear while walking in the street. Neither is the *prescription simple*. *Surely it is scarcely* wise to put into the hands of what must often be an ignorant public a mixture which contains a fourth part pure chloroform to be used for inhaling six or seven hours a day and even at night"—unless it is with the idea of increasing the work of coroners. I quite agree with the writer that formalin is a very important aid in the treatment of pulmonary tuberculosis" and also I would add of other diseases of the lungs, but why not use it simply with water with which it is perfectly miscible? Personally I use one part formalin and two parts water and the simple inhaler I use is the glass sponge-tube of a "Godfrey's" chloride of ammonium inhaler breathing in by the for scientific merit promotion was given and every effort was being made to bring up to date the medical and surgical equipment. With regard to hospitals he proposed instead of the elaborate machinery by which different branches of the War Office had hitherto dealt with hospitals one with the building and another with the equipment to have a small committee with a civilian member of the Advisory Board and a member of the Royal Army Medical Corps in order to hand over to it, in conjunction with the Financial Secretary to the War Office the whole administration of these services in order to secure continuity and to bring the whole question as far as possible up to date. The right hon gentleman also referred to the new footing on which army nursing had been placed

Appointments.

Successful applicants for Vacancies Secretaries of Public Institutions and others possessing information suitable for this column are invited to forward it to THE LANCET *Office directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week, for publication in the next number*

BARCLAY W BOWIE L.R C P & S Edin D P H Vict., has been appointed Medical Officer of Health for Farnborough (Hants) Urban District Council.

BRISCOE WILLIAM THOMAS, A.B M.D M.Ch Dub has been appointed Medical Officer of Health for the Chippenham Urban District

COPE RICARDO, M R C S, L R C P Lond has been appointed House Surgeon at the Rotherham Hospital and Dispensary

CROOKS JAMES M D, C M. Toronto, L.R C S Edin., L S A. has been appointed Medical Officer of Health for Chard

DALBY AUGUSTUS WILLIAM, L R.C P L R C S Edin has been appointed Medical Officer of Health for the Frome (Somerset) Rural District Council

DUNLOP, THOMAS M.B C M Edin D P H Cantab has been appointed Medical Officer of Health for Torquay

HODLING JOHN HENRY L S A Lond. has been appointed Medical Officer of Health for the Bideford (Devon) Rural District

JOHNSON HENRY SANDFORD M.R C.P Irel, L F P S Glasg has been appointed Medical Officer of Health for the Totnes (Devon) Rural District Council

KEIR WILLIAM INGRAM F R C S L R C P Edin has been re-appointed Medical Officer of Health for Melksham Wilts

KELLY C B M. M D Lond has been appointed Certifying Surgeon under the Factory Act for the Witney District of the County of Oxford

MILES, U W N M.R C S L R C P Lond has been appointed Certifying Surgeon under the Factory Act for the Bewdley District of the County of Worcester

MURRAY JAMES L.R.C P L R C S Edin L.F P S Glasg has been appointed Certifying Surgeon under the Factory Act for the Allendale District of the County of Northumberland

PARSONS J FREDERICK M.R C S Eng L S A. Lond has been re-appointed Medical Officer of Health for the Frome (Somerset) Urban District.

SPROTT A M.B C M Glasg has been appointed Certifying Surgeon under the Factory Act for the Appleby District of the County of Westmoreland

WADE, REGINALD M R C S Eng, L S.A. Lond has been appointed Medical Officer of Health for the Highbridge (Somerset) Urban District.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

ADDENBROOKE'S HOSPITAL Cambridge —Assistant House Surgeon for six months Salary at rate of £30 per annum with board lodging and washing

ALDERSHOT URBAN DISTRICT COUNCIL.—Medical Officer of Health Salary £300 per annum

BIRMINGHAM GENERAL HOSPITAL.—Assistant Obstetric Officer

BRACEBRIDGE ASYLUM near Lincoln —Junior Assistant Medical Officer (female) unmarried Salary £125 with apartments board attendance &c

BRISTOL, ROYAL VICTORIA HOMES (INEBRIATE REFORMATORY) Brentry —Superintendent. Married and total abstainer Salary £400 per annum.

BURY COUNTY BOROUGH.—Assistant to the Medical Officer of Health for six months Salary at rate of £60 per annum with board and residence

CENTRAL MIDWIVES BOARD —Secretary Salary £300 a year

DERBY BOROUGH ASYLUM.—Assistant Medical Officer Salary £120 per annum with board and washing

DUBLIN, TRINITY COLLEGE.—Professor of Anatomy

ESSEX AND COLCHESTER HOSPITAL —Honorary Physician

EVELINA HOSPITAL FOR SICK CHILDREN Southwark S E —Medical Radiographer Honorarium £25 per annum

GLASGOW EYE INFIRMARY —Resident Assistant House Surgeon Salary £75, with apartments and board

GLOUCESTER GENERAL INFIRMARY AND GLOUCESTERSHIRE EYE INSTITUTION —Assistant House Surgeon for six months Remuneration at rate of £30 per annum with board residence, and washing

HOSPITAL FOR DISEASES OF THE SKIN Stamford street Blackfriars S E —Clinical Assistant.

HOSPITAL FOR WOMEN, Soho-square.—Clinical Assistants

HUDDERSFIELD INFIRMARY —Junior House Surgeon Salary £60 per annum with board, residence, and washing

LIVERPOOL MILL-ROAD INFIRMARY —Assistant Medical Officer unmarried Salary £120 per annum, with board and apartments.

LONDON LOCK HOSPITAL, Soho —House Surgeon Salary £80 per annum with board lodging and washing

LONDON THROAT HOSPITAL 204 Great Portland street W —House Surgeon (non resident) Honorarium at rate of £50 per annum

MANCHESTER. MONSALL FEVER HOSPITAL.—Fourth Medical Assistant Salary £100 per annum with board lodging and washing

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN Park place Cheetham Hill road —House Surgeon Salary £80 per annum with apartments and board.

MANCHESTER OWENS COLLEGE —Junior Demonstrator in Physiology Salary £100 rising to £150 per annum

METROPOLITAN HOSPITAL, Kingsland road N E.—House Physician (salary at rate of £40 per annum) House Surgeon (salary at rate of £40 per annum), Assistant House Physician (salary at rate of £20 per annum) and Assistant House Surgeon (salary at rate of £20 per annum) All tenable for six months Also an Anæsthetist Honorarium 25 guineas per annum

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC Queen square Bloomsbury —Junior House Physician. Salary £50 with board and apartments

NEW HOSPITAL FOR WOMEN Euston road —Anæsthetist (female)

NORTH EASTERN HOSPITAL FOR CHILDREN Hackney road, N E —Resident Medical Officer Salary £120 per annum with board, residence and washing

NORTH RIDING INFIRMARY Middlesborough-on Tees —Assistant House Surgeon unmarried

OXFORD WARNEFORD ASYLUM —Assistant Medical Officer Salary £100 with board &c.

PRESTON ROYAL INFIRMARY —Assistant House Surgeon Salary £60 per annum with board lodging washing &c

ROTHERHAM HOSPITAL AND DISPENSARY —Assistant House Surgeon. Salary £80 per annum

ROYAL BERKSHIRE HOSPITAL.—Assistant House Surgeon for six months. Salary £60 per annum with board lodging and washing

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST Ventnor —Assistant Resident Medical Officer unmarried. Salary £100 per annum with board and lodging

ROYAL ORTHOPÆDIC HOSPITAL.—Resident House Surgeon and Registrar unmarried for six months Salary £100 per annum with board and washing

ST GEORGE'S HOSPITAL, S W —Dental Surgeon Also Assistant Dental Surgeon

ST PETER'S HOSPITAL FOR STONE, &c. Henrietta-street Covent Garden W C —House Surgeon for six months Salary at rate of £100 a year with board lodging and washing

SAMARITAN FREE HOSPITAL FOR WOMEN Marylebone-road N W —Anæsthetist Honorarium £20 per annum. Also Clinical Assistants

SUSSEX COUNTY HOSPITAL —House Physician unmarried Salary £80 per annum with board and residence

TIVERTON, DEVONSHIRE INFIRMARY AND DISPENSARY —House Surgeon Salary £80 and all found

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE Newcastle-upon Tyne.—Lecturer on Ophthalmology

VICTORIA HOSPITAL FOR CHILDREN Tite-street Chelsea, S W —House Physician for six months Honorarium of £25 with board and lodging

WALSALL AND DISTRICT HOSPITAL.—House Surgeon unmarried Salary £100 per annum, with apartments board and laundry

WESTMINSTER GENERAL DISPENSARY —Resident Medical Officer Salary at rate of £120 per annum, with rooms gas coal, and attendance

WEST RIDING ASYLUM Wakefield.—Assistant Medical Officer Salary £140 rising to £160, with apartments board, washing and attendance.

THE Chief Inspector of Factories Home Office London S W gives notice of a vacancy as Certifying Surgeon under the *Factory* and Workshop Act at Crosshills in the West Riding of the County of York

Births, Marriages, and Deaths.

BIRTHS

BROCK —On March 4th at 77 Fellows-road S Hampstead N W the wife of J H E Brock M D F R C S of a son

JOY —On March 4th at Bradfield near Reading the wife of Norman H Joy M.R C S L R C P Lond of a daughter

NAPIER JONES —On March 4th at Crowthorne Berks the wife of Philip Napier Jones M R C S L.R C P Lond, of a son

DEATHS.

ENNECCERUS —On the 20th February at Coblenz Rhein suddenly while under chloroform inhalation Amy Margaret aged 21 the beloved wife of Wilhelm Victor Enneccerus Oberleutnant und Landwehr-Bezirks, Adjutant Coblenz only daughter of Charles Hoar M B. C M. of Robertsbridge Sussex and grand-daughter of the late Augustus Waller M D F R S

WIGAN —On Feb 15th at Portishead Somerset, George C H. Wigan, M D, aged 82.

N B —A fee of 5s is charged for the insertion of Notices of Births, Marriages and Deaths

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY (20 Hanover square, W).—8.30 P.M. Discussion on the Dietetic Factor in Health Resort Treatment (introduced by Dr Mouillot Harrogate)

SOCIETY OF ARTS (John street Adelphi, W C) —8 P.M. Mr W Schooling New Aspects of Life Assurance.

THURSDAY (19th) —HARVEIAN SOCIETY OF LONDON (Stafford Rooms Titchborne-street, Edgware-road, W).—8.30 P.M. Clinical Evening Cases will be shown by Dr S Phillips, Dr W J Harris Dr L. Guthrie. Mr Jaffrey and others

FRIDAY (20th) —SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN (11, Chandos-street, Cavendish square W) —5 30 P.M. Clinical Cases will be shown. Papers —Dr H. Ashby and Mr S Stephenson On a Form of Acute Amaurosis in Infancy following Convulsions —Mr H. T. Curtis A Case of Congenital Parosteal Sarcoma arising in connexion with the Acromion Process of the Left Scapula removed *from a boy aged 5½ months.*

EPIDEMIOLOGICAL SOCIETY (11, Chandos street, Cavendish-square W).—8 P.M. Council Meeting 8.30 P.M. Paper —Dr L Parkes: The Prevention of Diphtheria Outbreaks in Hospitals for Children.

LECTURES, ADDRESSES DEMONSTRATIONS &c -

MONDAY (16th) —MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22, Chenies-street W C) —4 P.M. Dr J Galloway Clinique. (Skin.) 5.15 P.M. Dr F J McCann: Cancer of the Uterus.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W) —5 P.M. Dr Russell Mediastinal Disease

TUESDAY (17th) —ROYAL COLLEGE OF PHYSICIANS OF LONDON (Pall Mall East) —5 P.M. Dr A. S F Grünbaum Theories of Immunity and their Clinical Application. (Goulstonian Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street W C) —4 P.M. Dr R. L. Bowles Clinique. (Medical.) 5.15 P.M. Mr S Stephenson The Ophthalmoscope as an Aid to General Diagnosis

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road W) —5 P.M. Dr Robinson Pelvic Pain.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen square Bloomsbury) —3.30 P.M. Dr Batten: Congenital Cerebellar Ataxy

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—3 P.M. Dr P Horton Smith Arrested Pulmonary Tuberculosis

WEDNESDAY (18th).—MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22, Chenies-street. W C) —4 P.M. Mr A. H. Tubby (Clinique. (Surgical.) 5.15 P.M. Dr G Rankin: Neurasthenia the Wear and Tear of Life.

POST GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W) —5 P.M. Dr S Taylor Rheumatism and Allied Affections.

THURSDAY (19th) —ROYAL COLLEGE OF PHYSICIANS OF LONDON (Pall Mall East) —5 P.M. Dr A. S F Grünbaum: Theories of Immunity and their Clinical Application. (Goulstonian Lecture.)

MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22, Chenies-street W C.) —4 P.M. Mr W H. A. Jacobson: Clinique. (Surgical.) 5.15 P.M. Dr F Caiger The Treatment of Enteric Fever

POST GRADUATE COLLEGE (West London Hospital, Hammersmith road, W) —5 P.M. Mr Keetley On Fractures in and near the Elbow and Wrist Joints.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street W C) —4 P.M D Poynton Clinical Evidences of Damage to the Myocardium in Rheumatic Fever

NORTH EAST LONDON POST GRADUATE COLLEGE (Tottenham Hospital N) —4 P.M. Clinical Lecture —Mr R P Brooks: Demonstration of Cases of Ophthalmoscopic Interest

FRIDAY (20th) —MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22, Chenies-street W C) —4 P.M. Dr H. Tilley: Clinique (Ear) 5.15 P.M. Mr T. P Legg Injuries of the Head and Neck III.

POST GRADUATE COLLEGE (West London Hospital, Hammersmith road W) —5 P.M. Dr Reece Some Factors of Infection

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle street W) —5 P.M. Prof E A. Schäfer The Paths of Volition

EDITORIAL NOTICES

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest or which it is desirable to bring under the notice of the profession, may be sent direct to this office

Lectures, original articles and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub Editor"

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager"*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES

THE INDEX TO THE LANCET

THE Index to Vol. II. of 1902, which was completed with the issue of Dec 27th, and the Title-page to the Volume, were given in THE LANCET of Jan 3rd.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1902 are now ready Bound in cloth, gilt lettered, price 18s, carriage extra.

Cases for binding the half-year's numbers are also ready Cloth, gilt lettered, price 2s., by post 2s. *3d*

To be obtained on application to the Manager, accompanied by remittance.

TO SUBSCRIBERS

WILL Subscribers please note that only those subscriptions which are sent direct to the *Proprietors* of THE LANCET at their Offices, 423, Strand, W C are dealt with by them! Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are —

FOR THE UNITED KINGDOM.	£ s. d.	TO THE COLONIES AND ABROAD	£ s. d.
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager MR. CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W C

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues, and Agents are authorised to collect and do so collect from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND

METEOROLOGICAL READINGS

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office March 12th, 1903.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 a.m.
Mar 6	30·09	S.W	0·12	66	51	36	37	33	Fine
7	29·83	S W	0·03	63	46	35	43	45	Raining
8	30·20	N.W	0·21	82	49	37	33	40	Cloudy
9	30·19	S.W	—	76	50	35	41	43	Overcast
10	29·92	S W	0·15	45	48	42	43	44	Raining
11	29·97	S.W	0·07	86	52	34	35	36	Foggy
12	29·92	S.E.	—	91	54	36	40	41	Foggy

During the week marked copies of the following newspapers have been received *Irish Truth, Yorkshire Post, Westminster Gazette, Nottingham Guardian, Sussex Daily News Taunton Gazette Guernsey Evening Press, Cardiff Echo Dublin Times Birmingham Post Aberdeen Free Press (Weekly) Brighton Gazette Surrey Advertiser Notts Guardian, Bristol Mercury Dublin Express Bradford Observer Morning Post Hereford Mercury Daily Graphic Sanitary Record, Local Government Chronicle, Mining Journal, Hertfordshire Mercury Blackburn Daily Telegraph, Devon Gazette Halifax Evening Courier Plymouth Mercury Dundee Mail, &c.*

mouth and out by the nose, thus bathing the whole of the respiratory tract in formalin vapour Such a simple inhaler with the small end of the tube drawn out to a mouthpiece and a movable cap to fit the lower end anyone could carry in the pocket and use frequently during the day and it ought to be produced at such a price as to be within the reach of any poor person I would say always use the original brand of normal formalin prepared by the Formalin Hygienic Company as when practising in London I met with samples made by the chemists by whom they were sold the odour of which was anything but pleasant after standing a few days This I have never found with the original. A drug is sometimes condemned altogether by a bad specimen.

I am, Sirs yours faithfully

Ryde Feb 24th 1903 J MILLER

TESTIMONIALS TO PROPRIETARY MEDICINES

IN the advertising pages of the Parish Magazine of St. Botolph s Bishopsgate, appears an advertisement dealing with a preparation alleged to be prepared by Messrs John Morgan Davis and Sons The preparation is called Phosphorised Quinine and its virtues are extolled in a testimonial headed 2, Elphinston road Hastings, and signed by G C Kernot Ph D, L R C S L.S.A. Lond &c We are unable to find Mr Kernot s name in either the Medical Register or the Medical Directory If Mr Kernot be dead we consider that Messrs John Morgan Davis and Sons should supply the date of Mr Kernot s letter and if he be alive we think that he had better have his name placed on the Register and refrain from eulogising proprietary preparations

A FAIR MAID OF FEBRUARY

"FLOWERS" said Emerson, are a proud assertion that a ray of beauty outvalues all the utilities of man The lady who signs herself "Snowdrop" in the following letter which has been addressed to the medical officer of a metropolitan dispensary acts in accordance with the quotation She proudly asserts that the vulgar routine of sanitation as generally understood should give place to her crankiness. A more comical mixture of impudence and ignorance we have seldom read

"Fulham London S W
Jan 1903

At the request of your guides we write to ask you to use natural and curative agency in your Hospitals such as natural and pure diet (fruit and hot fruit drinks can eradicate disease and maintain strength) curative colours curative clothing hot baths and bathing All drugs operations impure food and drink (flesh foul fish and Alcohol) are forbidden in the spirit world therefore against GOD s laws and a healthy soul and body—Black came into the world through evil agency is against—GOD s—divine laws and is to be abolished from our earth—Your guides earnestly pray that you will help us in these important matters and at their earnest request we must tell you that all vaccinators will be punished in this or the spirit world as most disease is due to the dirt and poison of vaccine Yours faithfully

SNOWDROP

'Snowdrop s mental attitude is that of many worthy people but they are usually able to express it in a less ridiculous manner

DEGREES FOR MEDICAL PRACTITIONERS

A CORRESPONDENT writes: "I have had frequent occasions of studying the various causes which induce students to take collegiate licences instead of university degrees. In most cases I found that the college curriculum had been entered upon in entire ignorance of the relative value of licences and degrees An announcement in the *Irish Times* of Feb 26th under the heading Medical Students Guide' must continue to foster misconception in the minds of would be students The announcement referred to states that the Royal College of Surgeons in Ireland is issuing gratuitously to any one sending for it a copy of their Students Guide: How to become a Doctor' The publication is an advertisement to induce pupils to take out the licence of that body under the Irish Conjoint Board and obviously will be taken as an orthodox guide by students parents guardians and others, to the proper mode of qualifying The students forthwith in consequence may enter and pass the Conjoint preliminary examination and thus be committed to a course leading to licences instead of degrees—a course which in 99 cases out of 100 is irretraceable. Our correspondent concludes: How to become a Licentiate in Surgery would be less open to objection than that referred to if it were really necessary for the College to advertise its qualifications

A QUERY

To the Editors of THE LANCET

SIRS —Could any of your readers tell me what books are now recommended to be read for the M D, State Medicine London University, especially in Mental Physiology?

I am, Sirs yours faithfully,

March 3rd 1903 HOUSE SURGEON

COLD PRESSURE AS A TREATMENT FOR LUPUS

To the Editors of THE LANCET

SIRS,—Can any of your readers tell me if cold pressure alone has been tried as a treatment for lupus and if there is any reason why it should not be tried? I am Sirs yours faithfully

THE THREECIS PLUG

THIS is a little device supplied by the Threecis Plug Company 3, Cross lane, St Mary-at Hill, London, E.C It consists of a small sponge plug fitted with a perforated tin cover. The plug is to be fitted into the bottom of a pipe and it can be easily removed for cleaning It certainly prevents moisture from getting into the mouth but in the experience of various members of our staff to whom we submitted a plug for trial it gives the tobacco smoke an unpleasant taste. The advertisement says: The Threecis plug becomes household word to smokers as soon as they have tried it Perhaps but sometimes a household word is short, emphatic and uncomplimentary

◆

An Enquirer —The amount to be paid depends entirely upon the evidence of the value of the practice A well established practice, or a share in such where appointments are secure and competition not likely to prove damaging is worth two years purchase The purchaser of a share in a practice usually obtains a better introduction to the practice and a better guarantee that it will not decline in value than the purchaser of a whole practice

Surgeon.—As a rule medical men holding British diplomas and degrees can practise in Canada on obtaining a licence from the Provincial Medical Boards They must however be registered, and the fees vary from £2 to £20, according to the province selected

W H C—*The man is a well known money lender*

ERRATUM —The mover of the vote of thanks to Sir Michael Foster for presiding at the conference on March 3rd on the Supply of Rural Midwives was Colonel Long M P., and not Lord Camoys as reported in our account of the proceedings

Medical Diary for the ensuing Week.

OPERATIONS

METROPOLITAN HOSPITALS

MONDAY (16th) —London (2 P M), St Bartholomew's (1.30 P.M), St. Thomas s (3 30 P M) St Georges (2 P M) St Mary's (2 30 P.M), Middlesex (1 30 P M) Westminster (2 P M) Chelsea (2 P.M), Samaritan (Gynæcological by Physicians, 2 P M) Soho-square (2 P M), Royal Orthopædic (2 P.M), City Orthopædic (4 P M), Gt. Northern Central (2.30 P.M) West London (2.30 P.M), London Throat (9.30 A M) Royal Free (2 P M) Guy s (1 30 P M)

TUESDAY (17th) —London (2 P M) St. Bartholomew s (1.30 P M), St. Thomas s (3.30 P M) Guy's (1 30 P.M) Middlesex (1 30 P M) Westminster (2 P M) West London (2 30 P M) University College (2 P M) St Georges (1 P M) St Mary s (1 P.M) St. Mark's (2.30 P M) Cancer (2 P M) Metropolitan (2 30 P M) London Throat (9.30 A M) Royal Ear (3 P M) Samaritan (9.30 A M and 2 30 P M.) Throat Golden square (9.30 A M) Soho-square (2 P M)

WEDNESDAY (18th) —St Bartholomew's (1.30 P.M), University College (2 P M) Royal Free (2 P M) Middlesex (1 30 P M) Charing Cross (3 P M), St. Thomas's (2 P M), London (2 P.M) King s College (2 P M) St Georges (Ophthalmic, 1 P M) St Mary's (2 P.M) National Orthopædic (10 A M) St. Peter s (2 P.M) Samaritan (9.30 A M and 2 30 P M) Gt. Ormond-street (9 30 A M) Gt. Northern Central (2.30 P M), Westminster (2 P M) Metropolitan (2 30 P.M), London Throat (9 30 A M), Cancer (2 P M), Throat, Golden square (9 30 A M), Guy s (1 30 P M)

THURSDAY (19th) —St Bartholomew's (1.30 P M) St Thomas s (3 30 P.M) University College (2 P M) Charing Cross (3 P M) St. George s (1 P M) London (2 P M) King s College (2 P M) Middlesex (1 30 P M) St Mary s (2 30 P M), Soho-square (2 P M) North West London (2 P.M) Chelsea (2 P M) Gt Northern Central (Gynæcological, 2 30 P M) Metropolitan (2.30 P.M) London Throat (9 30 A M) St. Mark s (2 P M) Samaritan (9 30 A M and 2.30 P M.) Throat Golden-square (9 30 A M) Guy s (1 30 P.M)

FRIDAY (20th) —London (2 P M) St. Bartholomew s (1 30 P M) St. Thomas s (3.30 P M) Guy's (1.30 P M) Middlesex (1 30 P.M) Charing Cross (3 P M) St. George s (1 P M) King s College (2 P M), St. Mary's (2 P.M) Ophthalmic (10 A M.) Cancer (2 P M) Chelsea (2 P.M), Gt. Northern Central (2.30 P M) West London (2.30 P M) London Throat (9.30 A M) Samaritan (9 30 A M and 2 30 P.M) Throat Golden square (9 30 A M), City Orthopædic (2.30 P.M) Soho-square (2 P M)

SATURDAY (21st) —Royal Free (9 A.M) London (2 P M) Middlesex (1 30 P M) St Thomas s (2 P M) University College (9 15 A.M) Charing Cross (2 P M) St George's (1 P.M) St. Mary's (10 P.M.) Throat Golden square (9.30 A.M) Guy s (1.30 P M)

At the Royal Eye Hospital (2 P M) the Royal London Ophthalmic (10 A M) the Royal Westminster Ophthalmic (1.30 P M), and the Central London Ophthalmic Hospitals operations are performed daily

SOCIETIES

MONDAY (16th) —MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish square, W) —9 P.M Dr H Radcliffe Crocker The Conditions which Modify the Characters of Inflammations of the Skin and their Influence on Treatment Lecture III —Principles of Treatment (Lettsomian Lecture.)

TUESDAY (17th) —CHELSEA CLINICAL SOCIETY (Jenner Institute of Preventive Medicine, Chelsea gardens Grosvenor road S.W) —8 30 P M Annual Clinical Debate on Diabetic and Non Diabetic Glycosuria in which Dr H Mackenzie Dr Hutchison and Dr V Poore will take part

WEDNESDAY (18th) —ROYAL METEOROLOGICAL SOCIETY (Institution of Civil Engineers Great George-street, S W) —7 30 P M Lecture:—Mr C V Boys: The Passage of Sound through the Atmosphere

The Goulstonian Lectures

ON

THEORIES OF IMMUNITY AND THEIR CLINICAL APPLICATION

Delivered before the Royal College of Physicians of London

By A. S. F. GRUNBAUM, M.D. Cantab.,
F.R.C.P. Lond., &c.,
DIRECTOR OF THE CANCER RESEARCH IN UNIVERSITY COLLEGE AND THE
ROYAL INFIRMARY, LIVERPOOL; ASSISTANT PHYSICIAN TO THE
LIVERPOOL HOSPITAL FOR CONSUMPTION AND DISEASES
OF THE CHEST; ASSISTANT LECTURER AT THE LIVER-
POOL SCHOOL OF TROPICAL MEDICINE, ETC.

LECTURE I.[1]

Delivered on March 17th.

Mr. President and Gentlemen,—The first impulse—the natural impulse—of the Goulstonian lecturer for any year is to inquire what is known about his benefactor, what he did and what he accomplished. Meagre as are the materials for answering these questions there is one act of Dr. Goulston which will always be imprinted on the mind of his lecturer—I mean the expression of his desire that the lecturer should be chosen from among the four youngest Doctors of the Royal College of Physicians of London. The pleasurable sensation of an honour received, although unmerited—the ambition and failure to reach an ideal—even your youngest Doctor is already old enough to realise how much these sensations are inversely proportionate to age. For the opportunity of experiencing at once this feeling of pleasure, together with the sense of responsibility and want of success, I owe my obligations and thanks both to the memory of Dr. Goulston and Mrs. Goulston, and also to you, Sir, with the Fellows of this College.

In two more years three centuries will have passed since Francis Bacon, a contemporary of Dr. Goulston, published the "Advancement of Learning." His remarks on the state and progress of medicine in the seventeenth century were far from complimentary, yet we cannot deny their truth. But as some of his reproaches and advice guide the tenour of my lecture, expressing in finer and more pleasing language than I can imitate the goal which we in the twentieth century are still trying to reach, I trust you will forgive my quoting freely from his words. He says: "Medicine is a science which hath been more professed than laboured and yet more laboured than advanced, the labour having been in my judgement rather in circle than in progression. …… In the inquiry which is made by anatomy, I find much deficience: for they enquire of the parts and their substances, figures, and collocations; but they enquire not of the diversities of the parts …… of the secrecies of the passages and the seat or nestling of the humours, nor much of the footsteps and impressions of diseases. …… And for the humours, they are commonly passed over in anatomies as purgaments, whereas it is most necessary to observe what cavities, nests, and receptacles the humours do find in the parts, with the differing kind of the humour so lodged and received. And as for the footsteps of diseases …… they ought to have been exactly observed by a multitude of anatomies and the contribution of men's several experiences. …… I will not doubt to note as a deficience that they enquire not the perfect cures of many diseases, or extremities of diseases, but pronouncing them incurable do enact a law of neglect and exempt ignorance from discredit."

It is "the humours, the footsteps of disease and perfect cures" and their relations to one another which I shall attempt to describe, for within this triangle lie the theories of immunity and their clinical application. A little further on Bacon says: "They be the best physicians which being learned incline to the traditions of experience, or being empirics incline to the methods of learning." Fifty years later Sydenham, the English Hippocrates, was following these precepts and since he first struck out on the path of healthy empiricism English medicine has never left it. There can be no doubt that bedside and laboratory medicine must go hand in hand; at one time the eye or ear, at another the microscope or test-tube, may first descry the new disease—its manifestations or its cause. The correlation between bacterial cause and clinical symptoms is not always very evident and some sceptical spirits are disposed entirely to deny such relation. On the other hand, there are also some minds who fulfil Cicero's dictum concerning the unscientific thinking of the physician of his time: "Medici causa morbi inventa curationem inventam putant," substituting for "medici" the word "bacteriologici." It is not unreasonable to hope that some day finding the cause will mean also finding the cure, but that goal is not yet within sight. By good fortune it has occasionally been possible in the past to find a cure whilst we were yet ignorant of the cause and I trust that this may be so for still some time to come. But it is certain that without a knowledge of the cause we cannot explain or intelligently anticipate the symptoms of disease and the treatment can only be empirical; successful empiricism based on long and accurate experience it may be, satisfying perhaps to the patient and to mankind in general, but to the thoughtful physician unsatisfactory to a degree. He has also the disconcerting knowledge, based on his experience, that some day, unexpectedly, this empirical treatment will fail him. There is, then, every reason for trying to make disease and remedy premisses of the same syllogism the conclusion of which is health. The modern theories of immunity—and in particular that of Paul Ehrlich—based as they are upon ingenious and imaginative experiment have brought us appreciably nearer to a rational etiology and rational therapeutics of infective disease. I hope to show you that they have done even more than this and will do yet more. As on the Indian juggler's ladder, the topmost rungs are out of sight—heavenwards.

It would be unfair and ungracious to pass over entirely in silence the work of those far-sighted men, both clinicians and scientists, of the past and the present generations who in their mind's eye saw and expressed in prophetic language some of the achievements of to-day. Their thoughts will form convenient steps for us to follow.

At the latter end of the eighteenth century Hufeland, the celebrated physician of Berlin, published his "Ideas on the Pathogenesis and Influence of Vital Force on the Origin and Form of Diseases." Speaking of "contagium vivum …… an animal material, a special product of pathological-animal chemistry," he observes, amongst other more or less vague and erroneous statements, that "the contagious or infecting power of disease is relative, both as regards origin and effect. In origin because it depends on the degree of putrefaction and constitution of the subject suffering from the disease. As regards effect on other conditions, for here it depends on the susceptibility of the other for the reception of the contagium. Therefore the same disease may under certain circumstances and in certain subjects become contagious (e.g., consumption, of which it is known that in Italy it is reckoned among the infectious diseases; with us it is much less so) while under other circumstances and in other subjects it is not so, so that a disease may act contagiously on one man and not on another."

Half a century later these vague ideas, illuminated by subsequent observations, were brought to a focus by the logical mind of Henle. He showed by methods of argument and experiment akin to that of modern bacteriological investigation that scabies must be due to, and its transmission effected by, the *Acarus scabiei*. "Scabies cannot be transmitted by means of the matter from itch pustules, nor by freshly killed and pressed itch insects; it cannot be transmitted by the male but only by the impregnated female; the male causes a few local blisters, but scabies becomes a general and chronic skin disease only by the propagation of the insect on the infected body. …… The disease produced by a parasite which is communicated by accidental or intentional transplantation of the parasite is on that account infectious or contagious; the specific parasite is the infectious material or contagium of these diseases." Henle fought against the prevailing hazy and mystical conceptions of contagion, prophetically remarking: "I am firmly convinced that this is the way to condemn the doctrine to eternal darkness"; and, indeed, not until this path was abandoned did the doctrine again emerge from obscurity and itself become a source of light. Henle went even further and discussed the bearing of disposition of the host and the possibility of the production of a poison being

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[1] Lecture II. was delivered on March 19th and Lecture III. will be delivered on March 2 th.

Communications, Letters, &c , have been received from—

A.—Messrs. Allen and Hanburys Lond. Dr J E Anderton, New Mills Alcalá y Compañia, Grenada.

B.—Dr A. H Brindley Bury Mr C Birchall Liverpool; Mr G K. Sherman Bigg, Lond Birmingham General Hospital House Governor of Mr E Stanmore Bishop Manchester, Mr W J T Barker, Lond Dr T R Bradshaw Liverpool, Mr W Braumüller Vienna *Blackpool Times*, Manager of Dr F Bottalico Padua Italy; Sir Lauder Brunton, Grasse Dr F W Burton Fanning Norwich *British Medical Journal* Editor of Mr W Bryce Edinburgh

C —Clinical Society of Manchester Hon. Secretary of Cunard Steam Ship Co, Secretary of, Cortland Wagon Co Lond; Messrs Cassell and Co Lond Messrs T Christy and Co Lond Messrs Condy and Mitchell Lond; Captain M H. Cooper, R.A.M C, Mr R. Crane Lond Mr F W Cooper, Bristol Dr E P Cathcart Berlin Children s Hospital Nottingham, Secretary of Covenant of Abraham (Circumcision) Society Lond Secretary of Mrs E Leuty Collins Lond; Dr Louis P Colat Bordeaux

D —Mr H De Styrap Shrewsbury Durham County Asylum, Winterton Clerk of Dr M Dunning Glasgow

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G.—Dr J G Glover Lond; Galen Manufacturing Co Lond Glasgow Eye Infirmary Secretary of Miss Goffe Lond

H.—Dr W G Holloway Lond, Mr J Heywood, Manchester B Whitworth Hurd, Ltd Norwich Mr W S Handley Lond Dr A. W Hawthorne, Carcoar New South Wales Dr Walter K. Hunter, Glasgow; Major M P Holt R A.M C Dublin Dr E H. Harrison Harrow Mr Hugh E Hoare Marlow

J —Mr D Hill Jack Glasgow Mrs Josephine Johnstone Pulborough Mr R. P Jackson, Lond J G; Mrs Johnson, Palermo, Jewel Pen Co, Lond

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N —National Hospital for the Paralysed and Epileptic Lond, Secretary of North London or University College Hospital Secretary of; Mr M Neveux Nancy Messrs Neyroud and Sons Lond Dr David Newman Glasgow Dr Carlos Nery Lond Mr J C Needes Lond; Mr H. Needes Lond

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R.—Mr H. Robinson Guildford; Royal College of Physicians of Ireland Dublin Registrar of Professor Ross, Liverpool Rotherham Hospital Secretary of Mr B J Reid Lond The Royal Society, Lond Secretary of Royal Microscopical Society, Secretary of; Dr J Reid Lond. Mr E Ricketts, Lond Mr J Robbers Lond Messrs Reynolds and Branson Lond Royal National Hospital for Consumption and Diseases of the Chest on the Separate Principle Ventnor Secretary of

S —Mr Kenneth Scott Cairo Messrs W H. Smith and Son, Liverpool; Messrs Slack and Brownlow Gorton St Austell Union Clerk of; Sussex County Hospital Brighton, Secretary of; Mr G T Schofield, Blackpool; Mr C F Scripps Lond. Messrs. W B Saunders and Co, Lond.; Mr H W Scriven, Lond, Dr S Stephenson, Lond; S H. W Mr Simeon Snell Sheffield Dr Giuseppe Spezia Turin Messrs G Street and Co Lond; Mr John Spring Grimsby Mr F W Sears Lond S N Scholastic Clerical, &c. Association Lond St Mary s Hospital Medical School Lond

T —Mr F Tyrrell Ramsgate Tiverton Infirmary Secretary of Dr Alfred Turner, Plympton; Dr J H Teacher Glasgow; Mr T J Tonkin Hanley

U —University of Birmingham, Secretary of

W —Professor Windle, Birmingham Warneford Asylum, Oxford Medical Superintendent of Mr H C Webster Lond W W Messrs. F Williams and Co, Lond Westminster Dispensary Secretary of

Letters, each with enclosure, are also acknowledged from—

A.—Apollinaris Co Lond A M A. L. A R H.; Accrington Corporation Accountant of

B.—Dr R Blair Sunderland Mr T H Brocklehurst Templecombe Dr G Byres Lond Dr R M Buchanan Glasgow Sir Wm Broadbent Bart, Lond Bridgwater Infirmary Secretary of, Dr P Best Louth Miss L. Birkin Arnold, Mr J H E Brock Lond Mrs M A Burke, Lond. Mr J Bourdas jun Lond. Britannia Fruit Preserving Co Kelvedon Messrs Booty and Son Lond Dr E T Born Saddleworth Messrs Battle and Co Neuilly sur Seine Dr W Blair Bell Liverpool Dr R T Bowden Ramsgate.

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S.—Dr J Sorley, Sheffield Dr J Sinclair Kirn; S C L S E. G Messrs Spiers and Pond Lond. Mr C G Sawyer, Lond. Mr C Stonham Lond. Surgeon, Plymouth

T —Miss A. Talbot Dartford 'Threccis Plug Co Lond. Mr H C Titterton Lond Dr J Taylor Lond T R. D., Mr A J Tayler Northwick Mr J Thin Edinburgh T A L; Mr L G Tonking Camborne Mr J J Tate Bideford T B

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vertebrates, especially warm blooded vertebrates, there are two kinds, which Metchnikoff designates as macrophages and microphages respectively They correspond to what the ordinary nomenclature calls large mononuclear leucocytes and the smaller polymorphonuclear white cells. On the introduction of any foreign matter, whether bacteria, metallic granules, or even sterile fluids, into the organism, the leucocytes leave their normal habitat, and, passing through the vessel walls, go to the attack, and often to the annihilation, of the intruder. Having surrounded and engulfed it, where possible, they then proceed to digest it. But when the foreign body is organised, the particular kind of leucocyte to lead the attack will vary according to the nature of that body The macrophages, as befits their larger, slower, and more unwieldy character have, according to Metchnikoff, a preference for animal cells—e.g , xanthocytes , for the bacteria of chronic disease—e g , tubercle and leprosy , and for the malarial and other analogous parasites The microphages, on the other hand, show a preference for the micro-organisms causing acute disease The phagocytic theory was in this crude condition in 1888 when Nuttall discovered the bactericidal action of serum and it received further blows by Behring's discovery of antitoxins in 1891 and Pfeiffer's finding of the bacteriolysins in 1894 But Metchnikoff has managed with considerable ingenuity to adapt his theory to these new factors and with much facility to abandon the purely mechanical explanation at first afforded by his theory

But since the modifications of Metchnikoff's theory and many of the experiments performed to support them are due to the evolution and development of Ehrlich's theory it will be well to consider the two theories side by side, or, rather to see what explanation is afforded by Metchnikoff's theory of Ehrlich's facts

Ehrlich's theory is really an outcome of his investigations into the nature of toxins and antitoxins He had early shown that as regards immunity similar results might be obtained with vegetable poisons to those obtained with bacterial toxins, also that the immunity obtained was to a large extent specific. In his experiments in 1891 on feeding and injecting animals with ricin he obtained from them a serum which protected other animals from a lethal dose and the immunised animals showed no reaction on solid ricin being applied to the conjunctiva. Yet on instilling a dilute (1 in 10,000) solution of abrin violent inflammation resulted, showing that the immunity existed for ricin only, or at any rate, had not been produced against abrin. By performing his experiments in a test tube outside instead of inside the body Ehrlich was able to show that the reaction is chemical and follows chemical laws He showed that for the agglomerating action of ricin on xanthocytes[2] vitality in the corpuscles was not essential, that the action could be inhibited by the addition of serum from a ricin immune animal, and that the relative proportion of ricin and serum required to form such a neutral mixture remained constant.

But the real starting point of Ehrlich's side-chain theory was his laborious investigation for the standardisation of diphtheria toxin Certain anomalous results occurred. The standardisation of the various samples of toxins was done with a standard serum. To a quantity of this serum able to neutralise 100 lethal doses were added successive quantities of toxin until two limits were obtained—one in which so much toxin was added that the antitoxin was just neutralised and the other in which there was just so much excess of toxin as to produce death in the test animal in four days Ehrlich found, firstly, that of various toxins a quantity less than 100 lethal doses often neutralised the standard quantity of antitoxin and, secondly, that the excess of toxin required to be added to the neutral mixture was more than one lethal dose. In order to explain this anomalous phenomenon Ehrlich assumed and finally proved the existence of a modification of the toxin, the "toxoid " which is nearly non poisonous but is nevertheless capable of uniting chemically with the antitoxin. The toxoids may again be subdivided into three groups according to their affinity for the antitoxin which may obviously be either greater (protoxoid), equal (syntoxoid) or less than (epitoxoid) that of the toxin When the affinity is less than that of the toxin to the antitoxin it is obvious that the epitoxoid will first be set free in the mixture and until they are all set free no toxin will be free, so that the difference between a neutral antitoxin + toxin mixture (L_0) and one just killing (L_+) will be several lethal doses. Ehrlich makes the following chemical comparison —

$$\begin{array}{llll}
\text{100 (epitoxoid} & + \ \text{antitoxin)} & + & \text{100 (toxin + antitoxin)} \\
\text{100 NaCH}_3\text{ COOH} & & + & \text{100 NaCl.} \\
\text{Add 101 units :} & \text{101 epitoxoid} & + & \text{101 toxin} \\
 & \text{101 CH}_3\text{ COOH} & + & \text{101 HCl} \\
\text{We get 200 NaCl} + & \text{201 CH}_3\text{, COOH} & + & \text{1 HCl.} \\
\text{(toxin + antitoxin)} & \text{(epitoxoid)} & & \text{(toxin)}
\end{array}$$

—viz., the difference between L_0 and L_+ is enormously increased by the presence of the epitoxoid. The modification from toxin into toxoid may be brought about in various ways and is perhaps comparable to the allotropic change occurring in the case of phosphorus When a toxin is kept some alteration takes place and its toxic power diminishes , it may apparently occur also by the action of high frequency *currents on toxin solutions Since the toxoids are not only* capable of producing immunity, but are also very much less poisonous, there may be some hope for the clinical treatment of diphtheria and tetanus within the solenoid by the conversion of toxin into toxoid within the living body

Having shown that the union of toxin and antitoxin occurs in fixed ratios, more rapidly in concentrated solution and in the warm, &c., Ehrlich deduces the following conclusions "The capacity of the toxin to saturate the antidotes must depend upon a specific atomic group of the toxin molecule, which group must have a maximal specific relationship to a definite atomic group of the antitoxin molecule, the one fitting easily into the other as a key into a lock, in the same manner as Emil Fischer has explained the specific action of ferment " Various observations tend to verify this statement Thus tetano toxin affects primarily the cells of the central nervous system and Wassermann showed that by previously mixing the toxin with an emulsion of brain substance it was neutralised. The affinity was specific emulsions of other organs were devoid of action. It appears most reasonable to assume that such specific atomic groups or antitoxin pre exist in small numbers and that their saturation by the toxin affords a stimulus to the cell for their reproduction. As Ehrlich says 'In the course of a typical process of immunisation the cell becomes trained, so to speak, to produce the specific side-chains in large quantity In such processes of regeneration, not compensation, but hyper compensation is the rule, and with the enormous increases of the poison dose a point must be reached when there is such an excess of side-chains that the cell is surfeited and casts them off as useless ballast into the blood." If, on the one hand, the presence of such receptive side-chains is a necessary condition for the occurrence of the toxic process this circumstance also explains in the most simple way the production of the antidotes.[3]" The existence and formation of the toxoids he explains as follows ' One must assume in the toxin molecule two independent atomic groups. One of these is haptophore and brings about the union with the antitoxin or the antitoxic side chains of the cells. The other atomic group is toxophore—viz., is the cause of specific toxic action ' The toxophore group is unstable and easily decomposed , with its decomposition the toxin is converted into the toxoid. The union of the haptophore group with the cell side-chain enables the toxophore group to act on the cell through the bridge thus formed , when the side-chain is circulating in the blood and becomes attached to the toxin molecule there is no cell on which it can exert its toxic action it is neutralised. There is further evidence in support of this view It is possible to immunise with toxoids alone Since by hypothesis their haptophore group should be able to unite with the cell side-chain quite apart from and without the lost toxophore group, this result is quite in accordance with theory

Starting from this central point it has been possible to explain a number of biological phenomena by similar reasoning and similar experiments, which in their turn confirmed the correctness of the original theory Pfeiffer's phenomenon gave the stimulus for this series of investigations Already before Pfeiffer's observation the bactericidal power of normal serum and its property of dissolving xanthocytes of other species, together with the loss of this power on heating to 56° C , had been observed and recorded The increased bactericidal power of the serum of an animal immunised against cholera without any antitoxic power was also known Its bacteriolytic the essential property of micro-organisms, thus anticipating many so called modern ideas of infection.

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[2] Vide Sherrington Brit Med Jour 1901 p 742

[3] I use this word instead of the hybrid enormity "antibody"

Of the clinicians Bretonneau and his pupil Trousseau were among the first to recognise specificity in disease and to overthrow the teaching of their time For the schools of Brown and Broussais were then still dominant, schools which allowed only quantitative differences in diseases producing similar symptoms To them cholera, typhoid fever, and ordinary intestinal catarrh were merely different manifestations of the same disease Trousseau devotes two lectures to the "specific element in disease and contagion," interesting and fascinating reading like all Trousseau's work, even to-day Permit me to quote some of his anticipating words "There are two factors one is the morbific germ coming from without and the other the economy about to receive it, there is required a special aptitude of the organism to respond to the action of the stimulus When there is no such predisposition the morbific germ perishes"

But from this time onwards there was a parting of the ways until now when they are once more coming together The fault lies largely with the bacteriologists, especially in Germany for they, in spite of Virchow's warning, until recently refused to take predisposition and susceptibility properly into account. On the other hand, the physicians have not been entirely blameless Sir Thomas Watson has more to say on predisposition than on specificity in disease and even his fine instinct led him so far astray as to deny the infectivity of phthisis To-day ideas of immunity and infection are so bound up with one another that an explanation of one carries with it the reason for the other But this was not always so In bygone ages immunity was the prevalent idea and applied only to mineral and vegetable poisons In recent times it has been limited largely to immunity against bacterial (vegetable) infection. In the future it will include both these and also immunity to cellular animal infection. Nay, more, if pushed to the limits it would appear that immunity is merely a special instance of the evolutionary laws concerning adaptation to environment But this is an altruism not yet capable of proof and we must return to palpable experimental facts and their meaning

Immunity may perhaps be defined simply as the power to resist infection. Metchnikoff thinks it at present impossible to give a more precise definition of immunity to infectious disease than "the complex of phenomena by which an organism can resist the attack of the specific pathogenic microbes," and the resistance, we may add, to their products. So far as I know Ehrlich, perhaps wisely, refrains from any definition

The two chief theories of the present day are those promulgated and supported by Metchnikoff and Ehrlich respectively Originally opposed to one another, like the humoral and iatro-chemical theories of the Middle Ages, they are really only rays of light refracted at different angles from the same source of light and will ultimately be made to fuse into one brilliant cellulo-humoral theory of immunity Not that we can accuse the upholders of the modern humoral theory as we could their predecessors of a period of bacterial supremacy, of neglecting the fundamental ideas of cellular pathology, it is merely a question of distribution. While, on the one hand, Metchnikoff and his school believe that the white cells directly attack the invading bacteria Ehrlich and his followers have laid more stress on the constituents of the body fluids. But even they regard a bacterial toxin as poisonous only in the form of a chemical combination with a cell constituent If the cell does not possess this constituent the bacterial toxin is innocuous—the cell possesses a natural immunity On the other hand, these cell constituents coursing in the blood are the protective bodies and they have had their origin in the cells. As Behring tersely puts it, "that substance in the living body which, when situate in the cell, is a preliminary essential to the toxic process becomes a curative agent when it enters the blood stream." To take a very gross illustration Suppose a ball of cotton wool to have wrapped up in it some small lumps of sodium carbonate and immersed in an acid fluid. There will be an evolution of gas in the ball and it will be partly disintegrated. If the ball had previously secreted these lumps the chemical reaction would have gone on outside

There are only two theories which we need consider at all in detail, but before attempting an exposition of these theories it will, I think, be better to describe a few of the phenomena of immunity and then to proceed to the explanations put forward The spirited contest between the exponents and their partisans of these two rival theories has led to the most ingenious and interesting experiments of modern biological investigation.

Immunity may be either congenital or acquired. When congenital true infection for particular disease is impossible Into the explanation of this phenomenon we shall inquire later This form of immunity is always natural. Acquired immunity may be either active or passive. By active immunity we understand that acquired either by an attack of the disease, in which case it is natural, or by inoculation, when it is artificial. In both instances a process of what may fairly be termed infection occurs. Passive immunity is produced by the introduction into one organism of the products of active immunity in another By the injection of the products of active immunity against diphtheria from the horse into the human subject the latter becomes passively immunised against the disease. But infection itself is not of a single kind and immunity will vary with the nature of the infection. The action of some infective agents—e.g, the tubercle bacillus and the leprosy bacillus—is largely mechanical, they produce fibroid and degenerative changes in the tissues which they attack. Others when introduced into the body do not multiply extensively but remaining at the site of inoculation perform their malignant functions by secreting poisonous substances to enter the circulation. To this group belong diphtheria and tetanus. Yet others are capable of multiplying in the tissue as well as producing poisons and so exert their influence in both ways

A suitable soil is essential for many bacteria. Introduced beneath the skin the comma bacillus is comparatively soon destroyed, but if put into the alimentary canal it produces cholera. Cutaneous infection with bacillus anthracis produces severe illness, but taken into the alimentary canal it is practically harmless The tubercle bacillus by whatever route it may enter the body can settle, multiply, and produce its specific lesions It must be remembered that the mere presence of a specific bacillus is not evidence either of infection or immunity of the organism in which it is found, for the tubercle bacillus has been found in the sputum the typhoid bacillus in the fæces, and the diphtheria bacillus in the throat of healthy persons Both are relative terms, there is no certain infection or absolute immunity Infection, then, may be due chiefly either to the micro-organism or its products. Corresponding to these two modes we can distinguish two classes of immunity—viz, a bactericidal and an antitoxic immunity Again corresponding to these distinctions we find a variable duration of immunity, it may be only for months or it may be for years It may be slight or nearly absolute, and finally it may be either individual or racial.

Let us now consider the two chief theories put forward to explain the phenomena of immunity, and taking them in their historical order commence with that of Elias Metchnikoff.

Metchnikoff was originally a zoologist who, as he himself tells us has "strayed into the domain of chemical biology and of medical science," and his theory is essentially that of a zoologist. I should like to make it clear that I say this in no depreciatory sense. On the contrary, nobody, I hope, can be more alive to the interdependence of the several sciences and particularly of the dependence of the science of medicine—I say advisedly the science, not the art, of medicine—on the sister sciences. It is rather with the object of directing attention to the way in which a theory based on the broad principles of cellular biology has been applied to the special problems of disease as contrasted with another theory which, starting from the comparatively narrow basis of disease, is finally found applicable and pertinent to many wide biological problems The starting point of Metchnikoff's theory was the observation that the protozoa habitually ingest and digest bacteria, whether pathogenic or no—that the bacteria form for them an important aliment. On the other hand, the more highly developed organisms with a digestive tract are unable to digest bacteria, but when they enter the circulation, unless they are pathogenic, they disappear, and not by way of the kidneys unless the latter are injured Passing up the line of increasing complexity of organisation we find these large cells at first distributed in the alimentary canal or along the external surface of the organism, until finally they are confined to the blood stream. The blood of the invertebrates contains but a single kind of amœboid cell, in the vertebrates, especially warm blooded vertebrates, there are two kinds, which Metchnikoff designates as macrophages and microphages respectively They correspond to what the ordinary nomenclature calls large mononuclear leucocytes and the smaller polymorphonuclear white cells. On the introduction of any foreign matter, whether bacteria, metallic granules, or even sterile fluids, into the organism, the leucocytes leave their normal habitat, and, passing through the vessel walls, go to the attack, and often to the annihilation, of the intruder Having surrounded and engulfed it, where possible, they then proceed to digest it. But when the foreign body is organised, the particular kind of leucocyte to lead the attack will vary according to the nature of that body The macrophages, as befits their larger, slower, and more unwieldy character have, according to Metchnikoff, a preference for animal cells—e.g , xanthocytes , for the bacteria of chronic disease—e g , tubercle and leprosy , and for the malarial and other analogous parasites The microphages, on the other hand, show a preference for the micro-organisms causing acute disease The phagocytic theory was in this crude condition in 1888 when Nuttall discovered the bactericidal action of serum and it received further blows by Behring s discovery of antitoxins in 1891 and Pfeiffer's finding of the bacteriolysins in 1894 But Metchnikoff has managed with considerable ingenuity to adapt his theory to these new factors and with much facility to abandon the purely mechanical explanation at first afforded by his theory

But since the modifications of Metchnikoff's theory and many of the experiments performed to support them are due to the evolution and development of Ehrlich's theory it will be well to consider the two theories side by side, or, rather to see what explanation is afforded by Metchnikoff s theory of Ehrlich's facts

Ehrlich s theory is really an outcome of his investigations into the nature of toxins and antitoxins He had early shown that as regards immunity similar results might be obtained with vegetable poisons to those obtained with bacterial toxins, also that the immunity obtained was to a large extent specific. In his experiments in 1891 on feeding and injecting animals with ricin he obtained from them a serum which protected other animals from a lethal dose and the immunised animals showed no reaction on solid ricin being applied to the conjunctiva. Yet on instilling a dilute (1 in 10,000) solution of abrin violent inflammation resulted, showing that the immunity existed for ricin only, or, at any rate, had not been produced against abrin By performing his experiments in a test tube outside instead of inside the body Ehrlich was able to show that the reaction is chemical and follows chemical laws He showed that for the agglomerating action of ricin on xanthocytes[2] vitality in the corpuscles was not essential, that the action could be inhibited by the addition of serum from a ricin immune animal, and that the relative proportion of ricin and serum required to form such a neutral mixture remained constant.

But the real starting point of Ehrlich's side-chain theory was his laborious investigation for the standardisation of diphtheria toxin Certain anomalous results occurred. The standardisation of the various samples of toxins was done with a standard serum. To a quantity of this serum able to neutralise 100 lethal doses were added successive quantities of toxin until two limits were obtained—one in which so much toxin was added that the antitoxin was just neutralised and the other in which there was just so much excess of toxin as to produce death in the test animal in four days Ehrlich found, firstly, that *of various toxins* a *quantity* less than 100 lethal doses *often* neutralised the standard quantity of antitoxin and, secondly, that the excess of toxin required to be added to the neutral mixture was more than one lethal dose. In order to explain this anomalous phenomenon Ehrlich assumed and finally proved the existence of a modification of the toxin, the "toxoid" which is nearly non-poisonous but is nevertheless capable of uniting chemically with the antitoxin. The toxoids may again be subdivided into three groups according to their affinity for the antitoxin, which may obviously be either greater (protoxoid), equal (syntoxoid), or less than (epitoxoid) that of the toxin. When the affinity is less than that of the toxin to the antitoxin it is obvious that the epitoxoid will first be set free in the mixture and until they are all set free no toxin will be free, so that the difference between a neutral antitoxin + toxin mixture (L_0) and one just killing (L_+) will be several lethal doses. Ehrlich makes the following chemical comparison —

$$\begin{array}{llcl}
\text{100 (epitoxoid} \quad + & \text{antitoxin)} & + & \text{100 (toxin + antitoxin)} \\
\text{100 } NaCH_2\,COOH & & + & \text{100 } NaCl \\
\text{Add 101 units} \quad : & \text{101 epitoxoid} & + & \text{101 toxin,} \\
 & \text{101 } CH_3\,COOH & + & \text{101 } HCl\,; \\
\text{We get 200 } NaCl \quad + & \text{201 } CH_3\,COOH & + & \text{1 } HCl \\
\text{(toxin + antitoxin)} & \text{(epitoxoid)} & & \text{(toxin)}
\end{array}$$

—viz., the difference between L_0 and L_+ is enormously increased by the presence of the epitoxoid. The modification from toxin into toxoid may be brought about in various ways and is perhaps comparable to the allotropic change occurring in the case of phosphorus When a toxin is kept some alteration takes place and its toxic power diminishes , it may apparently occur also by the action of high frequency currents on toxin solutions Since the toxoids are not only capable of producing immunity, but are also very much less poisonous, there may be some hope for the clinical treatment of diphtheria and tetanus within the solenoid by the conversion of toxin into toxoid within the living body

Having shown that the union of toxin and antitoxin occurs in fixed ratios, more rapidly in concentrated solution and in the warm &c., Ehrlich deduces the following conclusions "The capacity of the *toxin to* saturate the antidotes must depend upon a specific atomic group of the toxin molecule, which group must have a maximal specific relationship to a definite atomic group of the antitoxin molecule, the one fitting easily into the other as a key into a lock, in the same manner as Emil Fischer has explained the specific action of ferment." Various observations tend to verify this statement Thus tetano toxin affects primarily the cells of the central nervous system and Wassermann showed that by previously mixing the toxin with an emulsion of brain substance it was neutralised. The affinity was specific emulsions of other organs were devoid of action. It appears most reasonable to assume that such specific atomic groups of antitoxin pre exist in small numbers and that their saturation by the toxin affords a stimulus to the cell for their reproduction. As Ehrlich says "In the course of a typical process of immunisation the cell becomes trained *so to speak*, to produce the specific side-chains in large quantity In such processes of regeneration, not compensation, but hyper compensation is the rule, and with the enormous increases of the poison dose a point must be reached when there is such an excess of side-chains that the cell is surfeited and casts them off as useless ballast into the blood." 'If, on the one hand, the presence of such receptive side-chains is a necessary condition for the occurrence of the toxic process this circumstance also explains in the most simple way the production of the antidotes.[3]" The existence and formation of the toxoids he explains as follows ' One must assume in the toxin molecule two independent atomic groups One of these is haptophore and brings about the union with the antitoxin or the antitoxic side chains of the cells. The other atomic group is toxophore—viz , is the cause of specific toxic action " The toxophore group is unstable and easily decomposed , with its decomposition the toxin is converted into the toxoid. The union of the haptophore group with the cell side-chain enables the toxophore group to act on the cell through the bridge thus *formed* , when the side-chain is circulating in the blood and becomes attached to the toxin molecule there is no cell on which it can exert its toxic action it is neutralised There is further evidence in support of this view It is possible to immunise with toxoids alone Since by hypothesis their haptophore group should be able to unite with the cell side-chain quite apart from and without the lost toxophore group, this result is quite in accordance with theory

Starting from this central point it has been possible to explain a number of biological phenomena by similar reasoning and similar experiments, which in their turn confirmed the correctness of the original theory Pfeiffer s phenomenon gave the stimulus for this series of investigations Already before Pfeiffer s observation the bactericidal power of normal serum and its property of dissolving xanthocytes of other species together with the loss of this power on heating to 56° C , had been observed and recorded The increased bactericidal power of the serum of an animal immunised against cholera without any antitoxic power was also known Its bacteriolytic property was yet unknown Pfeiffer found that either by the simultaneous intraperitoneal injection of a lethal dose of cholera vibrios, together with the serum of an immunised animal, or by the injection of the cholera vibrios alone into the abdominal cavity of an immunised animal, the micro organisms lost their motility, became spherical, and then underwent a granular degeneration, while the animal survived (Pfeiffer's phenomenon) It was shown by Fränkel and Sobernheim that this result obtained also if the immune serum had been previously heated to 56° C and its bactericidal power consequently destroyed. It follows that if the bactericidal substance plays any part in this reaction it must be supplied from the blood of the animal subjected to the experiment. Bordet proved that two substances contributed to Pfeiffer's reaction by showing, firstly, that it occurred *in vitro* and, secondly, that if the bactericidal property of the immune serum were destroyed by first heating it to 56° C the bacteriolytic action could be restored by the addition of a small quantity of normal serum.[4] By similar experiments, using xanthocytes instead of bacteria for immunisation, Bordet was able to show that the hæmolytic power of the immune serum was destroyed by heating and could be restored by the addition of normal serum which by itself possessed no hæmolytic properties

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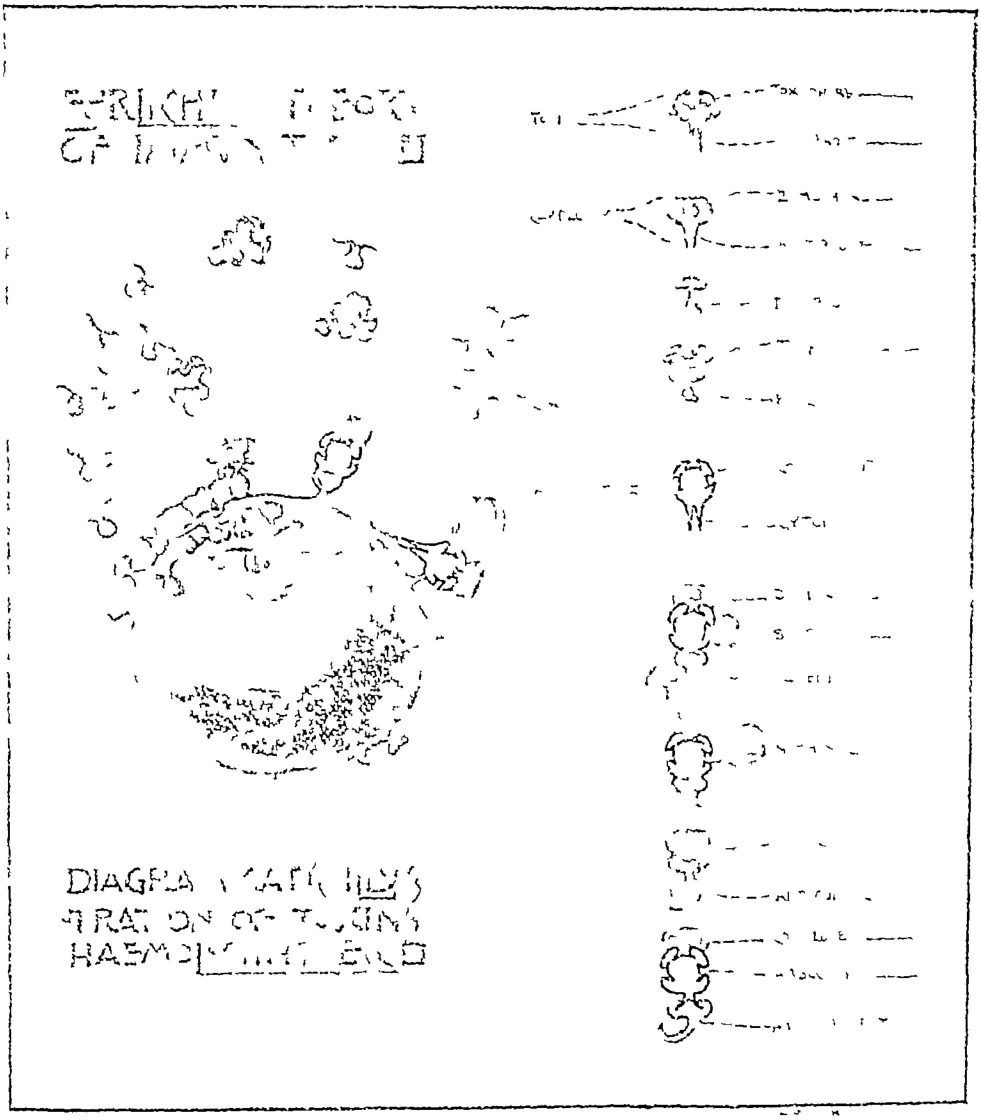
[2] Vide Sherrington Brit Med Jour 1901, p 742

[3] I use this word instead of the hybrid enormity antibody"

In order to extend his theory of the formation of antitoxins to that of hæmolysins Ehrlich made a long series of experiments. He recognised, of course, that Bordet was right in assuming the existence of two bodies for the production of the phenomenon and that one body (mediator amboceptor) was present in quantity in the serum of immunised animals only, while the other (the complement) occurred in the serum of normal untreated animals. He reasoned that if the hæmolysin were formed in a similar way to antitoxin, then it ought to be saturated and neutralised by the addition of xanthocytes which would correspond to the toxin in an antitoxin mixture. This was proved to be so by taking the serum of a goat immunised against sheep's blood, heating the serum to 56° C to destroy its hæmolytic power (by the destruction of the complement), and then adding to it sheep's xanthocytes. After standing awhile they were again separated by centrifugalising If the mediator had united with xanthocytes then on the addition of normal serum to the corpuscles hæmolysis ought to occur This was found to be the case. On the other hand, if the mediator had been removed from the immune serum, then on the addition of fresh normal serum and xanthocytes to it no hæmolysis of the latter should occur Nor did it This proved, as Ehrlich says, "that the amboceptor possesses a specific haptophore group which binds it to the xanthocyte, as required by the side-chain theory" On the other hand, if to normal goat's serum, which contains the second body, the complement, there be added sheep's



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[4] It will be convenient to note here that a serum deprived of such a property by heating is called an inactivated serum and when this property is restored a reactivated serum

xanthocytes, then, if they were capable of binding the complement, on centrifugalising off the xanthocytes and adding fresh xanthocytes and mediators to the removed supernatant serum, no hæmolysis should occur. But it does, showing that the complement has not united with the xanthocytes. Moreover, if xanthocytes and immune serum be mixed as before, but kept in the cold, no hæmolysis occurs. On centrifugalising and treating the xanthocytes as just mentioned one can prove that the amboceptor has united with the xanthocyte, but not the complement with the intermediary body. Since the interposition of the amboceptor is thus shown to be essential Ehrlich concludes "that the amboceptor has two different haptophore groups, one having a great affinity to the corresponding haptophore group in the xanthocyte and a second haptophore group of less chemical energy which can attract more or less completely the complement present in the serum."

Since the action of the complement produces effects which with Pfeiffer we must regard as analogous to digestion, we shall probably not be far wrong in regarding the complement as possessed of the properties of a digestive ferment. Taking a familiar illustration—in which, however, the characters are really reversed—we may regard the pepsin in an artificial digestion mixture as the amboceptor and the acid as the complement. That is, the pepsin is the special factor, like the amboceptor occurring only in the immune serum, while the acid which may, as we know, be either hydrochloric, or sulphuric, or oxalic, &c., corresponds to the complement to be found in a variety of sera. The lock and key simile of E. Fischer affords perhaps the best analogy. The lock is the cell, the key is the amboceptor, and the hand which turns the key is the complement. As a rule but one key (or at most a few similar ones, a small number compared with all) will fit a given lock. But nearly any hand, it may be of a monkey or performing dog, can turn the key in the lock. The same explanations hold good for the action of the agglutinins—viz., those substances in immune sera which cause agglutination of the corresponding bacteria, and for the action of the precipitins—viz., those substances in immune sera which cause precipitation when added to the fluids or solutions of substances used for immunisation. In the case of milk they have been called coagulins.

I shall return later to these particular substances. It will suffice here to point out that their occurrence led Ehrlich to expand his hypothesis and to apply it to explain also the normal processes of food assimilation. The formation of antibodies to normal food stuffs is quite analogous to the formation of antitoxins to toxins, so that the generation of antitoxins "is only a reproduction of a process in normal cell life." Ehrlich believes that the proteid molecule of a food becomes attached to one group of the cell receptor while the other group is already occupied by a ferment (the complement) molecule to make the food stuff assimilable. In this respect the receptor is more complicated than that for the toxin which has only one group, but is less complicated than that concerned with the formation of hæmolysins, cytolysins, &c. In the last instance separate groups are required for union with the broken down bacteria or xanthocytes and for the complement circulating in the blood stream. This can be most easily explained by reference to the diagrams (modified from Ehrlich) and to the models.

ROYAL NATIONAL PENSION FUND FOR NURSES.—The annual meeting of the members of this society, of which Her Majesty the Queen is the President, was held on March 12th at River Plate House, Finsbury circus, E.C. Sir Henry Burdett, K.C.B., the deputy chairman, presided in the absence of the chairman, who is abroad, and moved the adoption of the report for 1902. In the pension branch the number of policies issued was 869 as against 842 in 1901. Progress is shown in the work of the annuity branch. At the end of 1901 there were 339 annuitants holding 500 policies, while on Dec. 31st, 1902, there were 415 annuitants under 598 policies and for the December quarter annuities were being paid out at the rate of over £8000 a year. The amount distributed in sick pay was £1568, as against £1633 in 1901. The percentage of expenses to premium income—3·26 per cent.—was lower than it had been in any previous year and considerably below the average for the past five years which is 3·56 per cent. The total

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ABSTRACT OF

The Hunterian Lectures

ON

SOME POINTS IN THE ANATOMY AND PATHOLOGY OF THE VERMIFORM APPENDIX.

Delivered before the Royal College of Surgeons of England on March 9th, 11th, and 13th, 1903,

BY W. McADAM ECCLES, M.S. LOND., F.R.C.S. ENG.,

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LECTURE III.[1]

Delivered on March 13th.

MR. PRESIDENT AND GENTLEMEN,—Recently the association of appendicitis with joint lesions has been brought before the notice of the profession by several observers and arthritis as a complication or sequela of appendicitis is worthy of further investigation.

THE ASSOCIATION OF APPENDICITIS WITH JOINT LESIONS.

Any infective process in the body may be associated with secondary affections of the synovial cavities. The arthritis of gonorrhœa and that of scarlet fever are two only of many instances which may be cited in this connexion. It is therefore self evident that in the infective processes occurring in the appendix there will be a liability for a similar condition to supervene. Whether, however, this should be spoken of as a rheumatic affection is quite another matter. I have previously stated that I believe all cases of distinct appendicitis are dependent upon the action of micro-organisms. If ordinary articular rheumatism associated with cardiac lesions in many instances is in reality due to the invasion of a specific diplococcus, then there is no doubt but that it is possible for this organism to infect the lymphoid tissue of the appendix in much the same way that it does the adenoid tissue of the palatine tonsils. I am unaware, however, of any case in which an excised appendix has been shown to be infected with this coccus, so recently described by Dr. F. J. Poynton and Dr. A. Paine.[2]

Personally in the somewhat rare cases in which definite joint lesions are associated with inflammation of the appendix, I look upon the arthritis as wholly secondary to the appendicitis, of the nature, perhaps, of a subacute pyæmia, rather than that both joint affection and appendix inflammation are coincidently due to the same general infection. It is true that the colon bacillus may induce an arthritis which has many of the characteristics of that of ordinary rheumatism, but it is more common in such cases to find that the fluid formed within the joints is sero-fibrinous, semi purulent, or even well marked pus. A practical outcome of this view of the condition is that if there be a source of infection in the appendix the sooner this is removed the safer for the patient.

INFLAMMATION OF THE APPENDIX ASSOCIATED WITH PREGNANCY AND PARTURITION.

The association of appendicitis with pregnancy and parturition is one of the gravest import and one which is by no means uncommon. That a woman who has suffered from an attack of appendicitis and has not had the organ excised runs an enormous risk if she becomes pregnant is now coming to be a well recognised fact. It is difficult to judge whether the occurrence of the pregnancy is a factor in the lighting up of the inflammation in the appendix, but it is equally certain that such an inflammatory condition commencing during pregnancy or after parturition has up to now been attended with often fatal results. This unhappy termination, I think, in many cases is due to a want of early recognition of the lesion and of its prompt surgical treatment.

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[1] Lectures I. and II. were published in THE LANCET of March 14th, 1903, p. 703.

[2] Transactions of the Pathological Society of London, 1901, p. 10

Appendicitis occurring during pregnancy—Inflammation of the appendix may supervene at any period of pregnancy Appendicitis is graver in its prognosis the longer pregnancy has been in existence It will lead frequently to the death of the fœtus or of the mother and fœtus In the early months of pregnancy there is often some disturbance of the digestive system and constipation is not uncommon, for constipation is very frequent among women and pregnancy aggravates it. It may be that these troubles have a bearing on the incidence of appendicitis The history of a previous attack of inflammation of the tube is always of great importance in arriving at a correct diagnosis, but a primary attack may show itself in a pregnancy There can be little doubt that if signs and symptoms of appendicitis show themselves in the first three months of pregnancy the safest course is to treat the case as if it were one in which no fœtus resided within the uterus—that is, to deal with it surgically At this early stage of pregnancy abortion is not a serious complication of an operation upon an appendix, but to delay surgical interference in the appendicitis of early gestation because of the possibility, or even probability, of abortion is to subject the patient to a very real and very serious risk. When, however, inflammation of the appendix does not show itself until after the uterus has risen out of the pelvis, and especially in those instances in which the appendix lies over the brim of the pelvis, a much more complicated condition necessarily ensues. It is then that the uterus approaches the dangerous region near the appendix and renders it likely that its own serous covering may in part form the wall of an abscess cavity connected with the diseased organ From this will easily be seen the extreme danger of the condition.

As to the diagnosis of appendicitis in pregnancy from the fourth month onwards the difficulties are distinctly increased. The presence of the enlarged uterus, the want of softness of the abdominal walls, and the symptoms, such as vomiting and constipation referable to the pregnant state, are all obstacles to a conclusive decision as to the exact site of the inflammatory mischief Here, again, the history of a previous attack is of the greatest assistance. I am chiefly inclined to rely upon the sudden onset of the symptoms, the marked rigidity of the right rectus, and the early localisation of the pain in the right iliac fossa. A rapid rise of temperature with a quickened pulse rate, vomiting, the discovery of nothing definite by a careful vaginal and rectal examination, and the presence of leucocytosis are all aids to a correct diagnosis. But it is safer in a really doubtful case to assume that inflammation of the appendix is present than to temporise and to delay an exploration until too late The all important question is the one of treatment after a diagnosis has been arrived at

Miscarriage or premature labour is almost certain to occur and with it arises the chief danger of the condition both with regard to the mother and the child. Seeing that this complication is almost inevitable the treatment must be directed so as to minimise the danger attending it. As in appendicitis occurring in the male or the non pregnant female the line of action may be non operative or operative From the record of published cases, and probably still more from those that remain unpublished, the results in those instances in which the inflammatory condition has been allowed to progress to perforation or gangrene of the appendix and to suppuration around it have in at least 70 per cent been disastrous, both mother and child dying It would therefore seem to be rational and wisest to operate upon all cases of even suspected appendicitis in pregnancy at the earliest possible moment, disregarding the fact of the gravid uterus and dealing with the appendix. If the uterus does empty itself it will do so with much less danger if there is no abscess cavity in proximity to it and although the life of the child will probably be sacrificed that of the mother may be saved Further, supposing the uterus retains its contents there is good hope for both mother and child Seeing that the termination of expectant treatment, even supposing the pus finds its way into the bowel, is so uncertain and so fatal, it can hardly be worse from prompt surgical interference and might be a good deal better

With regard to the suggestion that the uterus should be made to discharge its contents by artificial interference before an operation on the inflamed appendix is undertaken, I cannot see what benefit can accrue from such a proceeding If an operation is performed without the uterus being emptied previously, the child's life may be saved. If pus should have formed it is possible, and even probable, that the alteration in the position of the uterus, consequent upon its contraction, may tear down adhesions and flood the peritoneal cavity with the septic fluid. If, on the other hand, the abscess cavity is opened and even merely flushed out there will be less danger of general infection than if the uterus subsided with pus pent up under tension. There should be no need to have to empty the uterus artificially if the condition of the appendix is diagnosed and treated early

Appendicitis occurring during the puerperal state—Appendicitis manifesting itself after parturition is somewhat different in its course and in its termination to that occurring during gestation. It is possible for the condition to be in evidence, or latent, during the last few days of pregnancy, and for it to be fanned into activity by the disturbance caused by delivery A woman with a diseased appendix, as, for instance, when the organ contains a calculus and lies over the brim of the pelvis, is placed in distinct danger of an acute attack soon after the commencement of the puerperium The condition is then most apt to be mistaken for a septic condition dependent upon infection of the interior of the uterus, but there are several signs which should serve to distinguish the appendix inflammation from the uterine sepsis. The lochia remain sweet, vaginal examination may reveal nothing abnormal, pain localises itself to the right iliac fossa, intra uterine douching does not effect any lowering of the temperature, marked leucocytosis may be found and a history of previous attacks may be gleaned. The prognosis is not so grave as in the cases of appendicitis complicating pregnancy, but it is sufficiently serious to make the cases very anxious ones to the medical attendants and friends I consider that each case should be treated on the lines that would be considered best if the condition was not complicated by a recent delivery

APPENDICITIS IN RELATION TO LIFE INSURANCE.

There can be no doubt that as the medical examiner is becoming more and more inclined to look upon the history of pleurisy in a proposer as one very suspicious of tubercle, so he will be likely to regard the vague term of "inflammation of the bowels" or even the still more common "bilious attacks" as possibly indicative of recurrent appendicitis. It is extremely difficult to arrive at any degree of accuracy as to the death rate from appendicitis but that in the present day it really is the primary cause of a large number of deaths assigned to "peritonitis," "inflammation of the bowels," and other such lesions there can be but little doubt. Hernia is practically always inquired about in a proposal form but a question seeking information as to the occurrence or not of signs or symptoms of appendicitis is hardly if ever put, and yet I venture to think—and here, again it is difficult to prove—that the latter lesion produces a death rate far in excess of that of the former Then, again, it is important to remember that appendicitis is a disease affecting particularly young adults, and especially the male sex just the particular class of person most usually seeking to become insured Against loss by death from a primary attack of inflammation of the appendix it is probable that insurance offices cannot be protected, but as a precaution all examiners should pay careful attention to intestinal history which is at all suggestive of an attack even if this is very indefinite. I am sure in any suspicious proposal it is of great importance to weigh the habits of the proposer in respect of diet, hurried meals, and action of the bowels and also the condition of the teeth.

Given, on the other hand, a proposer in whom a fairly definite attack of inflammation of the appendix but without operative treatment has occurred, what is to be the attitude of the medical examiner in expressing his opinion as to the eligibility of the life? It is here that extremes meet. Some would refuse to accept unless the appendix has been removed, others would pass without loading provided that two years had elapsed since the attack. Personally I am inclined to load, say with seven to ten years extra most cases in which an attack of appendicitis has been diagnosed and the appendix remains *in situ*. It is well known that although a first attack which is recognised may be apparently a very slight one, yet the second may lead to the death of the sufferer On the other hand a case in which the appendix has been removed and the scar resulting is sound may be accepted at the ordinary rates six months after the laparotomy When there has been more than one attack I should not pass the proposer unless the appendix had been successfully removed.

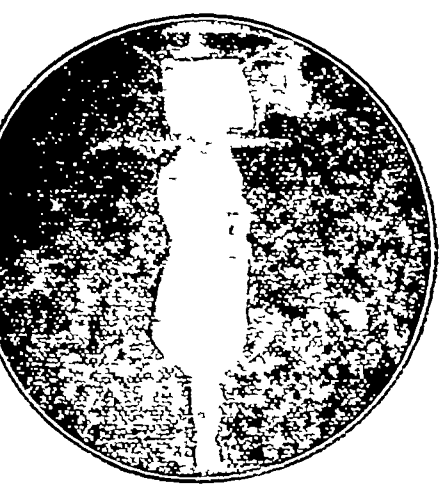
Then there are those cases in which an abscess has formed and has been drained without the removal of the appendix. If relapse was common in these conditions it would be again necessary to charge an extra premium, but second attacks are distinctly rare, some 3 to 4 per cent being probably about the proportion. Moreover, when a relapse does occur it usually takes place within the first year after the suppuration. Thus, other things being equal, the life may be accepted provided there have been no secondary signs for two years following the drainage.

NEW GROWTHS OF THE APPENDIX.

New growths of the appendix are rare. They may be innocent or malignant.

Innocent new growths are extremely rare. Examples have been recorded of lipomata, myomata, and lymphadenomata. I have been unable to find actual specimens of these conditions. Deaver[3] records two instances of fibro-myoma of the appendix. One was from a patient, the subject also of fibro-myomata of the uterus, and both organs were removed at the same operation. The appendix presented two fibroid growths, each of which was spheroidal in shape and about five millimetres in diameter. One was situated at the mid-point of the appendix opposite the attachment of the mesentery, and the other towards the tip of the organ within the mesenteric attachment. They projected somewhat from the surface of the appendix and each was well circumscribed, surrounded by a rather dense capsule, and was firm to the touch. On section they were whitish and glistening and revealed a fibrillar structure. One was much harder than the other—being of almost stony hardness—and cut with a grating sensation. The wall of the appendix elsewhere was much thickened and the lumen was much constricted. The mucous membrane appeared smooth and atrophic. On microscopical examination there were detected the lesions of moderate interstitial appendicitis, with considerable thickening of the walls of the blood-vessels. The tumours consisted of bundles of dense fibrous connective tissue that coursed in various directions and intertwined among themselves and interspersed between them was a small number of unstriped muscular fibres. The growth opposite the meso-appendix contained a considerable amount of calcareous infiltration. The second case was like the first. There is in the museum of St. Bartholomew's Hospital a specimen of a simple papilloma of the mucous membrane of the appendix. About one-third of the distance along the appendix from the cæcum there project from the mucous membrane lining the lumen three well marked papillomatous growths. The largest of these is about half an inch in length and hangs freely into the cavity of the appendix which is apparently somewhat dilated. The papillomata were innocent in nature and covered with typical columnar epithelium.

FIG. 9.



Papilloma of the vermiform appendix (St. Bartholomew's Hospital Museum).

Malignant new growths of the appendix are not so rare as are innocent growths, but they are sufficiently uncommon to make their occurrence a matter of interest and one for record. Such neoplasms are primary or secondary. New growths secondary to malignant disease primary elsewhere in the abdomen are not so very infrequent. Rolleston has remarked that it is possible that primary malignant new growths of the appendix are not so rare as is commonly supposed and he accounts for the scarcity of records from two causes, first, because the appendix may be removed for symptoms of appendicitis in quite the early stages of carcinoma and for want of a histological examination the presence of the new growth may be overlooked, and secondly, because if the disease is not removed early it will run its course, and at the post-mortem examination it will be difficult or impossible to say where the primary lesion originated. Both carcinoma and sarcoma are met with in the appendix, and also the growth which is now termed endothelioma. Carcinoma is found either of the columnar celled, adeno-carcinoma, or of the spheroidal celled variety. Such epithelial new growths have their origin in the epithelium of the glands or crypts in a manner similar to carcinoma of the large intestines.

There are two interesting points in the question of the etiology of carcinoma of the appendix. Do previous attacks of inflammation predispose to the commencement of the neoplasm? Does the presence of appendicular calculi tend to induce the cancerous condition? Unfortunately the records of instances of primary carcinoma of the appendix are not too comprehensive and therefore data are somewhat wanting which would lead to a satisfactory conclusion on these points. I have been able to collect only 14 instances of undoubted primary carcinoma and three of undoubted primary sarcoma or endothelioma. In only two out of these 17 is there any mention of an appendicular calculus being present. In five, on the other hand, there is a definite history of one or more previous attacks of appendicitis, in some of which a former attack had occurred several years before the one which led to the excision of the organ. While, therefore, there is scanty evidence of appendicular calculi being a predisposing cause of carcinoma in a manner similar to that in which biliary calculi are thought to be precursors of cancer of the gall bladder there is more in favour of previous attacks of appendicitis being related to the incidence of carcinoma.

HERNIA OF THE VERMIFORM APPENDIX.

The number of instances in which the vermiform appendix has been found in hernial sacs is becoming more numerous every day, not probably because the actual cases are more numerous but because there are many more operations for hernia at the present time than formerly. The appendix may constitute the sole contents of a hernial sac or it may be present with other viscera. The latter condition is chiefly concerned with cæcal hernia and will not therefore be discussed.

The appendix as the sole contents of a hernia is an interesting condition and one which at times severely taxes diagnostic skill. The question which first arises is as to how the appendix has come to enter a peritoneal pouch protruded beyond the abdominal wall. The normal appendix, some three or four inches in length, with a complete meso-appendix, is free to move within the abdomen within a certain range around its attachment to the cæcum, but it cannot be brought down to, much less forced or dragged through, either the right inguinal or right femoral ring. One of two conditions, then, is necessary for its descent. In the first place it may be considerably in excess of its usual length. This can be either the outcome of congenital elongation or of a stretching the result of adhesion. In the second place the cæcum may be abnormally free because of the presence of a long mesocæcum, with the result that the appendix may thus approach dangerously near to a hernial aperture.

A further point comes up for investigation in the query whether the appendix alone can be the primary and the final contents of a hernial sac. It is undoubtedly possible for it to be extruded into the sac of a so-called congenital right inguinal hernia, for in such a case there is a naturally patent processus vaginalis into which any viscus lying near may be forced. It is certainly somewhat difficult to understand how such a small part of the alimentary tract, having so little of surface area, would be able of itself to form a sac by pressure. But, on the other hand, is it actually necessary that there should be the special and active distending force of a particular viscus in order that an acquired pouch of peritoneum may be produced?

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[3] Appendicitis, 1900, p. [illegible]

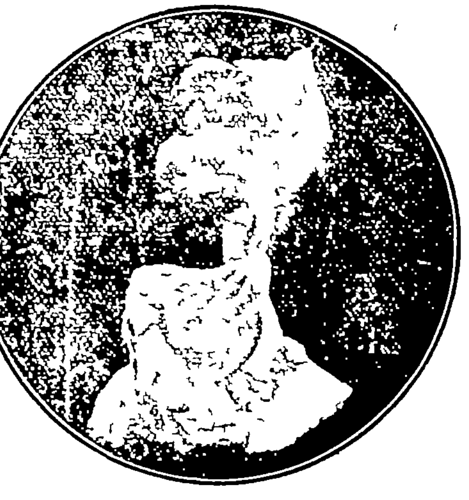
It does not require any very resistant organ to act in the production of a pouch—in fact, it may be true that no pressure of any individual viscus is absolutely needful. Some sacs with very narrow necks and yet apparently of acquired origin have but an extremely thin process of elongated omentum lying within them, and surely this would seem of itself less able to aid by pressure in the formation of a protrusion of the serous membrane than even the appendix. If, however, it is necessary to suppose that other of the abdominal contents besides the appendix have been the cause of the hernial sac, it is difficult to account for the very small pouches, and these often with narrow necks, which are found not infrequently as the coverings of prolapsed appendices. Doubtless this argument is open to the rejoinder that it is quite possible for the original multiform contents of the sac to have been reduced all but the appendix (which might alone have become adherent) and then for the mouth and neck of the sac to contract around the small structure passing through them, and beyond this it is perhaps feasible that strangulation, or, at least, some constriction of the appendix, may thereby occur. Or, again, the appendix might slip into a sac which had not previously contained it but which had been occupied by some other viscera.

The appendix when herniated is liable to a number of changes, some of which are peculiarly interesting and others of the gravest import.

Elongation.—Elongation is almost invariably present. The normal or average length of the tube is often given as about four inches, but the appendix may vary from one inch to nine or more inches. This lengthening, as has been remarked, may be the outcome of traction upon the tube, either by its being repeatedly nipped in the hernial ring or by its being adherent within the sac. Moreover, an appendix may be congenitally longer than usual; this fact itself may predispose to its protrusion. With this elongation there is sometimes an accompanying diminution in the calibre of the tube in its whole length or only in that part which still lies within the abdomen.

Adhesions.—Adhesions may form and they seem to be of comparatively common occurrence. Indeed, the appendix would appear to be proportionately more frequently adherent than any other viscus found in a hernial sac. These adhesions are probably always the result of local inflammation and it is a well known fact that an abnormally placed appendix is very liable to attacks of an inflammatory nature. In these cases of adhesion the appendix may be found attached to the margins of the mouth of the sac, with the extremity free in the body of the protrusion, or the tip alone may be the portion adherent, or, again, its whole length may be attached. This adherence, moreover, will bring about irreducibility and may further lead, as above stated, to elongation and thinning of the tube. Possibly it has also to do sometimes with the onset of another attack of inflammation by producing some kinking of the tube or by obstructing the exit of secretions from its lumen into the cæcal cavity. Lastly, the blocking of the mouth of the hernial sac may be so complete as to shut its interior off from the abdomen and thus to bring about the formation of a hydrocele of a hernial sac.

FIG. 10.



Hernia of the vermiform appendix into a right femoral sac (St. Bartholomew's Hospital Museum).

Cystic dilatation.—A cystic dilatation of the protruded portion has been found in several cases. Within the abdomen such a condition may also be found and there it would appear to be due to blockage of the lumen of the tube, either by contraction or by constriction or by kinking. Precisely the same may occur in a hernial sac. The mucous membrane of the tube contains glands which are continually secreting and if obstruction to the overflow of this secretion into the cæcum exists a cystic dilatation will result.

Inflammation.—Inflammation in a hernial sac is decidedly common, just as it is when the appendix retains its normal position. The causes of these inflammatory attacks are probably exactly similar to those of inflammation occurring in the appendix when it is in the abdominal cavity. It has been suggested that a truss worn over an adherent appendix is very likely to produce injury and thus cause inflammation and possibly this may account for a small proportion of the cases. As in the abdomen, so in the sac of a hernia, perforation of the appendix may be a termination of the inflammation and this may lead to symptoms which are very like, if not identical with, those ordinarily said to be the outcome of strangulation of the tube within the sac. In many of the recorded cases it was stated that there was a sudden onset of the symptoms and that there was local pain, also vomiting, and in some distinct constipation. These, of course, are symptoms which might well be put down to strangulation, and, therefore, intestinal obstruction, not so complete certainly as in instances where strangulation of a loop of intestine occurs, but similar in every detail to those which are in evidence when appendicitis is present within the abdomen. In this latter condition there is wanting any cause of strangulation of the appendix, though there is evident inflammation of the tube.

Strangulation.—Strangulation of a true nature no doubt does sometimes occur when an appendix is protruded, though I venture emphatically to assert that this is much less common than is usually thought to be the case. It may be brought about in at least two different ways. In some cases the contraction of inflammatory tissue outside the sac has seemed to be the real cause, but more frequently it appears that the appendix has been forced into a sac with a very narrow mouth, particularly into that of a so-called congenital inguinal hernia. Here the strangulation will be the result of the direct pressure of the tissues around the neck of the sac. In whatever way produced the symptoms which follow are, as has been stated, hardly those of true intestinal obstruction, but rather similar to those occasioned by a partial enterocele, by strangulation of Meckel's diverticulum, and sometimes by a prolapsed and nipped ovary. Usually on opening the sac the appendix is readily recognised, but at times owing to the presence of many adhesions, with, in fact, a matting together of the tissues, it is difficult to be sure as to the structure which is being dealt with. The appendix has been mistaken for the sac wall itself greatly thickened, for a second sac within an outer one, for the Fallopian tube, for Meckel's diverticulum, and even for the urinary bladder. The elongated form, the presence of its free extremity, and its small size as compared with other hollow viscera all serve to differentiate the appendix. The methods of treating the organ vary according to the condition in which it is found. If an operation for the radical cure of a non strangulated irreducible hernia is being undertaken and the appendix is found in the sac it may be returned to the abdomen, or it may be amputated in the usual manner and the stump returned within the peritoneal cavity, a line of treatment which, from its safety in the present day, is certainly the better. If, however, the tube is found adherent, and especially if not of natural size, it is well to free it from its attachments and to remove as much of it as can be readily drawn down into the sac.

ISOLATION HOSPITAL FOR TROWBRIDGE.—The Trowbridge and district joint isolation hospital committee has decided to erect a new hospital at an estimated cost of about £7000.

The Lettsomian Lectures

ON

E CONDITIONS WHICH MODIFY THE CHARACTERS OF INFLAMMATIONS OF THE SKIN, AND THEIR INFLUENCE ON TREATMENT

livered before the Medical Society of London on Feb 16th and March 2nd and 16th, 1903

By H RADCLIFFE CROCKER, M D, F R C P LOND,

ICIAN TO THE SKIN DEPARTMENT UNIVERSITY COLLEGE HOSPITAL.

LECTURE III.[1]

Delivered on March 16th.

MR. PRESIDENT AND FELLOWS,—The internal treatment of inflammatory diseases of the skin rests, so far as our knowledge permits, on the same foundation as that of other organs—viz., an accurate diagnosis and full knowledge of the etiology, pathology, and prognosis of the disease with which we have to deal Unfortunately, the gaps in our knowledge under these heads are at least as wide as they are in any other department of medicine, and we have to try to fill them up to the best of our ability with the help of remedies which experience has taught us to be of service in this or that form of dermatitis, whether we understand the *modus operandi* or not. I hope, however, in my previous lectures that I have afforded some assistance in estimating the factors to be considered in coming to a conclusion as to the line of procedure So far as the treatment depends on the general principles of medicine it is not for me to presume to lecture you, I would only like to say that, being a firm believer in the theory of the frequent absorption of toxins and ptomaines from the intestines and other organs, I am as strong an advocate for clearing out the *primæ viæ* as ever our forefathers were who with their emetics and purgatives cleared out their patients so thoroughly whatever their complaint might be that it gave occasion for the laity to rail against the profession, as in the uncomplimentary couplet attached to the name of the distinguished physician in whose honour these lectures were founded. As their patients were for the most part gross feeders and heavy drinkers they had some excuse for their drastic procedures, while we, having more definite aims, are able to avoid the excesses of these stalwarts in medicine and are content to remove whatever fæcal matter the intestine contains and to diminish portal congestion and with intestinal disinfectants and the requisite precautions as to diet endeavour to prevent the formation of fresh toxins

For the liver and kidneys similar principles are to be carried out and the success of many of the spas, like Contrexéville for instance, really depends on its being a method of washing out the liver kidneys, and intestines with very dilute alkaline fluids, but copious draughts of aerated distilled water are an excellent substitute for those persons whose powers of elimination are not up to the proper standard while their purse will not enable them to go to these spas, and sipping very hot water is also a familiar expedient although overdone by the laity, whose zeal being not according to knowledge is only too apt to abuse the remedy of the hour by indiscriminate use.

In senile eczema and pruritus this washing out of the liver and kidneys is especially important and is often the means essential to success.

ARSENIC

When we come to the specifics naturally arsenic has first to be considered both on account of its long established position and because of its employment for all sorts and conditions of skin eruptions by a large majority of the profession. Yet I venture to say that it is regarded by dermatologists generally as a most disappointing drug and that its rôle gets more restricted as their experience widens.

How does arsenic act? Our knowledge is far from complete, but there can be little doubt that it has a direct action on the epithelial cells and also on the vaso-motor nervous system centrally or peripherally and on the periphery of the cerebro-spinal nerves. In order to get the good results without the bad we must have definite aims, its local action is best seen in the patches of chronic subacute scaly eruptions such as psoriasis and some forms of lichen planus.

That its action is really local on the diseased area for which it has an elective affinity is shown by its effect on the patches of psoriasis. While it often removes any particular patch it does not prevent the evolution of another in its neighbourhood. There is also more pigmentation left in patches treated by arsenic than in those removed in other ways. That it is not a specific in psoriasis is shown by its not being in any sense prophylactic, and if given when the eruption is evoluting rapidly, so far from preventing this evolution it actually makes it come out more rapidly It is, therefore utterly useless for patients suffering from psoriasis to go on taking the drug year in and year out, as many do in the hope of warding off their enemy They not only fail to do this, but they bring upon themselves dangers and disfigurement from the direct effects of the drug itself. The disfigurement, as is well known, is due to a sepia brown pigmentation which, in my opinion, is due to the actual deposition of the metal itself in the skin When used only for a moderate time this pigmentation is limited to the area of psoriasis, for arsenic appears to pick out morbid tissue, of this I had an illustration in a patient suffering from psoriasis of the nails who said to me "Since I have taken the medicine I have had a pricking sensation at the root of the nails."

The general pigmentation induced by arsenic may be recognised by its sparing for some time the neighbourhood of the hair follicles which appear as white dots on a dark ground but eventually they get pigmented also More important even than the pigmentation is the thickening of the horny layers, chiefly of the palms and soles which ensues from its excessive use This also is recognisable in the early stage, as it is at first a nodular thickening round the sweat orifices or actual horny warts may be formed but after a time the whole surface is thickened and levelled up into a horny plate over the whole palm and sole except the arch, accompanied by and perhaps in many cases caused by, hyperidrosis. Besides the inconvenience and unsightliness of this keratosis it is liable as Mr J Hutchinson first pointed out, to lead to epitheliomatous growth from these warty thickenings.

In the following case the man had psoriasis in his youth for which much arsenic was given until he had horny hypertrophy of the palms. He remained free from psoriasis for thirty eight years but the keratosis never went away and one of the warty growths became epitheliomatous and was removed, it recurred, but a wider operation cured it That such a consequence should ensue, even so many years after the cessation of the drug, is a warning that it is not to be given indiscriminately and in a haphazard fashion, but its effects must be carefully watched and sufficient periods of rest given. At best it is a slow remedy as far as psoriasis is concerned.

In some of the worst forms of lichen acuminatus it has also been successful, but for that complaint we have now a better remedy than arsenic, its action in both this and lichen planus being probably directly on the epithelium of the diseased area. Its other action is through the nerves and is wholly or mainly peripheral.

Recurrent angio-neuroses such as some of the erythemata which recur at short intervals (not those which only recur seasonally) are often controlled and sometimes cured by the steady administration of arsenic in moderate doses but continued for a long time Erythema hæmorrhagicum is one o these, in this eruption at intervals of a few days, or a few weeks the patient has what appears to be an erythematou eruption in spots from a sixth to half an inch in diameter but they are unaffected by pressure from the onset and som of the lesions acquire a purpuric appearance, it come chiefly on the legs but in a minor degree on the upper limbs It is probably caused by a toxin acting on the vaso-moto nerves but arsenic often controls it and may cure it. In on of my cases, a musician in an orchestra had an outbrea whenever he had been kept up very late, although I coul not explain why this should be I regarded the eruption a of vaso motor nerve origin and gave him liquor arsenical in five-minim doses which stopped the renewal of th eruption as long as he was taking it and ultimately cured the morbid irritability of the affected nerves.

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[1] Lectures I. and II were published in THE LANCET of Feb 21st (p. ,31) and March 7th (p 640) 1903 respectively

In recurring sweat eruptions it is also of great value The eruption illustrated by the following case was a form of miliaria exactly like the red gum on infants. The patient, a railway porter, had suffered from it for eight years, whenever he got overheated, as he necessarily often did at his work , arsenic controlled and partially cured it after it had been taken for a long period, but I scarcely expect that after so many years it will be completely cured. Another recurring sweat eruption in the form of small vesicles along the sides of the fingers, from which so many people suffer in the summer, is definitely relieved by arsenic. So also is chronic urticaria not dependent on digestive disturbances but in this the dose should be small and long continued Pemphigus and dermatitis herpetiformis are generally controlled and sometimes cured by arsenic But I am far from regarding it a specific for pemphigus as Mr Hutchinson does, as it often fails conspicuously even to have a controlling effect. In all these the action is through the nervous system, chiefly the vaso motor, either peripheral or central Its preventive influence over bromide or iodide eruptions has already been mentioned

While the above pretty well covers the ground in which it is beneficial or curative, its frequent indiscriminate use renders it more important to point out where it is useless or injurious As an internal remedy for eczema in any stage I have very little faith in it except in chronic scaly patches which can, however, be more efficiently dealt with by suitable local treatment, while in the acute and subacute discharging eczemas it is quite useless in my opinion No doubt if it is given in every case with good local applications a fair number of cases will get well, but so most of them would if burnt sugar and water were given with the same local treatment, but in none of the obstinately recurring cases, without any apparent cause for the exacerbation, which often baffle us for a long time has arsenic ever helped me in a single case that I can recollect and I now scarcely ever give it in eczema, either acute or chronic It should never be given where there is already gastric irritation, as in acne rosacea, urticaria from dyspepsia, &c It should not be given in the evoluting stage of psoriasis and, as a rule, not when there is great hyperæmia, as it often aggravates the pruritus and congestion , indeed, with the exception of bullous eruptions, it is seldom advantageous in acute inflammations of the skin and often acts injuriously

A few words as to its administration. It may, as you know, be given as a liquid, a solid in pills, or by injections Injections are painful and are only, in my opinion, to be given for sarcomata , the Asiatic pills, which are arsenious acid and black pepper, are much used on the continent and are useful if the patient has to be out all day, but, on the whole, the advantages are all in favour of the time-honoured Fowler's solution, which can be given freely diluted and is thus less likely to give rise to gastro intestinal irritation. The cacodylate of sodium is still on its trial. It is by no means certain that its action is the same as the other forms of arsenic and it is not so free from danger in the recommended doses On the whole, I should reserve it for hypodermic injection for sarcoma, in which one is justified in taking some experimental risks All the other preparations of arsenic are I think, inferior to Fowler's solution The arseniate of sodium is said to be more easily tolerated by the stomach, but probably the real explanation is that the atomic weight of sodium is less than that of potassium and requires less arsenious acid to satisfy a given quantity of it, so that 10 minims of liquor sodii arseniatis only contain the same amount of arsenious acid as there is in five minims of Fowler's solution In no case should it be given for many months in succession without intervals from time to time being afforded for its elimination.

SALICIN AND SALICYLATES.

These drugs were introduced by myself into dermatology and I can state with confidence that they have been conspicuously successful in a large number of skin diseases. At first I used the salicylate of sodium, but finding that it disagreed with rather a large proportion of patients I tried salicin and found it quite as good as far as its action on the skin went, while it seldom disagreed with the digestive or other organs It has not so much depressing action as the salicylates, very rarely produces headache, and may always be combined with nux vomica if there should be any depression. In very exceptional cases I have seen it produce an erythema which is more frequently seen with the salicylates Salicin is said to break up in the organism into salicylic and carbolic acid and it is possible that these substances in a nascent condition in the blood may exercise either microbicide action or at least hinder the multiplication and development of microbes. At all events, it is most likely to be successful in those diseases in which there is a strong probability that they are of microbic origin, such as psoriasis, lichen planus, and pityriasis rosea On the other hand, it has no direct effect on any form of eczema and I only give it in that disease when I want to produce an effect on the liver and then the sodium salt is preferable. Speaking generally, it covers the same ground as arsenic and has in some respects advantages over that drug Thus it may be given during the developing stage of psoriasis and often checks the outbreak, while I have never seen it increase the development as arsenic often does. In giving it in psoriasis it must be given in full doses, 15 grains three times a day to begin with, and it may be increased to 20 or even to 30 grains three times a day, though I seldom give more than 22½ grains , in these doses in some patients it produces constipation which has to be counteracted It succeeds best in hyperæmic and extensive outbreaks, is of but little use when there are only a few chronic patches, and has not any striking effect on the scalp eruption It appears to act by diminishing the hyperæmia, the patches become paler the scales become looser and gradually cease to re form, and the patch becomes a circle, and even this gets broken up and only fragments remain which are best removed by local means. Its effects, of course, are best seen when no local treatment is simultaneously employed, but if local applications are used they should not be of a stimulating character, otherwise the internal and external medicaments are opposing each other In the great majority of cases its action is much quicker and it is successful in a larger proportion of cases than arsenic.

Of course the drug does not succeed in all cases—nothing does , but in 100 consecutive cases it would be beneficial probably in 75, it would have a markedly good effect in about 50, and in from 20 to 30 it would effect a cure, in an extensive case in from one to three months. I do not lay these figures down as absolute but as a general impression after a very extensive use of the drug Some have been disappointed in its use either from prescribing it too timidly—i.e , in five grain or ten grain doses—or in expecting to see a striking effect result in a week or two, which is naturally exceptional, or in trying it only in a few cases and taking a few failures as an indication of its value

In lichen planus the number of successes of salicin is not so great as in psoriasis, but that may also be said of arsenic or biniodide of mercury, but in some of the acute generalised cases the result has often been most satisfactory and even rapid, as in the following case where the disease was very acute and severe A man, aged 30 years, was sent to University College Hospital by Mr Percy Rose of Barking with general lichen planus which had developed rapidly latterly but had been present to some extent for eight months. It involved every region of the body, affected the mouth extensively and was complicated by keratosis palmæ and hyperidrosis. He had taken Fowler's solution in five-minim doses for a month without any improvement before he went to the hospital. Salicin in 15-grain doses three times a day, which in three weeks was raised to 20 grains was prescribed without any local application. Improvement was manifest in the first week, the enormously thickened skin of the palms and soles was shed in large pieces in three weeks, and in about six weeks the whole eruption had disappeared except that, as is usual there was deep pigmentation on the site of the lesions. Such a rapid cure is exceptional, as the course of lichen planus is usually excessively slow in its involution though often rapid in evolution, and no doubt there are many cases which are unaffected by salicin, but the same may be said of any method , the failures are more numerous than the successes for any one drug

Of pityriasis rosea, it may be said that it tends to get well of itself in from four to six weeks, so that it is difficult to say that a cure is the result of treatment or spontaneous, but there are cases which go on much longer, even several months, and I have repeatedly seen in such cases involution commence in a week or two after commencing the salicin This could scarcely be an accidental coincidence

With regard to bullous eruptions I have repeatedly known salicin to be successful both in pemphigus and in dermatitis herpetiformis even when arsenic has been well tried and failed, so it is always worth while to administer it in both these diseases which are sometimes most resistant to every treatment and can perhaps only be controlled as long as the drug is being administered. It has also been conspicuously successful in some of the more acute or widespread forms of lupus erythematosus which although not a simple dermatitis resembles one in many of its features. This does not exhaust all the possibilities of the drug or set of drugs which I regard with more confidence than arsenic for the diseases which I have mentioned, for its range is wider and it gives a higher percentage of successes, but like other drugs it has its failures.

It is probable that similar drugs which break up in the organism may be found to give similar effects. Aspirin, the acetic ester of salicylic acid, is one of these and I have had a few cases of psoriasis successfully treated by this drug which has been introduced as a rival to the salicylates. In a very obstinate and extensive case with gouty swelling of the finger joints not only did almost all the psoriasis clear up, but the deformity of the fingers improved considerably. Its slight solubility—five grains to the ounce—and the comparatively high price militate against its extensive employment.

THYROID EXTRACT.

Thyroid extract, which was first brought prominently into notice by Dr. Byrom Bramwell for skin eruptions, came in with such a flourish of trumpets that it raised too great expectations and in the disappointment which followed the reaction has been too great and it is almost lost sight of as a therapeutic agent in dermatology. This I think, is a pity, although it must be content with a lower place than was at one time expected it is a most valuable therapeutic agent. It was for psoriasis that most was expected of it and no doubt some very striking results were obtained, but the uncertainty of its action, not only in different cases but in different attacks in the same patient, and the fact that it not only sometimes failed but actually did harm in some instances, have made many throw it aside. The evils inherent in the substance itself can be avoided by not giving it to elderly people or to persons with weak hearts, by beginning with a single five grain dose and taking two or three weeks to reach 15 grains a day, and never to give more to patients who are not under constant observation. In psoriasis it should never be given when the disease is evolving as I have seen the most disastrous development in such cases. In young robust persons, with an extensive eruption which has reached its full development, it sometimes acts literally 'like a charm' and I have seen the eruption disappear more quickly than under any other internal treatment, but it must be admitted that such cases are exceptional and that it too often disappoints where *a priori* it might be reasonably expected to succeed.

There are other diseases in which thyroid extract is distinctly advantageous. Willan's and Hebra's prurigo is one of these, eczema on a congenitally ichthyotic skin as I have previously mentioned, in lichen acuminatus I have found it conspicuously successful, and finally, although it does not come under dermatitis, it has more beneficial effect on lupus vulgaris than any internal medication that has ever been given. It is a substance, therefore, to be borne in mind as a valuable medicament in selected cases, if given with due precaution and watchfulness to prevent thyroidism. Patients no doubt get thinner when taking it and they require an interval every now and then if it is to be given for a long period as in myxœdema and lupus vulgaris.

ICHTHYOL.

This drug is given internally to a limited extent and has been sometimes beneficial in some hyperæmic diseases like acne rosacea. I have found it chiefly useful in some of the sweat inflammations. Its successes are not very numerous or conspicuous, but it is one of those drugs which break up in the organism and its sulphur constituent is eliminated by the skin of which an ocular proof will be afforded if a lead lotion is applied while the patient is taking ichthyol the pores of the skin speedily turning black from the sulphur of the ichthyol combining with the lead lotion.

QUININE.

There is one more drug of which I have a high opinion in certain forms of extensive dermatitis and that is quinine. It must be given in large doses (from five to ten grains) and the method of administration is important. This should be in an effervescing citrate of potassium mixture. In this way it rarely disagrees with the patient or produces cinchonism if the bowels are kept open, while if given in the ordinary way with sulphuric acid large doses are seldom tolerated. I prescribe it chiefly where there is extensive or universal dermatitis, especially in pityriasis rubra. Dr. J. F. Payne advocates it in lupus erythematosus when acute or widespread. It is an alternative drug in some cases of pemphigus and dermatitis herpetiformis when arsenic and salicin have failed, but it is not equal to either of those drugs in the number of cases for which it is suitable.

SUBCUTANEOUS AND INTRA-MUSCULAR INJECTIONS.

Subcutaneous and intra-muscular injections of various drugs obtain a growing importance in dermato-therapeutics. Salts of mercury hold the first place and no doubt as yet their chief employment is found in syphilis and leprosy, but I will not dwell on their value for these diseases as they do not come within the scope of these lectures, but in some obstinate and extensive cases of psoriasis, in which other internal medication has failed and when the patient cannot lie up for efficient local treatment, I have had very gratifying success with injections of mercury salts. These injections should always be intra-muscular and not subcutaneous, the latter are much more painful and are liable to produce sloughs at the site of injection. In my opinion the soluble salts are preferable, as they are less liable to produce severe and even dangerous salivation than the insoluble salts with which there have been several accidents, although really a very small number compared to the thousands of injections given.

The perchloride and sozoiodolate are the salts chiefly employed, the latter is the best as it is equally efficacious and less painful. The dose is a quarter of a grain dissolved by the aid of one-third of a grain of iodide of sodium in 20 minims of water, injected into the buttocks once or twice a week. As the biniodide and perchloride of mercury by the mouth have proved useful in lichen planus, probably intra-muscular injections would be still more efficacious but they should not be employed until other means have been thoroughly tried as the injections are painful and would probably not be tolerated unless the patient had tried and failed to get relief by other treatment. Mercurial injections have also been used for lupus vulgaris with some measure of success, but there are other means at our disposal for this disease.

Arsenical injections have been occasionally used for chronic inflammations of the skin such as would be benefited by the same drug given by the mouth, but the results have not been sufficiently good to warrant their being recommended and their only use seems to be for sarcomatous tumours as first recommended by Köbner. Mycosis fungoides has also undergone temporary amelioration with them. The potassium salt is much more painful than the sodium salt and this is the one to be preferred and here also intra-muscular injections are less painful than subcutaneous ones.

Cacodylate of soda and the similar body called arrhénal have not, as Sir Thomas R. Fraser has shown, justified their laudatory introduction.

Subcutaneous injections of thiosinamin were first recommended by Hans Hebra for lupus vulgaris, but other methods were found to be superior and it was soon abandoned for that, it has, however, been found remarkably useful for keloids and hypertrophic scars, and I can bear personal testimony to its value. Here is an example. A boy, aged 14 years, was burnt by a chemical and a keloid followed in a month or so oval in shape, one and a half inches long, and situated on the forearm. It was excised by the family medical attendant and primary union was obtained, but a keloid soon formed in a line with the incision and in the suture holes and in three months from the operation was three and a half inches long and half an inch wide and was getting more prominent and irritable, weekly injections of a 10 per cent. thiosinamin solution were recommended and in two months after seven injections the major growth was flattened and had lost its purplish tint and several of the suture keloids had disappeared.

In hypertrophic scars I have had very good results. In a girl with contracted thickened bands across the elbow of long standing and consequent on a burn, the thickening entirely disappeared and the mobility of the joint was in great part restored. In another case in which there was a band all round the lower jaw, raised up a third of an inch with numerous projecting spur like processes, very considerable improvement was produced, the growth being much flattened, but the patient was unable to continue to attend the hospital, so that the cure was incomplete. Its mode of action I am unable to explain. The 10 per cent solution in glycerine and water usually recommended cannot be kept in permanent solution, but 8 per cent. solution with 20 per cent glycerine and the rest water, the solution being effected with a gentle heat, remains dissolved. The injections are well borne by the patients and are not, therefore, very painful nor do they produce any bad effects, local or general, in my experience.

But sufficient has been said upon specifics and it should be remembered that in a large proportion of cases their administration is an indication of failure to understand the true etiology and pathology of the disease and that we are driven, therefore, to resort to empirical remedies This is not a reason against them if we have first used all our available knowledge in the investigation of the case on which to found a rational treatment, but this is unfortunately possible only in a very limited number of cases and very often in the history of medicine the empirical remedy has justified its use by its curative successes long before the theory of its action was understood, the use of quinine in malaria is a striking example. Still, we are beginning to get a glimpse of the *modus operandi* of these so called specifics, sometimes we can fairly regard them as microbicides in the blood, or as antidotes to autotoxins, or as preventing the formation of these toxins, and in proportion as we are able to use these drugs on a rational basis our successes in their employment will increase, while it is an immense satisfaction to find that having made a correct pathological diagnosis we are able to insure that the treatment founded upon it has also been the correct one.

There are certain general measures to be adopted in all forms of acute and widespread inflammation of the skin quite irrespective of what the diagnosis may be, first of these come rest and equability of temperature. Although urticaria is not a true dermatitis, it is not far off from the early stage of it and may be used as an illustration of it Jacquet enveloped in cotton wool, one arm only of an urticarial patient, the urticaria came out as before on the uncovered arm while there was none on the covered one. The importance and value of putting patients in bed who have an extensive dermatitis were borne in upon me very early in my career Wishing to observe the influence of certain drugs on different inflammations of the skin I took the patients into the hospital and gave them no active medication until the influence of transference from their home to the hospital had been eliminated, and I found to my surprise that in many cases the improvement was so great that no trial of the drug could take place. The case of a postman with a general erythematous eruption which had been present for several months without improvement made a strong impression on my mind. I put him in bed without any other treatment and in three days the eruption disappeared and did not recur

The true prurigo of Willan and Hebra, which is proverbial for its obstinacy, is at once relieved by placing the patient in bed, and in a week some of the most severe and distressing features in a great measure will have subsided. When the whole skin is *hors de combat* as in pityriasis rubra it is not only desirable but positively imperative that the patient should be in bed and I will not undertake the responsibility of such a case if the patient refuses to lie up completely Some years ago a man came to me with this disease very extensive but not then universal, his face being spared. I urged him to lie up at once, but as he had an invitation to stay in luxurious quarters he said that he would defer treatment until after his visit. I could not hint that he was not a very desirable visitor (for when he undressed the scales fell down like a theatrical snowstorm) but I tried in vain to dissuade him from such a dangerous procrastination and a few weeks later I heard that he had died, it was said from congestion of the kidneys I believe that his life would have been saved if he had at once taken to his bed and had been efficiently treated from the first. Even when a dermatitis is not sufficiently extensive to necessitate the patient lying up it is often of the highest importance to avoid sudden changes of temperature and it is a matter of common observation in a patient with eczema, or, indeed, almost any acute dermatitis, especially on exposed parts, that to go out in a north east wind or to ride in an open carriage on a windy day is an almost certain way of producing an exacerbation of the disease. In persons still more sensitive, such as those who have urticaria, the sudden change of going in winter from the usually warm sitting room to a cold bedroom will often determine an attack

LOCAL TREATMENT

I have pointed out the line of the local treatment for the several affections which we have been considering as we went along and there only remain a few general principles to consider One is that in all acute inflammations the applications should be continuous. An ointment or a lotion applied for a few moments two or three times a day will be seldom of any service except for a slight inflammation. The continuous application insures that the medicament will be in the closest contact with the diseased surface, that the part will be guarded against external microbic invasion, that it will be protected from air and water, and that it will be to a great extent at rest and at an even temperature. Continuous applications must necessarily be of a mild character or they will increase the inflammation, lead, zinc, of what the Germans call indifferent applications, such as simple unguents and oil, being the kind of medicaments chiefly employed

Most microbicides, such as tar, mercury and silver salts, chrysarobin, ichthyol, &c, are more or less irritants and should be applied for a short time only and of a dilution adapted to the intensity of the inflammation irrespectively of its name, and it is often safer to try the application on a small area at first until the right strength and best form of application have been ascertained These drugs can often be combined with soothing astringents, such as zinc oxide or zinc oleate, to mitigate any irritant action and it is by no means to be inferred that the stronger the proportion of the most active ingredient the more beneficial will be the prescription. In the case of chrysarobin, for instance, such very small proportions as from one to five grains of chrysarobin to an ounce of zinc ointment will act admirably in some subacute cases of eczema or in the more acute forms of psoriasis, while in stronger proportions the disease would be aggravated The same may be said of many tar preparations. In chronic indurated patches higher proportions may be necessary In the case of tar in the milder forms of eczema, while it is often one of the most efficacious remedies we possess—so much so that one gentleman of high repute in dermatology acknowledges that tar and lead lotion is his one remedy for all forms of eczema, the proportion only varying to each other and to the dilution—yet tar is one of the most difficult remedies of which to be sure of the suitability in cases of eczema, a premature use or too strong a proportion lighting up again an inflammation just when it seemed to be subsiding satisfactorily It should, therefore, be ordered in small quantities at first and in a small area and for a short time in cases of eczema, while in psoriasis it can be adapted to almost every case by a little management and even be used at the full strength of the Pharmacopœial liquor picis carbonis, if a soothing lotion be immediately and continuously applied afterwards.

In choosing a local remedy it is necessary to have a definite aim Is it the hyperæmia that is to be subdued, the exudation to be dried up, or the suppuration to be stopped? or is it some micro-parasite that is to be destroyed without increasing the inflammation? Then the extent of the area affected is to be taken into consideration, as the medicament might be, like mercury or pyrogallic acid, dangerous if applied to a large region though quite adapted for a small area.

Further, there is a complicating factor of which it is not possible to predict, unless from previous experience of the patient—viz, idiosyncrasies towards certain drugs, either external or internal and the variable reaction to remedies of certain skins This is especially common in the acute forms of eczema—a remedy which is like a balmy breeze to the majority of patients acting like the blast of a furnace to some others in whom the character of the inflammation appears to be precisely similar No doubt experience diminishes the number of such mistakes, but the most experienced have many humiliations to put up with in this connexion It is for this reason if for none other that it is wise never to start with strong remedies but to work up to them as the knowledge of the patient's peculiarities increases

Many of the indications can be successfully met by recognising the character of the inflammation without making an exact diagnosis, an acute psoriasis and a subacute eczema, for instance, often requiring the same local treatment, but in others an accurate diagnosis is essential, as in the inflammation excited by scabies in clean people, which is so often erroneously treated as an eczema, or in not recognising that impetigo contagiosa is secondary to some previous itching lesion such as urticaria, prurigo, animal parasitic irritation, &c. It is, however often desirable and even necessary to remove the secondary lesions first in order to pave the way for the most effectual means of treating the primary eruption

GENERAL DEDUCTIONS

The general deductions which may be drawn from the subject we have been considering are —That a large proportion of inflammatory diseases of the skin are of compound origin That there is frequently a microbic element and that this too may consist of more than one kind of microbe superimposed on another such as the staphylococcus aureus on the streptococcus pyogenes the staphylococcus on the seborrhœic mioro-bacillus, the seborrhœic micro-bacillus on the bottle bacillus &c That not only do these several mixtures produce different forms of dermatitis, but that even the same microbe may produce different forms according to its mode of implantation in the skin. That the microbic element generally requires a suitable soil for its successful implantation and propagation. That this soil varies with the age of the individual and the kind of skin he possesses of which the modifications may be congenital or acquired, certain of the tissue proclivities being probably hereditary That intestinal and probably other visceral toxins and ptomaines play an important and often unsuspected part in producing many forms of eruption and even that many supposed gouty eruptions are really of toxic origin from the generally present intestinal catarrh. That many of these toxins act through the vaso-motor nerves, central or peripheral rather than directly on the skin, though they may act directly on that also That the cerebral nervous system acts chiefly as a controlling influence over the sympathetic system as regards the intensity of the eruption. That with very few exceptions the nervous system, whether vaso-motor or cerebral, exercises but little influence on the character of the eruption though it does on its distribution and intensity That the character of the eruption is mainly due to individual peculiarities or proclivities of which we can often only chronicle the result without being able to explain it That while with apparently the same etiology different eruptions may ensue in different individuals, in recurring eruptions in the same individual there is remarkable constancy in the characters of the eruption and in its time, place, and mode of development. That many general eruptions are for a long or short time of local origin, occupying only a small area before generalisation. That other serious affections start from apparently trivial causes, such as seborrhœa, a superficial pustule, &c and that it is important, therefore, to treat affections of the skin in as early a stage as possible, as most inflammatory eruptions have a much greater tendency to further development than they have to spontaneous involution. That the principles of treatment depend on the due appreciation of the relative importance in any one case of the microbic, the personal, the nervous system, and the toxic elements, and that so far as our knowledge extends the general principles of medicine apply to them, but that inasmuch as our power of estimation is often at fault we have to fall back on certain so-called specifics which experience has shown to be of service in certain conditions. That the most reliable and comprehensive specifics are arsenic, salicin, thyroid extract, quinine in large doses, and iodide of potassium, the first two have a very wide range as compared to any others. That except as regards pustular eruptions and those demonstrably of micro parasitic origin the character of the local treatment depends comparatively little on the diagnosis of the particular kind of dermatitis, the extent, intensity and localisation of the inflammation being the most important elements. That in employing microbicide treatment in superficial and widespread eruptions the microbicide should not be irritating, or should at least be capable of being at once neutralised, otherwise the increased inflammation set up defeats the aim of the therapeutist and affords a favourable soil for further microbic development. It is in comparatively few circumscribed microbic diseases such as impetigo contagiosa, boils, and carbuncles that the microbicide is the sole curative agent. That in all wide-spread forms of dermatitis rest and equability of temperature are the most important and often the essential curative means. Finally, that in proportion as we study diseases of the skin in the same manner as we study diseases of other organs, we shall find that their treatment can be carried out successfully on the sound basis of pathology and that specifics will occupy a diminishing space in our armamentarium.

The statistics which I gave you in my first lecture show that the task of acquiring the power of diagnosis such as every practitioner should possess is not difficult in the majority of instances, as three-fourths of all cases of dermatitis are comprised under a very small number of diseases, but a considerable practical experience is necessary to grapple successfully with the variations which even these few common diseases present according to the several conditions we have already discussed, but attention to these points will gradually make this easier and will bring success which will add interest to the further study of a class of diseases which is a sealed book to many otherwise well-informed medical men, because they have not started on their investigation in a systematic manner

I trust that this brief *résumé* that I have given of a wide subject will be of some assistance to a serious study of the inflammations of the skin which will well repay the time spent upon it both by yourselves and him whom I must now call "your late Lettsomian lecturer"

A CASE OF ACUTE SPLENIC ANÆMIA TERMINATING FATALLY WITH GENERAL BACTERIAL INFECTION

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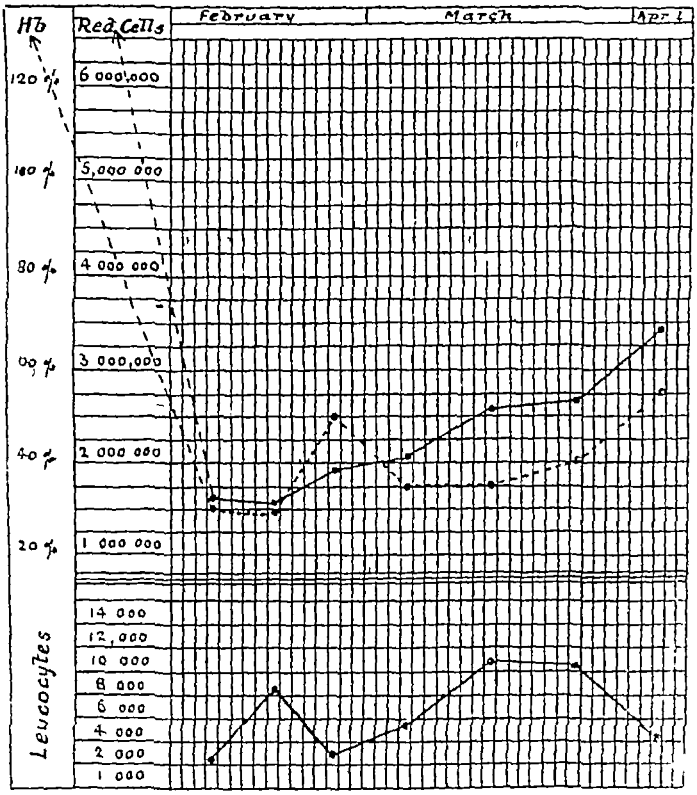
AN Italian *chef*, aged 37 years, was admitted into St. Thomas's Hospital on Feb. 7th, 1902, where he died two months later His previous history threw no light on the nature of his illness He had had no illness except slight indigestion occasionally had always been temperate, but had smoked about an ounce of cigarettes a day There was no history of syphilis or malaria or rheumatism, and he had not been in Italy for 28 years. He presented an odd appearance, for at the age of four years he was run over and his lower jaw was so damaged that some of the bone on the left side necrosed and was removed and at the age of 14 years he lost the sight of the left eye by an accident. His statement was to the effect that in January, 1902, having been previously in good health, he was admitted into the Italian Hospital suffering from pneumonia. The anæmia probably dates from this time, for on his recovery from the pneumonia he was sent to a convalescent home with the advice to return to the hospital later to obtain treatment for the blood state. After a few days at the convalescent home he began to experience difficulty in swallowing solid food, apparently through a dryness of the mouth, and becoming discontented on other grounds he left the home and was admitted into St. Thomas's Hospital.

On admission his chief complaint was a distressing feeling of weakness. But he stated also that he had difficulty in swallowing solid food, had to roll it about in his mouth before he could get it moist enough to swallow, and was frequently aroused from sleep by a choking dryness of his throat. There was some scarring over the lower jaw at the site of the injury which he had received in his infancy and the molars and the bicuspids had gone But the rest of the teeth were in good order, there was no apparent lack of saliva, and there was no apparent change in the buccal or pharyngeal mucous membrane, and, as a matter of fact, he never showed any difficulty in swallowing after admission, but gave play to a very considerable appetite He was rather thin and pale, with a slight yellowish tint of the skin and conjunctivæ. The spleen was considerably enlarged (post mortem it weighed 25 ounces), but its borders were always difficult to determine, owing to general fulness and resistance of the abdomen. The liver extended for two inches below the costal margin, as determined by percussion, but no clear signs could be felt. The heart was healthy but for a systolic murmur in the pulmonary area, the pulse was 102, small, and of low tension, and the temperature was 101° F The optic fundi were pale but healthy, the pupils were equal and active, and the knee jerks and plantar reflexes were normal. The shins were slightly œdematous The urine was strongly acid, brownish yellow, clear, with a specific gravity of 1018, and contained no albumin or sugar With the spectroscope it showed the absorption band of urobilin at F

During the first fortnight of his stay in hospital he improved considerably under the use of iron and arsenic. His temperature became subnormal, his appearance improved, the appetite was good and at times voracious, and he expressed himself as feeling quite well He gained three pounds in weight. During the second fortnight, however, his temperature began to rise, reaching 103° on two occasions, and coincident with this pyrexia there was profuse diarrhœa, there being on one day nine watery and rather offensive stools There was no blood or anything to indicate any necrotic process in the bowel and the diarrhœa was, in fact, attributed to the irritant effect of the arsenic The temperature fell to a subnormal point rather suddenly at the end of this period and during the third fortnight it remained subnormal with nearly normal stools a good appetite, and considerable general improvement. During the fourth fortnight the pyrexial attack was repeated. The temperature rose slowly at first, but soon reached 104° in the evenings and remained at about that level until death. At the same time the bowels again became very loose There was a tendency to sweat at night. The nose bled occasionally, the gums began to ooze, and the teeth became foul and clogged with blood He took very little food. The mind became obscured. The heart failed rapidly and rhonchi were heard over both lungs. During the last four or five days of life he became more and more yellow, eventually reaching the colour commonly met with in catarrhal jaundice. The urine preserved the characters already mentioned and containe no bile. Bile was always present in the stools During th whole course of the illness there was no alteration in th physical signs as regards the spleen and liver, but h complained occasionally of pain over the former The were no ascites, no necrotic process in the mouth, and n cutaneous or visceral hæmorrhage

CHART 1



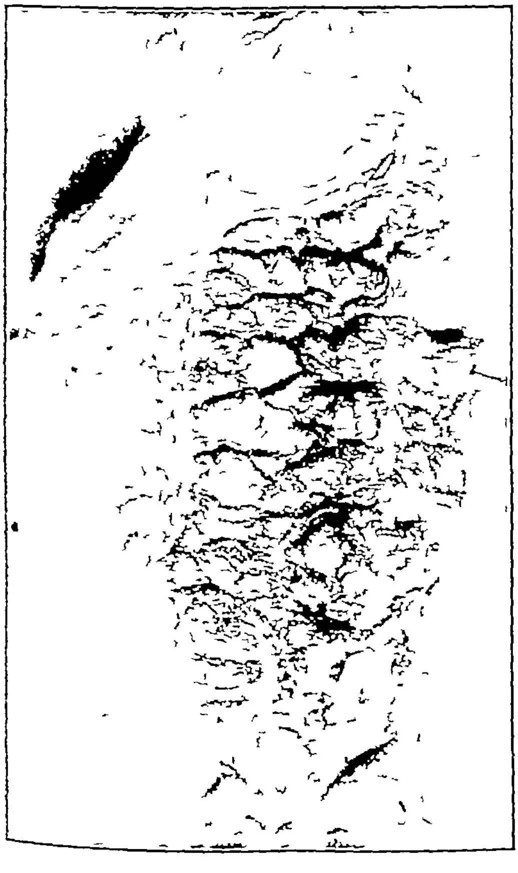
The state of the blood can be gathered from Chart It showed the type of secondary anæmia, the colour inde being below par (from 0 6 to 0 9) except on one occasio (Feb 24th), when it was 1 3. There were good rouleau formation and little, if any, variation in the size or shape the red cells, though on one observation (Feb 24th) a fe showed polychromatophilic degeneration. No nucleated re cells were ever seen There was no leucocytosis at any tim and the normal relative proportions of the different kin of leucocyte were roughly preserved, polymorphonucle neutrophiles varying from 62 to 80 per cent., lymphocyt from 18 to 35 per cent, and eosinophiles from 0 6 2 0 per cent A percentage of 0 6 of mast cells was note on two occasions Blood platelets were unusually abunda in one specimen. On three examinations marked leuc penia was found, the counts being 2200, 3000, and 40 respectively

Morbid anatomy —The liver weighed 67 ounces, th patient's weight at death being *102 pounds* It wa large, soft, and yellow To the naked eye the was no appearance of cirrhosis It was thickly studde throughout with dead white specks, the large having the size of a pin's head, and the could be seen to be surrounded by a zone hyperæmia. There was no iron reactio Microscopical examination showed no tra of cirrhosis or leucocytal infiltration Th whole organ was degenerate, the cells bein cloudy and largely pigmented and the nucl staining badly or remaining *invisible* Th white specks consisted of necrosed liver cell numerous irregularly shaped nuclei showing u among the granular structureless débris, an they were teeming with bacteria, mostly ro resembling the bacillus coli

The spleen weighed 25 ounces It was larg and rather soft. The capsule was slightly thic ened. Section revealed a large white infar and the cut surface showed numerous whi specks similar to those in the liver Micr scopically there were seen to be a slight fibros affecting the trabeculæ and sheaths of th vessels and considerable evidence of endotheli proliferation The white specks proved to b patches of focal necrosis similar to those in th liver There was no obvious change in th Malpighian bodies. The kidneys were large soft, and yellow, the cells being cloudy or ver granular The pancreas showed no change an there was no apparent alteration in an lymphatic glands. The marrow was no *examined*

The heart was pale, with large subpericardia hæmorrhagic blotches and numerous petechi in its muscle There was an early stage o pericarditis, and both mitral and aortic valve showed distinct vegetations of recent origin The lungs showed some broncho pneumonia i *the lower lobes, and here also*, as in th heart, the serous surface showed early inflam mation with deposit of lymph The stomac and small intestine showed no change an there was no sign of ankylostoma or othe worm The cæcum and adjoining portion of the colon for a total length of eight inches presented *the very peculiar appearance seen* in the illustration. The normal folds were greatly swollen in height and in breadth, and being separated only by slight sulci they bore some resemblance to the convolutions of the brain The thickening is shown by the fact that in places the distance from the peritoneal coat to the summit of a fold in a section through the bowel wall amounted to more than half an inch. The tissue was exceedingly firm, so that felt from the outside it suggested a new growth As seen from the inside the whole patch was dark grey or black. *In the* transverse and descending colon were two patches of croupous inflammation, each being covered by a dirty white membrane consisting of necrosed mucosa and coagulated exudation.

Microscopical examination of the affected part of the cæcum showed that the changes comprised hæmorrhage, inflammatory exudation, necrosis, and bacterial invasion. To demonstrate the early stage of the lesion an outlying flat-topped sessile projection of the mucous membrane may be taken. From such a spot the whole of the epithelium has been shed including the cells lining the glands, though traces of the latter remain. In the underlying submucosa there is some exudation of small round cells and the remains of the mucosa are in a condition of early necrosis Immediately under the muscularis mucosæ, which is itself altered by the necrotic process to such an extent as not to be recognisable in the central region of the elevation, hæmorrhage has taken place into the submucosa. The muscular tissue, though swollen, is comparatively little affected One section, which contains the edge of a lymphatic follicle, shows that the follicle has not participated in the change no necrosis and no infiltration with polymorphonuclear cells having occurred.



Cæcum in acute splenic anæmia

In a section through the most advanced part of the disease it is seen that the mucosa is swollen and necrotic over large areas, the submucosa is distended with inflammatory exudate now undergoing necrotic change, while hæmorrhages and distended vessels are present in the subjacent parts of the inner circular layer of muscle Throughout the thickness of the necrotic mucosa, but most abundant in its deeper part, are numerous circular or oval areas of finely granular material, which appear to be the remains of the fundi of glands crammed with disorganised or dead epithelial lining Bacilli and cocci are abundant in the necrotic mucosa and they extend also into the deeper layers, though here they seem for the most part to be limited to vessels, definite connective-tissue spaces or lymphatics. The masses of hæmorrhage and exudate in the deeper submucosa and inner muscular layer do not seem to be infected.

Remarks —A splenic anæmia—i.e. an anæmia of secondary type associated with enlargement of the spleen—stands out

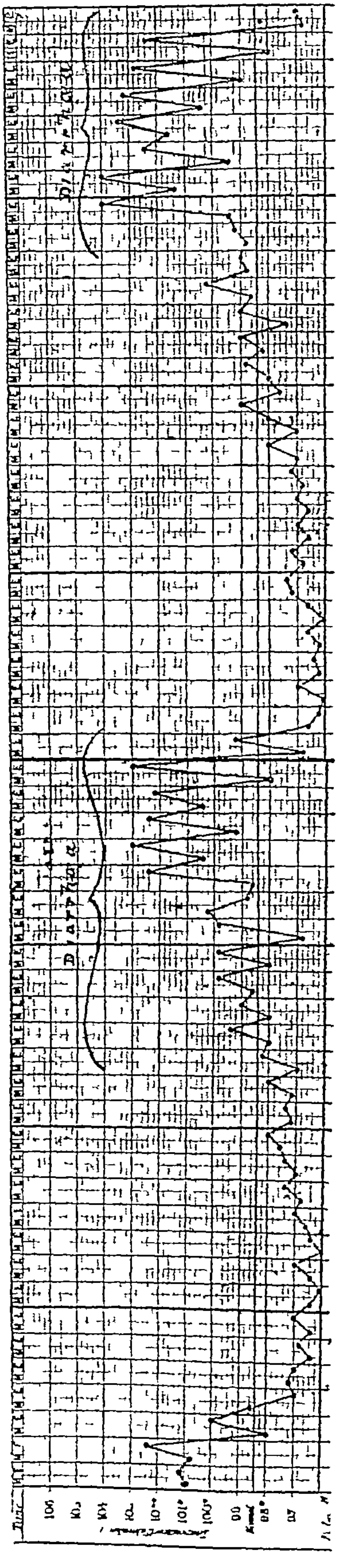


CHART 2

as a distinct symptom group It is as definite as pernicious anæmia and leukæmia, and though less common than these it is probably far more common than the scarcity of recorded instances would suggest. It consists of a primary splenomegaly, with more or less profound anæmia of a secondary type, without the characteristic blood changes of pernicious anæmia, without any material alteration, quantitative or qualitative, of the leucocytes (though leucopenia is generally noted), without enlargement of glands, generally showing pyrexia at some period, and in a late stage associated with some fibrosis both of the spleen and of the liver In many cases coming under this definition the duration is measured in years, and it is to these cases that Osler[1] has particularly directed attention A duration of 15 years has been noted. It is in such long standing cases that hæmatemesis and ascites are apt to occur, leading perhaps to an erroneous diagnosis of cirrhosis of the liver In a smaller number of cases, however, death occurs in from three to twelve months Thus two forms—an acute and a chronic—may be recognised. It is possible that when the actual cause is discovered these two forms will be found to be distinct But the symptoms and state in the two forms are identical, except in the occurrence of repeated hæmatemesis in the chronic form And at present there seems to be little reason for arbitrarily separating them and for considering them as different diseases merely on the score of a difference in duration

In the example of the acute form here recorded, the size of the spleen and the character of the blood exclude a diagnosis of pernicious anæmia The blood state points rather to defective formation than to increased hæmolysis. At the same time the latter process is indicated, in spite of the absence of iron reaction in the liver, by the character of the urine and the yellow tint of the skin. The chief points of interest are (1) the apparent onset of the disease after pneumonia, (2) the curious periodicity of the fever as shown in the temperature chart (Chart 2), which might almost be taken as a copy of the chart given by West[2], (3) the steady improvement under treatment as shown in the blood chart, and (4) the cutting short of this improvement by the supervention of a general infective state, as shown by necrosis of the bowel wall focal necrosis of the liver and spleen, pericarditis, pleurisy, and acute endocarditis

As regards the nature of splenic anæmia a string of facts points strongly to the localisation of the cause in the spleen 1. In the first place it is highly probable that the enlargement of the spleen is practically the first sign of disease In the case of a man, aged 64 years, recently in St. Thomas's Hospital, who had never had any illness except influenza and had led a perfectly healthy life, the onset of an acute splenic anæmia was very clearly described. In December, 1900, he began to notice a little unusual tiredness after his day's work and some disinclination for exertion. But he was little incommoded by this and did not think it worth while to consult a medical man until the end of January, 1901—i.e., not more than two months later The spleen was then found to be already greatly enlarged, the lower end being at the level of the umbilicus As regards the state of his blood (anæmia of secondary type) and his other symptoms he departed in no important particular from the case above described and he died six months after the beginning of symptoms with a spleen weighing 30 ounces When he went into hospital he was very ill and the time for splenectomy had gone by 2 In the second place it is certain that removal of the spleen will effect a cure and that it is the right course to pursue if it is estimated that the patient can survive the operation itself Sippy[3] and Harris and Herzog[4] give a list of 19 cases of primary splenomegaly in which *splenectomy was performed* Of these 14 patients recovered and four died, of one the result is not stated 3 Further there is evidence to show that in long standing cases at any rate the changes in the spleen have a somewhat distinctive character in the marked endothelial proliferation.

It is possible that this endothelial change is itself responsible for the blood state, as has been suggested, by the production of a hæmolysing enzyme, wholly abnormal or an exaggeration of a normal product. But such a theory, however plausible, is incomplete, as it still leaves us without a cause for endothelial change and the tendency must be to fall back on the hypothesis of the existence in the spleen of a long lived bacterial or parasitic agent. At any rate, on any view it is difficult to get away from the idea that the actual cause of the disease resides in the spleen. The established disease bears a close resemblance to the state of chronic malarial cachexia with permanent enlargement of the spleen

As regards the case here described, the question presents itself as to whether the infective termination can be allowed to have any bearing on the causation of the disease On finding the very remarkable condition in the cæcum above described one was tempted at first from the hardness and blackness of the part and the presumable chronicity of the change to imagine the possibility that this might prove to be a primary lesion, from which the blood state had arisen But the microscopical examination shows that it was not of long standing and it must be interpreted as a recent necrosis of the bowel wall, consequent on, or followed by, hæmorrhage into its tissue, with secondary bacterial invasion Though it is a much rarer change, it must be regarded as being essentially of the same nature as the patches of croupous inflammation which occurred in another part of the colon, both of them meaning loss of tissue vitality and secondary bacterial infection Neither change can be allowed to have direct bearing on the question of the bacterial or non bacterial origin of splenic anæmia At the same time it may be noted that a terminal croupous inflammation of the bowel, though it does occur in non bacterial diseases such as cirrhosis and renal disease, is far more common in bacterial conditions such as pyæmia septicæmia, and pneumonia.

As regards the state of general infection which was the immediate cause of death, its bearing on the question of the bacterial origin of splenic anæmia is vitiated by the occurrence of the intestinal necrosis. The whole series of changes, the focal necrosis of the liver and spleen, the pleurisy and pericarditis, and the acute endocarditis, may well have been the result of the intestinal infection But their occurrence seemed to be worthy of record in connexion with a disease of which so little is known As to the focal necrosis of the liver and spleen we know nothing of such a state except as arising from the action of bacterial toxins. In man it is confined to typhoid fever and dysentery In the former disease an instance is described and depicted by Glynn[5] The finding of recent vegetations on the valves after death from any acute febrile disease is a strong indication that that disease has been of an infective nature. Examples may be drawn from scarlet fever and, perhaps, other specific fevers, from pyæmia, erysipelas, and septic diseases generally, and from pneumonia. Considering the presence of the intestinal lesion, however, there seems to be no justification for laying stress on the endocarditis in this case as having a bearing on the origin of splenic anæmia. But, at the same time, it may be noted that a similar acute terminal endocarditis has been recorded in three cases of splenic anæmia by West,[6] Williamson, and Strümpell, and out of six cases of febrile (infectious) purpura occurring under the care of one of us similar early vegetations were found in three cases on the valves of the heart

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THE HEIGHT OF THE DIAPHRAGM IN RELATION TO THE POSITION OF CERTAIN ABDOMINAL VISCERA

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WITHIN the last few years attention has often been drawn to abnormalities in the shape and position of certain of the abdominal viscera, especially with reference to the part these play in the causation of disease. Some short time ago a pamphlet was published by Dr Arthur Keith on the "Anatomy of Glénard's Disease" and lately his Hunterian Lectures on this subject,[1] in which he laid stress on the action of the diaphragm and thinning of the abdominal walls as being important factors in the etiology of the condition. Since the introduction of the formalin method of hardening the abdomen one is often struck with the great variations in the position of such viscera as the stomach, liver, and gall bladder, and it is observed that these occur mostly in female subjects.

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[1] American Journal of the Medical Sciences January 1900 and November 1902.

[2] Allbutt's System of Medicine vol. v p 544

[3] American Journal of the Medical Sciences vol xcviii 1899

[4] Annals of Surgery July 1901

[5] Thompson Yates Laboratory Report vol iv part 2 1902.

[6] Loc cit.

[1] THE LANCET March 7th (p 631) and 14th (p 709), 1903

The following observations were made with a view to ascertain the height of the diaphragm in the two sexes and to find out if there was any relation between the height of the dome, the position of the viscera, and the thickness of the abdominal wall, a guide to the latter being obtained by estimating the average thickness of the rectus muscle on the right side midway between the umbilicus and pubes. Nine consecutive cases in the dissecting room were examined without being selected in any way and the notes made will be found in the accompanying table.

CASE 1.—The patient was an old female. A marked Riedel's lobe was present, the right lobe of the liver reaching to a quarter of an inch above the highest point of the crest of the ilium. The gall bladder was greatly dilated and filled with gall stones and communicated with a large abscess cavity in the right lobe of the liver. Matted adhesions were present between the under surface of the liver, transverse colon, and first and second stages of the duodenum. The abscess cavity measured five and a half inches long, four and three-quarter inches broad, and opened into the first stage of the duodenum by a narrow channel admitting a glass rod. The thickness of the rectus muscle in this case was very small, measuring three millimetres.

CASE 2.—The patient was an old male. The liver was greatly displaced backwards on the diaphragm. The anterior border in the mesial line was opposite the junction of the sixth costal cartilage with the sternum; in the right mammary line at the lower border of the sixth costal cartilage; and in the right mid axillary line at the lower border of the eleventh rib. The gall bladder was pressed against the under surface of the right lobe of the liver and was situated deep opposite the eighth right rib in the anterior axillary line. The under surface of the right lobe was greatly indented by the hepatic flexure of the colon. No gall stones were present. The transverse colon crossed the abdomen six and a quarter inches below the tip of the xiphoid cartilage. A greatly loaded colon evidently accounted for the displacement of the liver. The thickness of the rectus muscle was eight millimetres.

CASE 4.—The patient was a female. The right lobe of the liver covered the right kidney to within half an inch of the lower pole, showing an indistinct Riedel's lobe. The gall bladder was placed one inch below the tip of the ninth right costal cartilage. No gall stones were present. The great curvature of the stomach was placed six and a quarter inches below the tip of the xiphoid cartilage. The transverse colon appeared low down one and a quarter inches above the symphysis pubis. The thickness of the rectus muscle was four millimetres.

CASE 5.—The patient was a female. A marked Riedel's lobe was present, the tip of the right lobe of the liver reaching to the highest point of the crest of the ilium. The gall-bladder was greatly dilated, the fundus measuring seven and a quarter inches long and two and a half inches broad. It lay in a fossa the upper half of which was bounded by the right lobe of the liver and the anterior surface of the right kidney, and the lower half, partly in the right iliac fossa, by the hepatic flexure of the colon which did not extend above a line drawn from the left anterior spine to the umbilicus. A few gall-stones were present. In this case the gall bladder was placed almost exactly in the position of the normal appendix. The cæcum lay deep in

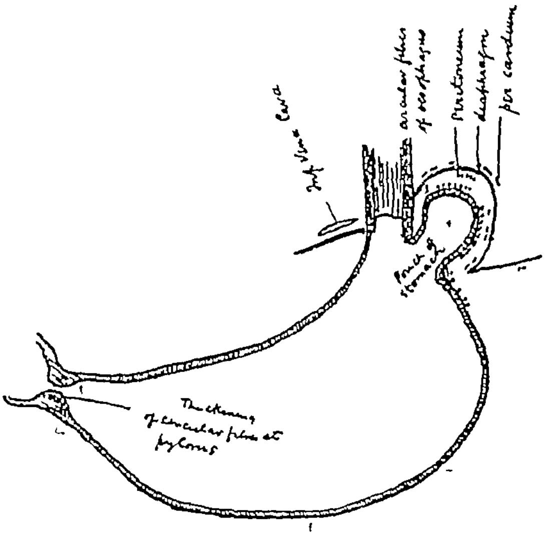
TABLE GIVING PARTICULARS OF THE HEIGHT OF THE DIAPHRAGM IN RELATION TO THE POSITION OF CERTAIN ABDOMINAL VISCERA IN NINE CASES.

No.	Sex.	Height of diaphragm right mammary line.	Height of diaphragm left mammary line.	Liver below the costal margin.	Stomach below the costal margin.	Transverse colon below the costal margin.	Gall bladder.	Reidel's lobe.	Average thickness of the recti.
1	F.	Fifth rib.	Fifth interspace.	Three inches below the tip of the ninth costal cartilage.	—	—	Large abscess cavity continuous with abscess in the liver gall stones.	Present.	3·0 mm.
2	M.		Fifth rib.	Greatly displaced back on the diaphragm.	—	Six and a quarter inches below the tip of the xiphoid cartilage.	Eighth rib in anterior axillary line.	Absent.	8·0 mm.
3	M.	Fourth interspace.	Fourth rib.	Three inches below the costal margin.	One and a half inches below the tip of the xiphoid cartilage.	Two and a quarter inches below the tip of the xiphoid cartilage.	—		7·9 mm.
	F.	Fifth rib.	Fifth rib.	—	Six and a quarter inches below the tip of the xiphoid cartilage.	One and a quarter inches above the pubes.	One inch below the tip of the ninth costal cartilage.	?Present. Right lobe half an inch below the lower pole of the kidney.	4·0 mm.
5	F.	Fourth rib.	Fourth rib.	Costal margin.	—	—	Partly in the iliac fossa greatly dilated. 7¼ inches by 2½ inches gall-stones.	Present.	2·0 mm.
6	F.	Fifth rib.	Fifth interspace.	—	Diverticulum of the cardiac end in a pouch of the diaphragm.	—	—	Absent.	—
7	F.	Fourth rib.		—	Five and three-quarter inches below the tip of the xiphoid cartilage.	Seven inches below the tip of the xiphoid cartilage.	Immediately below the costal margin at the tenth costal cartilage.	„	—
8	F.	Sixth interspace.	Sixth rib.	Four and three-quarter inches below the tip of the xiphoid cartilage.	Seven inches below the tip of the xiphoid cartilage.	Two inches above the pubes.	—	Not distinct. Tip of the right lobe reached the lower pole of kidney.	[illegible]·0 mm.
9	F.	Sixth rib.		Two and a half inches below the tip of the xiphoid cartilage.	Five inches below the tip of the xiphoid cartilage.	Seven inches below the tip of the xiphoid cartilage.	One and a quarter inches below the tip of the ninth costal cartilage.	Absent.	3·0 mm.

the right side of the pelvis, the appendix, four inches long, lying in the pouch of Douglas The thickness of the rectus muscle was in this case two millimetres.

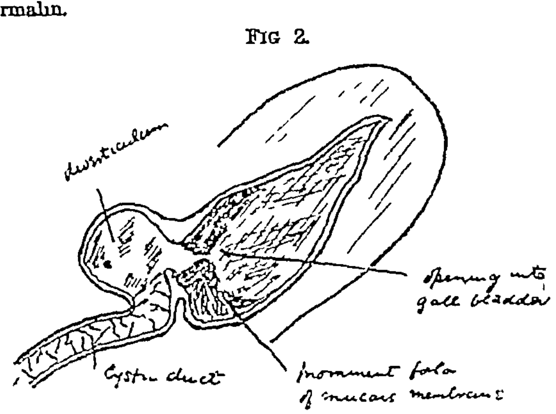
CASE 6 —The patient was a female. In this subject the stomach showed a curious diverticulum at the cardiac orifice Placed immediately to the left of the œsophageal opening there was seen a dome shaped pouch of the diaphragm into which a finger could easily be passed, and drawn up into this was part of the cardiac end of the stomach, measuring vertically about one inch (see Fig 1) The diverticulum could easily be pulled down from this pocket when it was noticed that the part of the stomach wall which lay against the neck of the pouch was thickened The peritoneum was reflected from the diaphragm to the stomach at the top of the pouch On slitting open the viscus the circular fibres of the œsophagus were seen to end at the right of the pouch So that it was without doubt a case of diverticulum of the stomach and not, as was thought at first, a dilatation of the lower end of the œsophagus The walls of the stomach were not thinned in any way, but the mucous membrane was thrown into well marked rugæ. The pylorus felt on examination very hard and thick as if some sort of stricture was present and the orifice would scarcely admit a glass rod, but microscopic examination showed no definite hypertrophy As there was no evidence of dilatation of the stomach, this apparent stenosis was evidently artificial and perhaps due to the hardening effect of formalin.

FIG 1.


Inf. Vena Cava
circular fibres of oesophagus
Peritoneum
diaphragm
per cardium
Pouch of stomach
Thickening of circular fibres at pylorus

Stomach, showing diverticulum of cardiac end in the pouch of the diaphragm

FIG 2.



Illustrates gall bladder with a diverticulum of the cystic duct

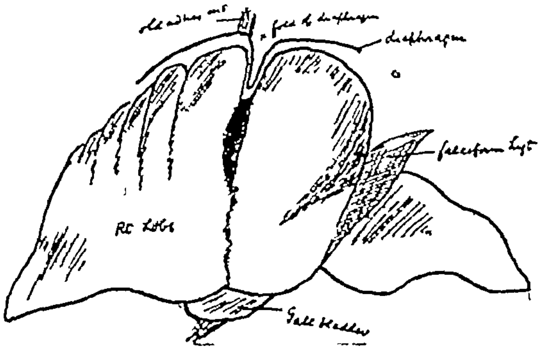
CASE 8.—The patient was a female. In this case the viscera appeared to be situated at a much lower level than usual. In the mesial line the liver extended to four and three-quarter inches below the tip of the xiphoid cartilage Although no distinct Riedel's lobe was present the tip of the right lobe of the liver reached as far as the lower pole of the right kidney The gall bladder was situated one and three quarter inches below the tenth right costal cartilage and the transverse colon two inches above the symphysis pubis. The thickness of the rectus muscle was four millimetres

The following two cases are interesting as exhibiting abnormalities in the liver and gall bladder in two female subjects

The first showed a well marked diverticulum of the cystic duct. The duct formed a sharp bend and opened at rather an acute angle into the diverticulum, which communicated with the gall bladder by a narrow circular orifice bounded by prominent folds of mucous membrane A few old adhesions were attached to the diverticulum

The second was a case of compressed liver taken from an old female subject. The liver measured seven inches from side to side and four inches high One and a half inches to the right of the longitudinal fissure was a deep grooving of the convex surface of the right lobe and in this lay a diverticulum of the diaphragm To the right of this were five other indistinct furrows A few old adhesions were attached to the right of the dipping in of the diaphragm and also to the fundus of the gall bladder (see Fig 3)

FIG 3



Liver in old female subject showing a fold of diaphragm dipping into the liver

On looking at the syllabus of the nine consecutive cases examined the first thing which strikes one is, I think, the great variation which seems to exist in the height of the diaphragm and the fact that this variation is well marked in the female subjects. In the seven females the height of the dome in the right mammary line varied from the fourth rib to the sixth interspace, whereas in the two males it did not extend lower down than the fifth rib Secondly, it is remarkable that so many abnormalities in the position of the viscera should have existed in such a small number of subjects and that these should have existed chiefly in females, for in the seven cases examined there were two distinct and two indistinct cases of Riedel's lobe of the liver, two cases of gall stones and two affections of the gall bladder, and one abnormality of the stomach Both cases of Riedel's lobe were accompanied by gall stones and in one of the cases there was an abscess in the liver and gall bladder, while in the other the gall bladder was greatly dilated and lay partly in the iliac fossa. Again, the measurements of the recti muscles as an indication of the strength of the abdominal muscles are interesting, as in every case they are much smaller in the females than in the males The thickness is especially diminished in the two cases in which a Riedel's lobe is present, the recti in these cases being so thin as to feel almost like a piece of brown paper The distance of the great curvature of the stomach and the transverse colon below the xiphoid cartilage was also greater in the females than in the males. In the case in which the diaphragm reached the sixth interspace the great curvature was seven inches below the xiphoid cartilage and the transverse colon was two inches above the pubes

Aberdeen

QUEEN'S HOSPITAL, BIRMINGHAM —This hospital ministers to the wants of a district containing a population of at least 700,000 persons The in patients treated last year amounted to 2065 the out-patients to 28,947. The yearly expenditure is over £11,000

ANGINA PECTORIS A CRITICISM AND A HYPOTHESIS

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THE field of cardiac pathology still resounds with the clash of conflicting arguments and the fray has nowhere been more hotly contested than over angina pectoris. Yet, in spite of the 61 attempts which according to Huchard, have been made to elucidate this symptom group or syndrome, as it is now the fashion to call it, the precise method of its causation remains more or less a mystery It will be the object of this paper to criticise the more important theories which have been advanced and also to submit a hypothesis whereby the mode of production of this curious and interesting group of symptoms is capable of explanation.

It is necessary, in view of the conflicting opinions held by clinicians with respect to the set or group of symptoms comprised under the term angina pectoris, to define clearly the nomenclature that will be adopted. If, as Professor T Clifford Allbutt pertinently observes, the title angina pectoris be used to include a variety of symptom groups which, though they may present a superficial clinical resemblance in the manifestation of some form of cardiac perturbation, yet differ widely and fundamentally in their etiological and pathological relations, all definite use of names comes to an end. In this connexion, too, it may be pointed out that the use of such terms as "false" angina pectoris and "pseudo" angina pectoris is altogether objectionable and fallacious inasmuch as it is obviously incorrect and unscientific to call a disease or group of symptoms by what it is not, rather than by what it is For the profitable discussion of any scientific problem it is well to deal so far as possible with clear-cut and definite conceptions and with this object in view the group of symptoms included under angina pectoris will now be clearly defined

The earliest and central feature of the paroxysm is pain, heart-rending, insistent, well nigh insupportable pain, which though initially and mainly retro-sternal tends to radiate over the upper portion of the thorax and down one or both arms as far as the elbows or wrists, and sometimes as far as the fingers. A sense or apprehension of impending death is the more or less constant and dread accompaniment of the pain. Agonised by this two-edged weapon the sufferer is rendered powerless and incapable of the slightest movement, he remains, as it were petrified and rooted to the spot. The apprehension of sudden death is in the large majority of cases realised sooner or later and post-mortem examination commonly reveals aortic and coronary atheroma associated, it may be, with a greater or less degree of myocardial degeneration

Such then in outline is the clinical picture of angina pectoris, the picture drawn so forcibly and accurately by Heberden in the year 1768. Other so-called anginas are but mimicries of this terrible and deadly syndrome and in order to put an end to the misnomer and consequent nosological confusion involved in the use of the terms "false angina pectoris, 'pseudo" angina pectoris, and the like, I would suggest that the name angina cordis be applied to these allied but widely different cardiac perturbations. The term angina cordis, moreover expresses more or less exactly the condition of the heart in these attacks and it can be suitably qualified in accordance with its mode of origin, as for instance, angina cordis vasomotoria, angina cordis toxicata, &c

The association of angina pectoris with disease of the coronary arteries and myocardium was observed and insisted upon by Jenner and is now generally admitted The relation between these coronary and myocardial changes and the symptoms of angina pectoris has long been the subject of speculation but it may safely be asserted that none of the theories hitherto advanced has afforded a perfectly satisfactory explanation. The theory of intermittent claudication' which, according to Osler, was originally advocated by Allan Burns, has been employed in the interpretation of the connexion between the coronary affection and the symptoms of angina pectoris. This interesting morbid condition is observed in the horse and occasionally in man and depends on arterial thrombosis or embolism whereby a large muscular territory, usually one or both limbs, is suddenly deprived of blood and becomes temporarily paralysed. The muscular paresis is apparently attended by great suffering and it is suggested that the pain and presumably the other phenomena of the anginal paroxysm are, in like manner, dependent on coronary ischæmia. It is, however, doubtful whether coronary thrombosis in man gives rise to pain and apart from this objection recurrent and frequently repeated attacks of angina which may occur without any appreciable disturbance or alteration in the action of the heart could not possibly be due to intermittent claudication.

The symptoms of angina pectoris and more particularly the pain that is so prominent and characteristic a feature of the paroxysm have been ascribed by many distinguished authors to cramp of the cardiac muscle The most extraordinary divergence of opinion appears with respect to this theory. Many eminent authorities deny that the cardiac muscle is capable of cramp, while other equally illustrious writers assert that this kind of painful muscular contraction can, and does, occur From a physiological standpoint, however, there is no evidence that the heart is capable of the cramp-like contraction that is observed in skeletal muscles And if the possibility of cramp of the heart be admitted its occurrence even when localised would surely interfere with the orderly and uniform performance of the cardiac systole and in this way lead to much greater disturbance of the action of the heart and of the rhythm and character of the pulse than is commonly found to be the case. Furthermore, cramp of the heart does not account for the angor animi or sense of impending death which is a characteristic feature of the anginal attack. Why, too, does not cramp occur in connexion with disease of the right ventricle? Why, too if cramp be concerned in the production of the symptoms of angina pectoris should the pain be relieved by the establishment of mitral regurgitation? Why, since the conditions which presumably favour the occurrence of cramp are not infrequently fulfilled should the phenomenon be so rarely observed? Why should cramp so rarely affect the heart of the class of patients who come to hospitals? It is necessary to obtain a satisfactory reply to these questions before cramp of the heart be admitted as the cause of angina pectoris

Current theories of angina pectoris link together cramp and paralysis of the cardiac muscle. But is not this blowing hot and cold with the same breath, are not these conditions the antithesis of each other and mutually destructive from a causal point of view? Be this as it may the objections urged above to the agency of cramp apply equally forcibly to the operation of paralysis of the cardiac muscle as a cause of the anginal attack Distension of the heart and stretching of the nerve elements in the cardiac wall cannot be a cause of the phenomena of angina if associated with increased arterial pressure since the two conditions are impossible at the same time Moreover, dilatation and stretching of the cardiac walls are frequently observed and are not attended by the symptoms of angina pectoris

The phenomena of the anginal attack have been attributed by a large number of eminent authorities to neuralgia or neuritis of the cardiac nerves. The objections to this theory are that inflammatory and degenerative conditions of the cardiac nerves have frequently been observed without any of the symptoms of angina pectoris Again, in those cases of angina in which nerve changes have been found there have also been observed well marked aortic and coronary atheroma, with or without myocardial degeneration. Neuralgia and neuritis of the cardiac nerves have also been found in association with symptoms which do not resemble those of angina pectoris. The mode of onset of the anginal paroxysm and the rarity of its occurrence among women are features opposed to the purely nervous theory of its mode of production Moreover, the angor animi is not explained by the theory under examination, nor does neuralgia of the cardiac nerves afford a satisfactory interpretation of the almost invariably fatal termination of angina pectoris.

Professor Clifford Allbutt is of the opinion that the pain of angina pectoris arises in the aorta and in cases of chronic disease of this vessel, at all events, is due to tension and stretching of the degenerated aortic walls. I cannot help thinking that for so able and brilliant a pleader Professor Allbutt's advocacy of this theory is somewhat half hearted.

The hypothesis in question does not permit the coronary and myocardial disease any causal influence in the production of the anginal attack. It is to be observed, however that these changes in relation to the aortic disease are advantageous and conservative inasmuch as they make for lessened aortic blood pressure and therefore diminished aortic stress A high blood pressure in the aorta of protracted duration is common enough without the incidence of anginal symptoms, Moreover, those occupations which are prone to give rise to aortic strain and stress do not furnish any large proportion of the cases of angina pectoris—indeed, angina pectoris is rarely observed among blacksmiths, labourers, navvies, porters, and the like Nor, so far as I am aware, does this hypothesis attempt to explain the sense of impending death which, as I have already insisted, is one of the central features of the anginal seizure. It seems to me that Professor Allbutt is much nearer the mark when he suggests that in addition to the static changes which are found there is a dynamical factor in the causation of this symptom group

The vaso-motor phenomena that are observed in connexion with angina pectoris will be considered later A hypothesis which aspires to elucidate the mode of production of the symptoms of angina pectoris must account not only for the dolor pectoris but also for the angor animi. It must likewise afford a satisfactory interpretation of the character of the pulse and of the vaso motor phenomena associated with the paroxysm The various theories which have been under review fail to satisfy fully these requirements and herein lies the justification, if one be needed, for yet another attempt to explain the mode of production of this remarkable and enigmatical syndrome. It is now generally allowed that disease of the coronary arteries and of the myocardium is in some way associated causally with the incidence of angina pectoris The coronary atheroma, which is the morbid condition usually found, and the myocardial degeneration are unequally distributed over the wall of the heart. Furthermore, careful microscopical examination usually reveals a greater degree and extent of myocardial disease than the macroscopical appearances indicate It is probable, too, that the nervous tissue—i.e , ganglia and nerve fibres—distributed over the wall of the heart suffers in common with the muscular substance of the organ and tends therefore to undergo similar degenerative changes. I would again insist on the fact that in both cases the morbid changes have a "patchy" irregular disposition

So long as the heart is acting quietly the areas of degenerated muscular tissue are able, even with a relatively insufficient blood supply, to take their share in resisting and overcoming the intra cardiac pressure during systole. So soon, however, as the work of the heart is increased as, for instance, by exertion, emotion, &c., the area or areas of degenerated muscular wall are at a double disadvantage, inasmuch as the diseased and partially occluded coronary vessels are unable to satisfy the increased demand for blood to the territories or patches of deteriorated muscular tissue. The areas of degenerated ventricular wall are thus unable to take their proper share in resisting the increased intra cardiac pressure and in consequence undergo more or less distension and stretching Herein lies the explanation of the pain experienced during the anginal seizure, since the affected portions of the ventricular wall contain nervous tissue in an unduly impressionable and irritable condition, which must be subjected to a considerable degree of stretching and tension In other words, the hypothesis I suggest ascribes the pain experienced in the anginal paroxysm to localised distension and stretching of the ventricular wall. If this hypothesis be well founded it must also satisfy the requirements that were detailed when the question of cramp of the cardiac muscle was discussed and I think this will on examination be found to be the case.

The hypothesis does not entail any interference with the regular and uniform performance of the ventricular systole , the wave of contraction passes uninterruptedly from apex to base, but over certain portions of the ventricular wall it is qualitatively and quantitatively deficient In these conditions the action of the heart and the rhythm and character of the pulse may remain, so far as physical examination is concerned, undisturbed and unaltered, and in the majority of anginal seizures this state of affairs obtains It is conceivable, however that should the area or areas of degenerated ventricular wall exceed a certain proportion in relation to the amount of sound muscular tissue the heart might falter, the pulse become irregular, and the blood pressure fall. This sequence of events has also been observed, more especially in old standing cases and in the terminal stages of frequently repeated anginal attacks

The establishment of mitral regurgitation in the course of angina pectoris relieves the intra ventricular pressure and in this way diminishes the stress on the cardiac wall, and hence the degree of distension and stretching of the diseased muscular territories Nitrites and other vaso dilators owe their beneficial influence to a similar mode of action—viz., the reduction of intra ventricular pressure. The safety valve action at the tricuspid opening effectually precludes the operation of the conditions which might otherwise give rise to undue stress on the wall of the right ventricle and it is for this reason, I take it, that anginal phenomena are rarely if ever associated with disease on this side of the heart Again, the hypothesis which I suggest provides a feasible and attractive explanation of the angor animi which is usually more or less neglected in the current theories of the pathogenesis of angina pectoris It is obvious that if distension and stretching of localised areas of the cardiac wall take place during systole the ventricular parietes are *simultaneously* undergoing contraction and expansion. The effect of this dynamical perversion of the cardiac movements on the impressions transmitted to the cardiac centre during the ventricular contraction must be contradictory and antagonistic, and the intensity of the opposed efferent impulses will be influenced by the relative amounts of sound and degenerated muscular tissue and also by the degree of extra work demanded of the heart. The cardiac centre must in these circumstances be thrown into a turmoil, and it is hardly a matter for surprise that a threatened disorganisation of the very citadel of life should occasion the sensation of impending death. Moreover, the perturbation of the cardiac centre spreads, no doubt, to adjacent centres and herein lies the explanation of the vaso-motor phenomena as well as of the nausea, vomiting, flatulence, hiccough, and so forth which so commonly accompany the anginal paroxysm.

A few subsidiary and contingent conditions still remain for consideration. The extraordinary variability in the incidence of anginal attacks is explicable on the assumption that the coronary and myocardial affection does not always provide the exact conditions for the production of localised stress on the ventricular wall. Indeed, it is not unreasonable to surmise in the light of the present hypothesis that the production of an anginal seizure in coronary and myocardial disease is always more or less of an accident. Clinical observations appear to bear out this supposition The occurrence of sudden death can be explained in two ways. Thus the sudden arrival at the cardiac centre of equally balanced antagonistic impulses might inhibit the action of the centre, or that portion of the ventricular wall which is known as Kronecker's centre in the dog and is situated in the lower portion of the upper third of the inter ventricular septum may be the seat of disease (coronary or parietal) and hence of distension and stretching in the manner previously indicated so that sudden death may be due either to a reflex or to a local cause.

The remarkable immunity from anginal symptoms that is displayed by the class of people who seek advice and treatment at hospitals is, I imagine, due to the fact that the conditions of life in which these patients live lead to more general and extensive myocardial degeneration and hence to more readily produced failure of the heart than is the case with the more well to-do members of the community Angina sine dolore is explained on the assumption that the deterioration of the nervous elements in the cardiac wall becomes so great that they fail to react to stimuli which ordinarily give rise to the sensation of pain. It is extremely interesting to observe that, under the operation of the causal factors I suggest, the incidence of this form of angina pectoris justifies a serious prognosis, since it implies grave deterioration of the wall of the heart

The relation between "pseudo" angina pectoris, or angina cordis vasomotoria as I prefer to call it, and angina pectoris still remains to be discussed. In angina cordis vasomotoria the essential feature of the paroxysm is, as Solis Cohen has pointed out, a vaso-motor ataxia, whereby the heart is suddenly exposed to stress which, after a period of stormy nervous action, subsides and enables the organ again to obtain control of the circulation The cardiac embarrassment, in these conditions, is due to sudden and general arterial constriction, which in turn depends on the operation of imperfectly controlled central and peripheral stimuli on unstable and unduly sensitive vaso-motor and nervous centres.

In angina pectoris, on the other hand, although the general arterial blood pressure is probably always above the normal, the vaso-motor phenomena are, in part at least, secondary and not primary features of the attack It is possible, indeed not improbable, that spasm of the coronary arteries (which are affected in common with the rest of the arterial system) plays a similar but subordinate rôle in the production of cardiac pain in angina cordis vasomotoria to that which organic disease of these vessels does in the causation of an attack of angina pectoris. Moreover, it is conceivable that long-continued and frequently repeated attacks of angina cordis from any cause might ultimately lead to disease of the coronary arteries and myocardium and in this way the various forms of angina may merge imperceptibly into one another From this point of view then, the existing antagonism may be resolved into a harmonious whole by means of which the incidence of cardiac angina is freed from the difficulties which have hitherto beset the solution of its occurrence and mode of production.

Upper Berkeley-street W

A CLIMATOLOGICAL ASPECT OF THE NAUHEIM TREATMENT OF DISEASES OF THE HEART

By LESLIE C THORNE THORNE M.D , B Sc Durh ,
MEDICAL EXAMINER TO THE TECHNICAL EDUCATION BOARD OF THE LONDON COUNTY COUNCIL.

It is now many years since the Nauheim treatment of diseases of the heart was first practised in England, and those who have devoted special attention to the subject have had time to observe the effects of the English climate upon it and have been able so to regulate its application as to produce the best results obtainable, these results being in many cases of a highly satisfactory nature. There are still, however, a large number of medical men who either do not use this method of treatment at all or do not give it that place of importance as a therapeutic agent which it rightly deserves. The reason for this, I believe, lies in the fact that the Nauheim treatment when administered in England has in some ways to be modified and adapted to the climate, whereas many medical men who have given it what they believe to be a fair trial have prescribed the comparatively long and frequent baths and the frequent resistance exercises that often produce good results at Nauheim, but, according to my experience in London, only benefit a small minority of mild cases of heart disease and do definite harm to the more serious cases.

As I am convinced that many who have hitherto found this treatment of little use in England would be led to regard it as a really valuable therapeutic agent were they to adopt the methods of administration that I have found most successful in London, I do not hesitate to give a short sketch of a course as I have carried it out for some years with very satisfactory results especially in cases which have not been greatly benefited by rest, the administration of drugs, or other methods of treatment In giving this sketch I shall endeavour to mention all the really important points to be attended to so that any medical man who has not hitherto administered the Nauheim treatment may be able to do so by carefully carrying out the directions given.

The administration of the baths—Taking for example, a case of dilated irritable heart, a sequel of influenza, causing symptoms of vertigo palpitation dyspnœa, insomnia, cardiac pain, lassitude, and general invalidism, I begin by giving a three or four minutes bath at a temperature of 97° or 98° F , containing from four to five pounds of Droitwich salt and from five to six ounces of calcium chloride The pulse is carefully noted before, during and after the bath and the result aimed at, and usually obtained, is a diminution in frequency, an increase in volume, and a lowering of tension. The patient goes to bed for one hour after the bath and is not allowed during this time to read write or talk. A bath of similar strength temperature, and duration is given the following day On the third day the Schott exercises are usually given instead of a bath, the patient resting for a minute or so between each exercise and lying down for half an hour after them.

Frequency of baths.—The baths are given on two consecutive days and the exercises on the third day for the first week or fortnight, according to the severity of the case and the result produced upon the heart's action. After the first week or fortnight baths are given three days in succession with an interval for exercises on the fourth day In my opinion it is a mistake to give baths for more than three days in succession even towards the end of the course

Strength of baths—If the patient does well and the circulatory system reacts well I increase the strength of the baths by one pound of sodium chloride and one ounce of calcium chloride every second bath up to the tenth or twelfth To the tenth or twelfth bath I add half of one of Sandow's effervescing packets, at the same time reducing the sodium chloride by about two pounds and the calcium chloride by about two ounces. If this change proves satisfactory I again start, raising the strength of the baths as in the first instance, increasing the effervescence to three-quarters of a packet at about the sixteenth bath, and a whole packet at the twentieth The number of baths taken in a course varies from about 25 to 30 any greater number being, in my experience, likely to weaken the patient and to decrease rather than to increase the good that has been done. By the end of the course the patient is having a bath containing from 12 to 14 pounds of sodium chloride, from 14 to 16 ounces of calcium chloride, and one boxful of Sandow's effervescing tablets

Duration of immersion—As I have previously said, I begin by giving a three to four minutes' bath and with an average case I find that the best plan is to lengthen the time of immersion by one minute every second bath, curtailing it, however by two or three minutes when the first effervescing bath is given.

Temperature of baths.—The first bath is given at a temperature of 97° or 98°, this temperature being lowered 1° every second bath down to 94° or even 93° in exceptional cases, but it is often found that a good reaction cannot be obtained with a temperature below 96° and in these cases that temperature is adhered to throughout the course. At Nauheim, where the treatment is only given from the beginning of May to the end of September baths of a lower temperature may have some advantages, but it is my experience that a good reaction is not obtained from a bath given at a lower temperature than 93°

The administration of the exercises.—The exercises should be given by as experienced an operator as possible and by one who has been trained to watch the pulse and to regulate the resistance given by the effect produced. If increased arterial tension and rapidity of pulse are produced then the exercises are being given too forcibly and too rapidly and are doing harm rather than good. As a rule, if the exercises are properly given, they rarely fail to lower the rate and tension of the pulse and to increase its volume. I only give the exercises on the days when there is no bath taken, as I believe this is the wisest plan to pursue all through the course I am certainly convinced that to give both bath and exercises on the same day for a longer period than the last week of the treatment is unwise and I am doubtful whether even this is advisable except in cases of very slight cardiac trouble The exercises are by no means as powerful an agent as the baths and if no experienced operator is procurable it is best to omit them entirely

The general care of a case during treatment is of great importance no definite rules can be laid down which would be suitable to all, but it is essential that the patient should absolutely give up business and social engagements and should, if well enough, take a prescribed amount of walking exercise both morning and afternoon and have the digestion and bowels well attended to That these general directions carefully carried out help to a satisfactory result is manifest, but that they are not in themselves enough to produce that result I have proved, as I have often given cases general treatment for some time before using the Nauheim baths and have failed to obtain improvement as rapid satisfactory, or lasting as that resulting from a course of baths and exercises

I have not entered here into a discussion with regard to the forms of cardiac disease most suitable for treatment, as that is not within the scope of this paper, but in advising the treatment and giving a prognosis as to the result it must always be remembered that an organically diseased heart cannot be converted into a sound organ by this or any other method of treatment but that a dilated and enfeebled heart with flabby muscular walls and imperfect contractile powers can be cured by this method in a way that, in my experience, is not possible by any other form of treatment the reason for this being that whereas digitalis and other allied cardiac tonics whilst stimulating the heart increase the arterial tension the Nauheim treatment produces a dilatation of the peripheral vessels by the baths and of the muscle vessels by the exercises, thereby lowering arterial tension and giving the heart a comparative rest

In conclusion, I would say that there is nothing new in the methods of procedure I have endeavoured to outline in this paper, but as I have not come across any similar description in the medical press, I trust that it may be of use to those who are anxious to give the Nauheim treatment a *trial and that it* may be the means of inducing some who have never practised it to do so for I am convinced that, if given in the manner I describe, the Nauheim treatment is one of our most valuable therapeutic agents in the treatment of heart disease

Inverness terrace W

DIABETIC GANGRENE OF THE TOE, AMPUTATION OF THE TOE RECOVERY

BY CHARLES FISHER, M B, B S DURH., M R C S ENG, L.R C P LOND

ON Sept 17th, 1902, I was consulted by a stout elderly man who complained of the middle toe of his left foot causing him pain. Upon examination it was seen to be acutely inflamed and in a sodden condition, with a hard corn on the dorsal surface of the last interphalangeal joint. The history given was that the patient had always led a very active life and had enjoyed excellent health till about eight or nine years before when he had quinsy; since then he had always felt unduly sleepy and tired during the latter part of the day He had had the corn for a number of years, but it had never caused him any trouble till about a month previous to his seeing me, when it became painful and the toe swollen, the pain frequently keeping him awake at night. The toe was washed with a solution of carbolic acid (1 in 60) and dressed with cyanide gauze, but the condition did not improve and by the 21st the skin covering the last two phalanges was purple in colour and sensation was somewhat diminished By the 23rd this portion of the toe was quite black and there was an entire absence of sensation Upon asking the patient if he had been suffering from inordinate thirst, had passed more urine than formerly, or had had an increased appetite, I received a negative answer to each question. His tongue was clean and moist, his teeth were good but much discoloured, and his bowels were opened regularly every day The liver was not enlarged The heart and lungs were normal, the pulse was 76, regular, of good volume and tension, the vessels were not thickened The skin of both feet was somewhat harsh and dry Upon examining the right foot the distal portion of the last phalanx of the middle toe was dark brown in colour, horn-like in structure, and devoid of sensation The patient said that this toe had been in much the same condition for the last two or three years The urine was rather pale in colour acid, of specific gravity 1038, and contained much sugar, but no albumin or excess of phosphate, and no diacetic acid Diabetic food and half a grain of codeia three times a day were ordered The quantity of urine passed for a number of days averaged 80 ounces and the quantity of sugar 1440 grains, the amount not being diminished in spite of treatment. By the 26th the line of demarcation was forming on the dorsal surface at the first interphalangeal joint, whereas on the plantar surface it was as far as at the metatarso phalangeal joint The toe was now being dressed with boric lotion (ten grains to the ounce) and cyanide gauze. During this time the patient was taking his food well and sleeping well, his temperature was not raised and his pulse was 80 Pulsation could be felt in the dorsalis pedis and posterior tibial vessels, but it was weak.

From this date onwards the condition of things gradually became worse, the foot becoming swollen and inflamed and a most offensive odour proceeding from the toe His temperature was 99 8° F and his pulse was 90 By Oct 4th the line of demarcation had completely formed and on the 6th Mr H F Waterhouse came down from London in consultation and amputated the toe at the metatarso-phalangeal joint. There was free hæmorrhage and a considerable amount of pus escaped As the foot was in such an inflamed condition a counter opening was made on the dorsum of the foot and a gauze drain was passed through. The flaps of the wound were not sutured together, but it was well packed with cyanide gauze After the operation the leg was kept well elevated and protected by a cradle The distal phalanx was found to be completely necrosed. From the following day and onwards until the inflamed condition of the foot had subsided it was dressed with warm boric fomentations, since then with cyanide gauze and boric lotion (10 grains to the ounce) On the 8th the wound was again offensive and gangrene appeared in the deep part of the wound, but fortunately it did not spread to any great extent and by degrees separated in the form of a slough After the operation the patient was ordered in addition to the codeia, a quarter of a grain of hydrochlorate of morphia three times a day and within a few days from taking the morphia the amount of sugar in the urine became less, the dose of both drugs was increased until the patient was taking three grains of each daily The wound and sinus filled up very slowly with granulation tissue and by Christmas they were quite healed, on which day the patient came downstairs for the first time since the operation. During the first week of being downstairs the urine was quite free from sugar, but ever since then there has been a slight amount present, the specific gravity being 1020 When the patient had been downstairs for a few days the dorsum of the foot became œdematous and this condition persisted for about a month, but as this began to subside œdema began to appear in the leg and it still exists During the latter end of January the gangrenous portion at the distal end of the middle toe of the right foot separated, leaving healthy skin underneath Since the beginning of the illness in September small pustules and purpuric spots have frequently appeared on various parts of the body and extremities. The patient is now leading a fairly active life and is able to attend to his business

This case presents several points of interest in that the classical symptoms of diabetes were absent the patient was a stout man and had not lost flesh, had not suffered from thirst, increased appetite, or passed an excess of urine, moist gangrene occurred on the left foot, dry on the right, and the corresponding toes were affected as in Raynaud's disease. The patient had had no business or family trouble and all his relatives had been healthy living to an old age, with the exception of a maternal uncle who died from gangrene, but whether diabetic or not is not known.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

A CASE OF BLACKWATER FEVER TREATED WITH LIQUID EXTRACT OF CASSIA BEAREANA.[1]

BY DR. H. CORKE,

MEDICAL OFFICER TO THE ZANZIBAR GOVERNMENT IN PEMBA.

I RECEIVED an urgent call on Jan. 26th, 1903, to proceed to Weti, some 18 miles away, to attend a woman engaged in missionary work who was said to be suffering from blackwater fever I accordingly saw her on Jan. 27th She had been invalided home some years before for an attack of blackwater fever She had been suffering on and off from attacks of ordinary malarial fever for some time previously to my seeing her and had been taking sulphate of quinine. I learned that on Jan. 26th her urine had suddenly assumed a very dark appearance and had become very scanty in quantity Her temperature at that time was 105° F She had pains all over the body and there was a tendency to jaundice During the night of the 26th she had several fits of vomiting and she slept only in snatches of a few minutes at a time. On the morning of the 27th general jaundice was well marked the conjunctiva being very yellow, with pains all over the body, the urine was quite black, scanty in quantity, and was passed frequently, the temperature was 103° and the pulse was 88 per minute, strong, and regular. As the bowels were constipated I administered three grains of calomel. I prescribed 15 minims of liquid extract of cassia Beareana well diluted with water, to be given every half hour at first and afterwards every hour For nourishment Brand's extract of meat was given To allay the thirst from which the patient was suffering I prescribed rice- and barley water I gave champagne occasionally in small quantities After the first dose of cassia Beareana all vomiting ceased, the patient dozed on and off throughout the day, and the temperature fell gradually from 103° at 11 A.M to 99 8° towards evening, when an enema was administered which acted fairly The patient passed a much better night, had no headache, and slept at intervals On the morning of the 28th her temperature was 100°, the jaundice was still very marked, and her pulse was 90 per minute, good and regular She vomited some bile at 6 A.M. and an enema was administered which produced a large motion, constipated in character and containing scybalous lumps Cassia Beareana was administered every hour during the day Towards evening a distinct improvement was observable in the urine voided, which was fully 50 per cent. lighter in colour than it had been in the morning The temperature remained at 100° all through the day, there was no vomiting, and the patient took nourishment well. On the 29th the jaundice steadily diminished, the urine became practically normal in colour, and the tongue was less furred. The dose of cassia Beareana was diminished to ten minims administered every two hours. The temperature ranged from 100° to 101° during the day, there was no vomiting The patient took nourishment freely and slept much in the course of the day The urine voided towards evening was quite clear On the 30th it was found that the patient had passed an easy night. The temperature was 101°, the jaundice had practically disappeared, and the urine was clear and was passed freely As all the urgent symptoms had now disappeared I left the patient in charge of an experienced nurse with instructions to continue the cassia remedy and to communicate with me should any fresh symptoms arise.

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[1] A full account of the botanical characters and medicinal properties of cassia Beareana, by Dr D R O Sullivan Beare and Mr B M. Holmes, F L.S was published in THE LANCET of Feb 1st, 1902, p. 282

I am of opinion that recovery was due solely to the beneficial action of the drug given—namely, liquid extract of cassia Beareana—the patient being advanced in years and this being her second attack I should most decidedly administer the same drug should I ever meet with any more cases of blackwater fever and I would give it with the greatest confidence.

Chaki Chaki, Pemba.

A CASE OF FULMINATING APPENDICITIS WITH SEPTIC PERITONITIS

By F E WOOD, B A., M.B, B C CANTAB.,

HOUSE SURGEON TO THE WINDSOR AND ETON ROYAL INFIRMARY

THE following case presents one or two points of interest, he chief one being the distance travelled in the removal of he patient to the infirmary This was done with ease under he influence of morphia and with apparently no ill effects.

The patient, who was a female, 26 years of age, was perfectly well on Dec. 4th and first came under medical observation on Dec. 5th on account of pain in the "stomach." On examination slight pain and tenderness with a certain amount of dulness were found to exist in the right iliac region. Her pulse rate was 90 and her temperature was 99° F On the following day the symptoms were much the same. On the 7th less than 48 hours from the commencement she complained of great pain in the right iliac region and it was then found that there were tenderness and dulness in the right flank, tympanites and loss of liver dulness Her temperature was 101° and her pulse-rate was 130 A diagnosis of perforation of the appendix was made. She was then put well under the influence of morphia and removed a distance of two and a half miles to the infirmary The removal was borne very well On admission the patient complained of no great pain, the physical signs were the same as above enumerated. A consultation was held at which the previous diagnosis was confirmed and an operation was decided upon.

The operation was performed on Dec 7th by Dr E. S. Norris, senior surgeon to the infirmary An incision was made over McBurney's point about three and a half inches in length. On opening the peritoneal cavity a quantity of offensively smelling pus escaped but there was no free gas. Some coils of intestine covered with flakes of lymph were floating free in the fluid There was also some matting together of the other coils and on breaking down a few adhesions pockets of a clearer fluid were found The appendix was not seen, so no attempt was made to remove it. The peritonitis extended right down into the pelvis and as far as the hand could reach in the abdomen The cavity was then washed out with warm boric lotion of the strength of 1 in 40 During this process the patient, who had been anæsthetised with chloroform, stopped breathing, whereupon artificial respiration was performed and injections of strychnine and ether were given. The washing out was also stopped. When she had recovered somewhat a Keith's glass drainage tube was inserted right down into the pelvis and absorbent dressing was applied over this. She was then removed to the ward. She had recovered from the effects of the anæsthetic but was very collapsed, so further hypodermic injections of strychnine and ether were given and also a nutrient enema containing two ounces of brandy and the yelk of one egg Some time afterwards she vomited twice and in the evening passed a well formed motion Rectal feeding was continued every two hours for two days On the second day after the operation feeding by the mouth was begun and as no vomiting occurred this was continued in gradually increasing quantities, peptonised milk, eggs, and brandy being given The bowels were kept open by injections of two drachms of glycerine about every other day. The day after the operation the patient's general condition was fairly good but she had the facies abdominalis well marked The wound was dressed frequently and about three ounces of offensive pus were withdrawn daily by the syringe. The glass tube was kept in for a week and then an indiarubber one was substituted. During the first week the whole thickness of the abdominal wall, about an inch in width for the entire length of the wound, sloughed away and the bowel was seen at the bottom of the wound. The patient progressed well from this time and is now quite well, the wound having healed completely

Windsor

NOTE ON CONDITIONS MODIFYING EXANTHEMATOUS ERUPTIONS

By JOHN REID, M A., M.D ABERD

IN medical practice there is often a temptation to diagnose a recrudescence of a previous attack, or even a fresh zymotic disease, on the appearance of a fresh eruption while probably sight is lost of certain factors in connexion with such cases—namely, (1) the fact that the skin has passed through an inflammatory stage and is on that account a *pars minoris resistentiæ*, (2) that the zymotic disease may have attacked a constitution weakened by rheumatism or gout, where rashes often appear, and (3) that some local mischief may favour, or rather tend to induce, eruptions. As illustrating the above principles I trust the following cases will prove interesting

CASE 1—A girl, aged nine years, with a rheumatic diathesis suffered from a burn of the second degree on the leg covering an area two inches square. Bronchial catarrh and herpes on the face and eyelids preceded varicella The mouth was full of pustules and it was extremely difficult to feed the patient, as the state of the lips and mouth interfered seriously with movement and the irritation of food matters was great. Lichen urticatus and general desquamation followed the varicella Quinine and cod liver oil formed the dressing and the administration of an alkaline stomachic mixture completed the treatment

CASE 2.—A boy, aged 12 years, passed a tænia solium after a dose of male fern. In a week he had an attack of typical measles, with fever and bronchitis He was treated with an ammonia mixture. In this case also the rheumatic diathesis was present. Koplik and Filatow's spots were seen. The rash disappeared on the sixth day and on the following day an exactly similar rash without fever—erythema morbilliforme—suggested a return of measles. There was intolerable itching After replacing the ammonia mixture by a mild stomachic the rash and itching disappeared within 24 hours and were followed by desquamation

CASE 3.—A male child, 11 weeks old, suffered from proctitis with rectal prolapse and bubonocele of the left side.

The symptoms improved under lead lotion and belladonna and the internal administration of bismuth. Pneumonia of the left base came on, necessitating the administration of brandy Next followed typical measles with Koplik and Filatow's spots The measles lasted for six days and then pneumonia returned in the left base A speedy desquamation followed. An erythema of one day's duration came on and finally herpes over the left groin and left buttock, as well as near the anus and on the anterior third of the penis The prepuce was inflamed and required treatment. Further symptoms were gastro intestinal catarrh with green clayey motions and protracted convalescence joined to slight bronchitis, although the child rapidly put on flesh and drank milk heartily This child as well as the other members of the family, had rheumatic symptoms It should be stated that snuffles were present although no other signs of specific disease presented themselves. The teeth of the other members of the family were good and regular as to time The father and mother were healthy

Southfields S W

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias tum aliorum tum proprias collectas habere et inter se comparare —MORGAGNI *De Sed et Caus Morb*, lib iv, Procemium

ST GEORGE'S HOSPITAL

A CASE OF EXTENSIVE PERICARDIAL EFFUSION, OPERATION, RECOVERY

(Under the care of Dr ARTHUR LATHAM and Mr H S PENDLEBURY)

A MAN, aged 53 years, came under the care of Dr Arthur Latham on Sept 1st, 1902 at St George's Hospital. He gave a history of good health until the early part of last March. He denied having had syphilis and asserted that he had always been a moderate drinker In the early part of March he began to suffer from shortness of breath This symptom gradually became more troublesome and the patient in consequence was obliged to give up work on March 28th. On April 4th the left pleural cavity was tapped and ten ounces of serous fluid were withdrawn. Further small quantities of blood stained fluid were removed on May 23rd, July 22nd, and August 5th During August the patient developed marked œdema of the legs and some distension of the abdomen He also became jaundiced. When he attended at the hospital he complained of sleeplessness and of cold extremities. He was suffering from considerable dyspnœa, with slight cough and expectoration, the face was sallow and somewhat cyanosed, the pulse-rate was 76, the volume being small and the wave full though regular, the respirations were 24 to the minute, the temperature was normal. The legs were markedly œdematous and there was evidence of a considerable quantity of free fluid in the abdominal cavity The apex of the heart could not be felt nor could it be located by the stethoscope as no cardiac sounds could be detected, the area of cardiac dulness was much increased. The note over the left axillary base was dull, there was diminution of the voice sounds, and on auscultation distant tubular breathing was heard Over the base of the left lung posteriorly the note was impaired, there was distant tubular breathing, and a few moist sounds could be heard The urine had a specific gravity of 1028, was normal in colour, somewhat diminished in amount, and contained a very faint trace of albumin On Sept. 3rd the patient was given a little chloroform by Dr Ll Powell Mr H S Pendlebury *tapped* the pericardial sac in the fourth costal interspace one and a quarter inches from the left border of the sternum and drew off 95 ounces of serous fluid which was dark brown in colour owing to the presence of a considerable quantity of methæmoglobin. No further evidence was obtained by a careful examination of the fluid. The patient slept well during the night and felt much more comfortable on the following morning The heart sounds could now be heard over the præcordial area but were still very faint. During the night 90 ounces of urine were passed. On the 8th the patient was comfortable and the œdema of the legs and the distension of the abdomen were considerably less. He was sleeping well and the coldness of his extremities had diminished. The pulse was of good quality and the wave could be easily felt. The heart sounds, however, were again becoming more distant and the cardiac dulness was again increasing, consequently Dr Latham asked Mr Pendlebury to drain the pericardial sac, which apparently had been distended with fluid for several months and was still secreting to an appreciable extent.

The operation was performed on Sept. 9th Having decided to drain the pericardium for some time it was of *the first importance to choose a procedure* which would insure drainage from the lowest approachable part of the pericardial cavity Consequently Mr Pendlebury determined to perform the operation so clearly described by Dr Cyril Ogle and Mr Herbert Allingham in THE LANCET of March 10th, 1900, p 693, with such modifications as might appear necessary A vertical incision some four and a half inches long was made with its centre at the lower border of the seventh costal cartilage parallel with, and one inch from, the left border of the sternum. The skin and fascia were reflected inwards and outwards and the abdominal muscles were then detached from the seventh costal cartilage The cellular interval, "costo-xiphoid space," containing the superior epigastric artery was then broken into, some of the muscular fibres of the diaphragm being torn. As the pericardium was distended it was easily brought into view, but as Mr Pendlebury wished to have sufficient room to insert the fingers after opening it two inches of the seventh costal cartilage were first removed by cutting it through with bone forceps and disarticulating the fragment from the sternum. The internal mammary vessels were now exposed and held aside. Had it been necessary it would have been easy to secure them More loose connective tissue, fat, and the triangularis sterni were gently pushed aside and the pericardium—tense and thick—was exposed Owing to the conformation of the chest the wound was somewhat deep and to obtain more complete and convenient access to the pericardial contents after opening two inches of the sixth costal cartilage were likewise removed. The pericardium was incised where it bulged downwards through the torn cellular space and the cut edges were seized with clips Some 20 ounces of blood stained fluid, similar to that removed by tapping on Sept. 3rd, escaped The incision into the pericardium was increased to allow of three fingers being introduced to examine as far as practicable the heart and parietal pericardium These were found quite smooth and apparently normal Unfortunately, the man's chest was very deep and it was not possible to explore thoroughly the back of the heart and pericardium, as can be done so readily in children after this operation There were no adhesions to be felt and the fingers could be interposed between the heart and the diaphragm A peculiar vibratile thrill was noticed on palpating the ventricles during systole. These manipulations had no harmful effect on the pulse, indeed, the escape of the remaining fluid had distinctly increased its strength and promoted its regularity It was only possible to stitch one corner of the pericardium to the skin at the lower end of the wound, a tube was introduced and the upper three inches of the incision were united by silkworm gut sutures The tube was removed on the fourth day after the operation as it was blocked with the clotted discharge On the eighth day the 16th, the stitches were removed, only a small sinus remaining where the pericardium had been sewn to the skin This sinus did not completely heal till nearly three weeks afterwards, a little easily clotting fluid trickling away from time to time. Throughout convalescence the patient's temperature was normal On the 16th the patient had improved to an extraordinary extent He was sleeping well and was free from dyspnœa, there was hardly any œdema of the legs, and there was no *evidence of the* presence of fluid in the abdomen The percussion resonance of the sternum was normal and there was no extension of dulness to the right of the sternum The cardiac sounds could be heard distinctly and the position of the apex appeared to be normal, although the thickness of the patient's muscles made an exact localisation impossible. Towards the base of the left lung there was some impairment of the percussion note, the vocal fremitus was increased, and the heart sounds were high pitched, whilst near the vertebral column distant tubular breathing could be heard. The urine was acid and pale, the specific gravity being 1008, no albumin could be detected after Sept. 19th. From Sept. 29th to Oct. 8th the daily output of urea varied from 216 to 463 grains The patient made an uninterrupted recovery, going into the hospital yard on Oct. 8th and to Bexhill on the 23rd Writing on Jan. 22nd, 1903, he stated that he felt perfectly well and was able to do his work

Remarks by Dr LATHAM and Mr PENDLEBURY —The above case is of interest in view of the facts that so large a quantity as 95 ounces was removed by aspiration from the pericardial sac in one operation, that the pericardial sac was opened by means of a new method devised by Mr Allingham and Dr Ogle, and that the patient is now well and at work The pleura was not seen at all during the operation and probably it may be taken that in cases where the pericardium is distended with fluid it is not likely to be seen. If it did come into view it could easily be held aside with the finger It may be suggested that by beginning the incision into the pericardium at a level just above the base of the ensiform cartilage all danger of opening the abdominal cavity is avoided. Surgically speaking, it may be said that the operation is not difficult to do and only takes a little over 20 minutes It would seem advisable, however, in cases where a large amount of fluid exists, to withdraw some before the actual operation in order to relieve a little the heart's embarrassment. Since writing the above we are permitted to mention that Mr Allingham has performed the operation on two other cases with success

Medical Societies.

CLINICAL SOCIETY OF LONDON

Skin-sliding as a Means of preventing and removing Cicatricial Deformity —A Case of Spinal Caries treated by Costo transversectomy with Complete Recovery —Prolapse of the Bowel and Prolapse of the Uterus treated by the Injection of Paraffin

A MEETING of this society was held on March 13th, Mr HOWARD MARSH, the President, being in the chair

Mr T. S. ELLIS (Gloucester) read a paper on Skin sliding as a Means of preventing and removing Cicatricial Deformity The process consisted of a daily dressing or massage by means of pinching up the skin around the edge of a wound or a scar and thus stretching or sliding the skin and subcutaneous tissues in the direction required The process was devised by Mr Ellis in the belief that when the skin in the neighbourhood of a cicatrising wound was made to slide freely and all adhesion of the cicatrix at the margin of the wound to the tissues beneath was prevented the contraction of the cicatrix, acting on the skin, would draw it towards and over the area of the wound Interstitial growth in the extended skin compensated for the extension it had undergone For the effacement of a cicatrix of any kind (keloidal or other) not only was the attainment of freedom from attachment indicated but also such mobility and redundancy of skin around it as should for a time, give freedom from tension. This indication might often be completely fulfilled by persistently sliding the adjacent skin towards the cicatrix and using the skin (made redundant) as a handle wherewith to lift the cicatrix from its attachment Lantern slides were exhibited of a case of severe burn which had occurred on Jan. 15th, 1902, to a child, aged 11 years, involving extensive destruction of the integument of the neck and chin, and the advantages of the treatment were described. Some calipers which Mr Ellis had designed to aid the process were also exhibited —Mr. A. E. J BARKER recalled an investigation by a committee of that society on keloid which had come to the conclusion that keloid sometimes underwent spontaneous cure. He then referred to a case in which skin grafts had been followed by such rapid growth of keloid that it was thought to be sarcoma, though the subsequent history showed that it was not so —Dr W H. B BROOK asked what was the exact manner of picking up the skin and for what period of time it had to be picked up.—Mr. ELLIS replied that no knife was required.

Dr W H. B BROOK (Lincoln) read a paper on a case of Total Paraplegia due to Caries of the Mid-dorsal Vertebræ, for which the Operation of Costo-transversectomy was performed with complete recovery The patient, a youth, aged 17 years, was admitted into the Lincoln County Hospital on Sept 22nd, 1902, suffering from angular curvature of the spine of a year's duration, for which he had worn a plaster jacket. During the previous four weeks there had been gradually increasing loss of power in the legs, with incontinence of urine. When admitted he presented well marked angular curvature, the sixth and seventh dorsal spinous processes being the most prominent. There were no tenderness and no signs of any collection of pus. There was well marked girdle sensation at the level of the epigastrium, with great impairment of sensation below this level. The legs could be moved but not well, the knee-jerks were exaggerated and there was incontinence of urine. For six weeks he was treated by extension applied to both legs, but his condition became steadily worse, paraplegia and incontinence of urine and fæces gradually became complete, and in spite of the greatest care bedsores appeared A skiagram showed blurring in the region of the seventh and eighth dorsal vertebræ, confirming the diagnosis that tuberculous matter was present. On Nov 8th the operation of costo transversectomy, as described by Mr J. Jackson Clarke, was performed, the right transverse process of the eighth dorsal vertebra being cut down upon and removed together with the head and neck of the eighth rib so that access was obtained to the seat of the disease and the broken-down bodies of the vertebræ were carefully scraped away with a specially designed curved sharp spoon, care being taken not to wound the dura mater or the pleura The wound was drained, injected with iodoform emulsion containing 1 40 per cent. carbolic acid, and tightly packed with iodoform gauze. The extension was continued Sensation began to return on the following day and movement on the day after At the end of three weeks sensation was perfect and movement was good but it was seven weeks before the patient regained perfect control over the bladder and rectum. The drainage-tube was discontinued on Jan. 8th the wound was healed by Jan. 25th and on Feb 15th the patient was able to sit up after having been fitted with a steel spinal support. He was now able to walk quite well.—Mr JACKSON CLARKE related how he first came to perform the operation that Dr Brook had so successfully repeated In October, 1901 a patient, aged 45 years, rapidly developed total sensory and motor paraplegia from tuberculous disease of the seventh and eighth dorsal vertebræ. Mr Jackson Clarke performed laminectomy and found that an abscess (formed by the destruction of the posterior parts of the bodies of the two vertebræ) was pressing backwards on the cord To secure better drainage he performed costo-transversectomy seven days after the first operation The result was most satisfactory and showed that the second operation would have done all that was required without the preliminary laminectomy From this experience and that of three other cases Mr. Jackson Clarke came to the conclusion that the removal of the transverse process afforded the best means of access to the vertebral bodies in certain cases. When complete sensory and motor paralysis came on rapidly as in his first case the lateral drainage, whether by removal of a transverse process alone or in conjunction with the head and neck of a rib, should be done at once. When the symptoms were not urgent rest should be tried for some months before proceeding to operate The main object of the operation was to open the abscess and to establish an aseptic sinus through which a few drops of carbolic solution or some other antiseptic could be injected daily for as long as might be necessary No attempt should be made to scrape away caseous material or carious bone The cord was often exposed by destruction of the bodies of the vertebræ and such interference would be highly dangerous If the paralysis should not be relieved the subsequent performance of laminectomy was in no way interfered with by the lateral opening —Dr BROOK, in replying expressed a preference for a straight spoon.

Mr. STEPHEN PAGET read a paper on Two Cases of Prolapse of the Bowel and a Case of Prolapse of the Uterus treated by the Injection of Paraffin under the Mucous Membrane The first case was that of a man, aged 65 years, who in 1897 had undergone excision of the rectum for cancer Ever since the operation he had suffered from prolapse of the bowel with loss of control and had been compelled to wear a rectal plug On Jan. 15th paraffin was injected into the prolapsed bowel, forming two hard round nodules under the mucous membrane, so that the opening into the bowel was closed by a sort of valve Since then there had been no prolapse, the patient had left off his plug and had kept perfectly clean. The second case was that of a patient of Dr E Lycett Burd of Shrewsbury She was 70 years old and had suffered from prolapse of the bowel for 22 years and had undergone five operations Prolapse occurred on the very least effort and if the motions were loose she had no control over them. On Feb 15th paraffin was injected under the mucous membrane, forming a hard collar around more than half of the bowel, this produced great improvement, but there was still slight prolapse at times On March 1st a second injection was made and the opening into the bowel was also narrowed by Mayo Robson's incision and suture This second operation was followed by some severe pain, but no prolapse had occurred since it was done The third case was that of a woman, aged 63 years, who for 28 years had suffered from prolapse of the uterus in spite of an operation which had been performed 14 years before. The prolapse occurred even when she was in bed, if she only coughed or turned over By day she supported it with a napkin The vagina was so greatly dilated that it would not retain a pessary and there was complete prolapse of both walls and of the cervix which was greatly enlarged. On Feb 25th paraffin was injected in various directions under the mucous membrane of the vagina, mostly in the posterior wall, and under the mucous membrane of the cervix. Since this injection she had had no prolapse, not even when she strained at the closet or "bore down" forcibly in the erect posture. The cervix was high up, both walls of the vagina were indurated, and the recto-vaginal septum was about half an inch in thickness. Mr Paget said that he brought these cases thus early before the society because he felt sure, from his experience of the use of paraffin in 40 cases of sunken nose, that the good results in these cases of prolapse would be well maintained. If it were at any time necessary to add a little more paraffin this could easily be done.—Mr BARKER mentioned a case of prolapse of the rectum in which he had adopted this method with complete success He had used a mixture of paraffinum molle and olive oil. A small celled infiltration resulted which aided in achieving the result In the hands of some surgeons embolism and other disasters had resulted.—Dr G H D ROBINSON had seen Mr Paget's case of prolapse of the uterus and the success was certainly quite remarkable. The operation was not suitable unless the patient had passed the child bearing period, but in other cases this method offered every prospect of success —Mr GEORGE EASTES asked if it was necessary to keep the stools liquid or not in cases of rectal prolapse.—Mr PAGET, in replying, said that the bowels should not be relaxed, rather the reverse. He thought the possibility of disaster had been exaggerated. If cases were treated as out-patients and 15 cubic centimetres of paraffin were injected at one sitting or the wax was too soft it would not be surprising that embolism should result. The melting point of paraffin was of considerable importance, it should not be below that of the body temperature. Reference was made to the case of a man in whom the absence of testicles was compensated for by the introduction of paraffin and who subsequently had typhoid fever accompanied by a temperature of 105° F, when the wax began to melt. The melting point Mr Paget preferred was between 111° and 115°

SOCIETY OF ANÆSTHETISTS

New Form of Chloroform Regulator —Apparatus for administering Ether, Chloroform, or Mixture

A MEETING of this society was held on March 6th, Mr WALTER TYRRELL, the President, being in the chair

Mr A VERNON HARCOURT, F R S, read a paper on his new Chloroform Regulator

The PRESIDENT, in introducing Mr Harcourt, said that he (Mr Harcourt) had been good enough to send them a report of a paper which he had read before the Royal Society on the Percentage Dosage of Chloroform. Since then he had been invited to become a member of the committee of the British Medical Association on the dosage of chloroform and had asked that committee to allow him to show his apparatus and to read a paper on the percentage dosage of chloroform before the Society of Anæsthetists. He would now ask Mr Harcourt to read his paper

Mr HARCOURT said that during many years past he had been concerned with the measurement of light and to provide a standard light for this purpose he had used a volatile hydrocarbon which was called pentane as being the fifth member of the series of paraffins. In dealing with this liquid he had accidentally inhaled some of its vapour and observed that it produced sensations similar to those caused by the inhalation of small quantities of chloroform Since the substance was readily obtained in a nearly pure condition, was little liable to chemical change, and was almost insoluble in water, it occurred to him that it might be serviceable as an anæsthetic. With the coöperation of Professor Gotch the trial of its physiological properties was made by giving white rats a mixture of air and pentane to breathe Anæsthesia was readily produced, but it was preceded by a period of excitement, the proportion of vapour to air required was rather large, involving, of course, a corresponding diminution in the proportion of oxygen, and recovery was slow and uncertain The results of the inquiry formed the subject of a paper read by Professor Gotch before the Physiological Society in 1898. To form a judgment of the effects of pentane upon rats as compared with those of another anæsthetic chloroform was administered in the same manner, and he might confess to having been a little disappointed when it appeared that chloroform was the better anæsthetic of the two In making these experiments it seemed desirable to find some means of regulating the proportion of air and of anæsthetising gas and of determining what the proportion was. Confining himself now to the case of chloroform Mr Harcourt tried a method of determination depending upon the action of a hot alcoholic solution of potash. The results were approximately right, about 95 per cent. of the chloroform, of which a weighed quantity had been brought into a flask filled with air, was represented by potassium chloride in the solution. But whatever care was taken the result was always a little too low and he therefore sought, and succeeded in finding a better method. When a platinum wire was heated to bright redness by the passage of an electric current in a mixture of air, chloroform, and steam, the chloroform was burnt on the surface of the platinum by the oxygen of the air and the chlorine which was probably formed in the first instance reacted, also under the influence of the heated wire, with the steam, forming hydrochloric acid and oxygen A small quantity of water placed in the flask containing the mixture of air and chloroform served both to supply steam when the bottom of the glass was heated and to dissolve the hydrochloric acid which was formed. After 20 minutes the operation was completed and it remained only to determine the amount of hydrochloric acid in the flask, which might be done by means of a standard solution either of silver nitrate or of alkali A full account of this method, and the record of the testings with weighed amounts of chloroform by which its trustworthiness was established, was given in the Transactions of the Chemical Society for 1899 In the same paper there was also described a method for charging a current of air with a proportion of chloroform vapour which might be fixed at any desired limit This method consisted in sending a stream of air through a mixture of alcohol and chloroform and then through water If the mixture contained only a small proportion of chloroform, then but little chloroform evaporated into and mixed with the air, if the proportion of chloroform in the liquid was larger the amount that evaporated was larger also. By passing the mixture of air with the vapours of alcohol and chloroform through or over water the alcohol was removed, and only air and chloroform passed on in a proportion determined by that of chloroform and alcohol in the liquid mixture. That the liquid used for diluting chloroform in order to diminish its rate of evaporation should be itself volatile was advantageous since when the quantity of both liquids diminished as evaporation proceeded the composition of the mixture remained more nearly constant than if only one was evaporating After writing this paper it occurred to him that a method might be made on the same principle for the administration of chloroform as an anæsthetic In order to provide for its administration in sufficient quantity and with a minimum respiratory effort he changed the form of the apparatus. If air travelled over a liquid for a sufficient distance saturation was complete and the resistance was far less than if the air bubbled through.

Mr. Harcourt had found by trial of various proportions that a mixture of 80 parts of alcohol by weight with 20 of chloroform yielded when air was passed over it a mixture of 98 volumes of air with two of chloroform vapour. He had found, and subsequent experience had confirmed the conclusion, that 2 per cent. of chloroform was the maximum amount ever required in producing anæsthesia. To reduce this proportion to any smaller proportion that might be desired he made an arrangement of stopcock and valves by which the 2 per cent. mixture might be diluted to any amount with pure air a pointer moving on a scale indicating the percentage thus produced. This apparatus was tried at the Oxford Infirmary by Dr. A. P. Parker, a surgeon who had had large experience of anæsthetics during the South African war. The tank filled with water which held the two boxes containing respectively alcohol mixed with chloroform and water was supported on a staging beneath the trolley on which the patient lay and the face-piece was connected with the outlet of the apparatus by caoutchouc tubing. The management of the amount of chloroform administered presented no difficulty and the result was satisfactory, but Dr. Parker represented to Mr. Harcourt that for ordinary medical use a portable apparatus was necessary. For this purpose the limitation of chloroform by dilution had to be given up, and Mr. Harcourt substituted for it a limitation of the surface of chloroform from which evaporation took place. After trying vessels of various size he found that air passed at the ordinary rate of human respiration through the upper part of a bottle containing chloroform the diameter of which was about 1⅗ inches took up 2 per cent. of chloroform. This proportion did not vary as might be expected with the rate at which air was drawn through. When the air entered the bottle slowly it passed from inlet to outlet without complete admixture with the air and chloroform lying over the surface of the liquid and thus a smaller quantity of air was mixed with a smaller quantity of chloroform. On the other hand, when air entered more rapidly it blew upon the surface of the liquid and caused more rapid evaporation, and thus a larger quantity of chloroform. The original instrument had the form of a straight stem to which the face-piece was attached, with branches connecting through a stopcock with this stem and at their other end with two valve-chambers one opening into the air and the other attached to a small Woulfe's bottle holding chloroform. The handle of the stopcock terminated in a pointer moving on a divided arc. According to the position the stem was connected either with one branch or the other or partly with both. A prolongation of the stem upwards ended in another valve-chamber which allowed passage to expired, but not to inspired air. Since the amount of evaporation depended not only on the area of liquid from which evaporation was taking place but also upon the temperature of the liquid, the operator must be provided with some ready way of observing the temperature. A thermometer could not be read very quickly and its insertion would require the provision of a third tubulure. Specific gravity bulbs were easily seen and answered the purpose well, since the density of chloroform changed rapidly with its temperature. By providing two bulbs, one of which was between floating and sinking when the temperature of the chloroform was 15° C. (59° F.) and the other when the temperature was 12·5° C. (54·5° F.), and placing these in the bottle with the chloroform it would be seen whether the temperature was above 15°, for then both bulbs sank, or below 12·5°, for then both bulbs floated. The temperature should be maintained as far as possible, between these temperatures, and when this was so one bulb was floating and the other sunk. Since anæsthetising and operation rooms were kept at much higher temperatures than 59° F. Mr. Harcourt used at first bulbs which were adjusted for several degrees higher, but the cooling of the chloroform by evaporation was so great that frequent applications of the hand to the bottle were needed to maintain the higher temperature. Also the proportion of chloroform with a bottle of the size he used was at a higher temperature, rather more than 2 per cent. Mr. Harcourt had made several other changes in this inhaler, to which he proposed to give the name of "chloroform regulator" since he read a paper on the subject before the Royal Society. To enable the face piece to be placed in any position he had divided the stem into two parts by a cross branch and had provided each part as well as the cross-branch with swivel joints. The longer piece of caoutchouc tubing connecting the chloroform bottle with one of the valve-chambers, which allowed the bottle to retain a vertical position when the stem was inclined, was now shortened, since the stem could be held upright. The upper valve-chamber had been removed and the valve transferred to the face-piece. This had the advantage of making expiration easier and limiting it to the face piece so that none of the patient's breath passed into the body of the instrument. The bottle had been made slightly conical, enlarging downwards, as the chloroform evaporated the interval between its surface and the air inlet necessarily increased and this was balanced by an increase of area. The valves consisted of discs of celluloid held in position by a short neck or continuous strip of the same material, the end of which was fastened down. By cutting this neck of a suitable width the spring which held down the disc against the tube which it covered might be made just sufficiently strong to support the weight of the disc in an inverted position. The movement of these valves gave useful information. That on the face-piece showed clearly whether respiration was full and regular, those connected with the two branches showed by the height to which they were raised how much of the 2 per cent. mixture was being inhaled and with how much air it was being diluted. The proportion was also shown by the position of the pointer on the divided arc. For example, if it was in the middle equal quantities were being inhaled of air mixed with 2 per cent. of chloroform and of pure air—that was to say, the mixture being inhaled contained 1 per cent. of chloroform. From any other position of the pointer upon the scale the percentage of chloroform which was being administered could be read off. Mr. Harcourt had been present at four or five operations at University College Hospital and, so far as he could judge or learn afterwards, the assistant to whom the management of the regulator was committed found no difficulty in maintaining the desired degree of anæsthesia. The proportion of chloroform required to produce anæsthesia in from five to ten minutes was with adults between 1 and 1·5 per cent. and for its maintenance subsequently between 0·5 and 1 per cent. He thought it possible that the actual figures should be lower than these some uncertainty arising from imperfect fitting or occasional displacement of the mask. But here he was on unfamiliar ground, and he hoped that an account which would be much more trustworthy of the use of the regulator and its advantages as compared with other apparatus or methods for administering chloroform would be given to the society by its President, to whose encouragement during the past two months he was greatly indebted.

The PRESIDENT said that the Society of Anæsthetists was much indebted to Mr. Harcourt for his paper and for the very lucid description of the methods by which his conclusions were arrived at. The idea was one "oft thought before but ne'er expressed so well." Mr. Harcourt had done what had been in all their minds to do but no one had quite accomplished it. Half a century ago Dr. Snow invented an inhaler with two orifices through which the inspiration was made, through one of these the inspired air passed over chloroform and the other was an inlet for pure air, and by slowly diminishing the size of the latter more and more of the inspired air passed over the chloroform until the desired anæsthesia was produced. This was exactly what Mr. Harcourt's apparatus did but nobody before had been able to show approximately what percentage of chloroform was being inhaled at any given moment. The credit of doing this must be given entirely to Mr. Harcourt. Mr. Clover had given them a percentage of chloroform but without any accurate means of regulating it. Junker's inhaler with its many modifications made mostly by members of their society and various other methods all tended towards the desired end of regulating the quantity of vapour inhaled, but it was only now that they had learned what the percentage really was. Perhaps those present who had used Mr. Harcourt's apparatus would give their experience of it. He (the President) had been much impressed with it and although he thought the arrangement of it was capable of improvement he believed that the principle of it was good and would prove of great service. The President then gave in detail notes of a few cases in which he had used this new instrument. He said that a child aged three years and eight months had been satisfactorily anæsthetised for an operation on the elbow and glands of the neck without ever exceeding 0·5 per cent. of chloroform. He had had several adult cases including iridectomy for glaucoma, removal of the breast, appendicectomy, &c. which had not required more than 1 per cent. and in no case had any patient of his required the maximum amount of 2 per cent. In one case pallor and failing pulse occurred while using 1 4 per cent, which was an instance of what could not be too strongly insisted on—viz., that a percentage only sufficient to produce anæsthesia was dangerous to a certain number of individuals The most striking thing about the administrations was the greatly diminished amount of excitement—in fact, in several cases this was entirely absent.

Dr DUDLEY W BUXTON said that the society was much indebted to Mr Harcourt for the very clear way in which he had led them to understand that which had put the idea of the apparatus into his mind But they had before them that night an actual dosimeter of chloroform Perhaps the President had not done justice to Clover in saying that there was no accurate method of giving a definite percentage of chloroform. In the apparatus before them they had certainly a means by which they might accurately and definitely know a percentage of chloroform There was one idea they, as practical men, had to dispute—i.e., that 2 per cent. of chloroform was capable of carrying them through all exigencies. Affairs such as they had to face to day in the operating theatre were very different from those of 50 years ago In those days operations which required a death like stillness were not performed and absolute quietness of the patient was neither asked nor expected Not only were they now asked to render the patient anæsthetic but to push narcosis to such an extent that vitality was distinctly lowered They were asked to act on the medulla oblongata and narcosis had to be pushed thus far in order that the surgeon might carry out his operation They (the anæsthetists) had to do as they were told He was quite sure that 2 per cent. would not carry them through all operations Would it not be possible to alter the apparatus in order to provide a 4 per cent. vapour if such were required? The experience which he had had with the apparatus had agreeably surprised him, more particularly as he was somewhat averse to new chloroform regulating inhalers, as so many had been failures None of them expected to give chloroform with absolute safety and most of the apparatus had fallen short in some important detail With Mr Harcourt's he had expected to have moderate success, but the success obtained had exceeded his expectations It produced a quiet anæsthesia, little or no struggling and the patients had gone under with a low percentage, beginning with 0 5 and sometimes 0 25 per cent. Dr Buxton then said that in a case of abdominal section for gastro enterostomy, where a deep degree of anæsthesia was required, he was unable to produce it and the surgeon asked him to get the patient more deeply under, but he (Dr Buxton) had failed That perhaps was owing to want of skill and he was quite ready to be told that he should have tried longer But in an ordinary hospital this was impossible unless a higher percentage could be obtained Short of that he could speak in the highest terms of the apparatus It was necessary to be careful of the position of the bottle, but there was no difficulty in warming it with the hand Up to the present he had had no unpleasant experiences, but on that point it was necessary to say a few words It would be most deplorable if the public thought, and a patient could say, "Give me a 2 per cent. and there will be no danger" In giving chloroform at any percentage there was a certain risk, in fact, although the danger might be lessened by using a low percentage, yet there was no absolute immunity The real action of chloroform was not yet known There were so many factors to consider that mere percentage dosing was not sufficient to insure safety, for instance, inspiration might be normal but expiration insufficient, and thus the chloroform would accumulate in the system and the nervous tissues become more and more soaked, there were so many other factors that it was beyond the power of man to say that salvation was in any percentage

Mr HARVEY HILLIARD observed that he had used the apparatus and had been very much struck with the quiet way in which anæsthesia had been induced, beginning with 0 25 per cent and working up to 1 per cent., which had been sufficient to produce anæsthesia but not to a sufficiently deep degree and he had had to push on in his first case (which had been the worst and was an abdominal section) to 2 per cent, but this was insufficient to abolish all rigidity He was working in a temperature of 75° F but without the specific gravity bulbs, and to try to get a deeper anæsthesia he warmed the bottle, which had only been half filled, with the hand. A little later, however, the boy showing signs of vomiting there was no time to try to deepen the anæsthesia with this apparatus, so he changed to a Skinner, returning to Mr Harcourt's apparatus when things were smoother but with the same result He agreed with Dr Buxton that 2 per cent. was not sufficient to produce a sufficiently deep anæsthesia in all cases, especially in some abdominal operations Mr Hilliard thought at first that his difficulty was due to the face-piece not fitting, but made sure that it was, for the valves were acting perfectly Mr Hilliard also mentioned other cases nearly similar Induction was perfect in all his cases, four sixths of which were abdominal, but 2 per cent. anæsthesia was not sufficient to deepen the anæsthesia to dilatation of the pupil and in one case without warming the bottle he could not abolish the corneal reflex One most satisfactory case was one in which craniotomy was performed, anæsthesia was induced and maintained at 1 5 per cent. The patient remained under satisfactorily except when the head was being crushed, then, however, there was a little straining and the chloroform bottle had to be filled up to three quarters and the hand placed round it, this was sufficient to deepen the anæsthesia. The temperature of the room was 60° Acting on his experience with the method Mr Hilliard said that he now always filled the bottle three quarters full

In reply to a question by Mr NORTON, Mr HILLIARD said that induction of anæsthesia took about eight minutes, in his first case it took from eight to ten minutes He considered that a slow induction gradually working up from a low percentage was best, the induction then being most quiet

Dr S H BELFRAGE thought that possibly the face piece and the apparatus might be connected by means of a flexible tube. This would leave the anæsthetist's hands more free.

Dr G EASTES wished to know how much liquid chloroform was required to produce a given amount of vapour

Mr HARCOURT replied that one volume of liquid chloroform gave 300 volumes at an ordinary temperature and pressure

Dr EASTES remarked that he constantly used Clover's regulating chloroform inhaler and found it the best apparatus which he had ever used The great advantage was that the measured maximum percentage of vapour was all measured out beforehand and this, he thought, was better than making their own percentages as the case proceeded

Dr W J MCCARDIE being asked for his experience when experimented on with Mr Harcourt's inhaler answered that it was short but pleasant. At first Dr Buxton had given him 0 5 per cent for five minutes which had had no effect. After an interval of five minutes he had received 1 per cent, this was very much stronger, so much so that he had lost consciousness in about one and a half minutes. He believed anæsthesia was so deep that the conjunctival reflex was abolished. The anæsthesia produced was sufficient for such tests as pin pricks upon his hands, but he did not know if it would be deep enough for abdominal operations 2 per cent., he considered, ought to be deep enough for all ordinary operations and for average anæsthesia. But he thought for experts that it would be a great advantage if Mr Harcourt's apparatus could be made to give up to, say 4 per cent, but for the ordinary medical man it was perhaps an advantage to have the low percentage beyond which he could not go

Mr HARCOURT in answer to the various questions and suggestions to which his paper had given rise, said with regard to that about one hand being always employed in raising the temperature his experience with the bottle was small He had seen an operation by Sir Victor Horsley which lasted a full hour The assistant seemed to have one hand free the whole time, the other feeling the pulse or being round the bottle of chloroform. He considered that in the high temperature of a theatre an occasional application of the hand ought to be enough Certainly something more simple than applying the hand was desirable if it could be found Concerning the using of more than 2 per cent he had carefully watched the stop-cock at an operation The 2 per cent. limit was never reached. He thought that as the common way of giving chloroform was with a loosely fitting mask possibly Mr Hilliard's difficulty to obtain in all cases a sufficiently deep anæsthesia was due to his not fitting the face piece with sufficient accuracy, although the valves might still be working If only two-thirds of the whole inspiration passed through the apparatus and one-third round the face piece that would make a very considerable difference in the dose. It was quite easy to increase the percentage of vapour by increasing the size of the bottle. If the cross-section of the bottle were doubled it would give double the percentage of chloroform vapour In reply to the suggestions of an india-rubber tube that would be easy, but he was advised to give it up on the grounds that the air in the tube would be re-breathed and that it was best to make the distance as short as possible. There would be no difficulty if preferred to have it made so that it stood on a stand, yet these tubes were liable to kink.

A vote of thanks, proposed by the PRESIDENT and seconded by Mr EASTES was then passed.

Mr. W G COPESTAKE then showed his Apparatus for administering Ether, Chloroform, or Mixture, and said that the apparatus remained practically the same as that which he described in the year 1900, the only alteration being the substitution of a glass jar, to contain hot water to heat the ether when by evaporation it got too cold, for the less satisfactory method of warming it by the anæsthetist's hand He also read notes of 69 cases he had anæsthetised with the apparatus with very satisfactory results. He claimed for the apparatus that the amount of sickness was less than when ether was given in the ordinary way, that the discomfort was less to the patient, and that the consumption of ether was less

The PRESIDENT asked if gas were given as a preliminary to the ether and how long it took to induce anæsthesia

Mr. COPESTAKE replied that gas was not given and that induction took from eight to ten minutes.

The PRESIDENT remarked that in London they were always in a hurry and in hospital practice could not spare ten minutes over the induction of each case

Mr HILLIARD said that he had seen Mr. Copestake use his apparatus that afternoon in one case and that the result was entirely satisfactory although induction was long

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CHELSEA CLINICAL SOCIETY

Discussion on Diabetic and Non-diabetic Glycosuria

THE annual clinical debate of this society was held at the Jenner Institute of Preventive Medicine, Chelsea Gardens S.W, on March 10th. Dr C C GIBBES, the President, being in the chair.

The debate was opened by Dr W HALE WHITE, whose remarks will be found in full in THE LANCET of March 14th p. 714

Dr F W PAVY said that they had all listened with much interest to Dr Hale White's able opening address but different minds approached a subject from different directions, and his (Dr Pavy's) mind had been concentrated upon the distinction between diabetic glycosuria and non diabetic glycosuria. The first point in drawing a distinction between the diabetic and non diabetic glycosuria was to decide what constituted diabetic glycosuria The broad facts before them were that a diabetic subject differed from a healthy subject in the following respects the healthy subject took carbohydrate food and all he knew after taking this food was the benefit which he had derived from it. The food did not show itself as sugar in the urine, nor did it increase the amount of sugar in the blood The amount of sugar in the blood remained fairly constant no matter what the diet, taking an ordinary diet, might be, and the urine reflected the character of the blood. There was a certain amount of sugar naturally existing in the blood and there was a certain amount of sugar naturally existing in the urine. If the amount of sugar in the blood were increased the amount of sugar in the urine immediately increased. They were all in reality glycosurics, as were also the lower animals, but only glycosurics to quite a small extent. He did not rely upon the copper test. By means of the fermentation test the presence of sugar was susceptible of demonstration He thought that it might be looked upon as a demonstrable fact that sugar was present in healthy urine so that diabetes only varied as regarded degree In the healthy subject carbohydrate food was taken and did not increase the amount of sugar in the blood, so that the sugar in the urine came from that constant sugar which was present in the blood In an ordinary case of diabetes in proportion as carbohydrate food was given so was sugar present in the urine, the carbohydrate of the food being no longer dealt with as it was in the healthy subject In the healthy subject it was in part converted into fat and in part synthesised into molecules which could traverse the blood without escaping with the urine. Sugar consisted of such small molecules that as it was passing through the glomeruli of the kidney it filtered away in the same manner as water, as urea, or as saline matter Sugar that reached the blood could not do otherwise than pass off with the urine, and thus if sugar reached the blood it would be sure to reach the urine. By the process of assimilation the sugar was built up into larger sized molecules and glycogen was nothing more than an extensive aggregation of sugar molecules with at the same time a certain amount of dehydration, or the sugar might be incorporated into proteid and in the proteid molecule it could circulate freely without any danger of escaping with the urine There was no doubt that the sugar which was derived from the food passed by the process of assimilation into large sized molecules which could circulate through the body without running off with the urine as the smaller sized sugar molecule did. In diabetes there was a want of this assimilative power—the power no longer existed of putting the carbohydrate of the food into a form capable of being retained in the body, if taken with the food it reached the blood as sugar and then ran off through the glomeruli of the kidney In what was called the "alimentary" form of diabetes that was what occurred. Sugar might also reach the urine from the breaking down of proteid which had been formed previously with the concurrence of sugar, and this was associated with what he had called the "composite" form of the disease. Thus they might have sugar in the diabetic from two sources—from the non assimilated carbohydrates of the food and from the breaking down of the proteid matter The former condition might exist alone—the "alimentary" form of the disease, the latter however, did not exist unassociated with the former; hence the term "composite" applied to it. As in all cases of diabetes the former condition existed, the disease might be defined as "a more or less persistent defective assimilative power over carbohydrate of food resulting in glycosuria." If they approached the consideration of diabetic and non diabetic glycosuria from that standpoint they could see into which category a particular case should fall It might first of all be said that apart from disease anyone might be rendered glycosuric. In ordinary circumstances a person did not get sugar in his urine from his food but under an undue ingestion of sugar he might do so This class of case would not fall into the category of diabetes, because it did not involve defect of assimilative power The sugar in the urine resulted not from a defective assimilative power but from carbohydrate having been taken to a sufficient extent to outstrip, as it were, the natural power to deal with it In relation to diabetic glycosuria the widest variation was noticeable in assimilative power In some instances there might be only so slight a diminution of the power that there was no sugar in the urine under an ordinary mode of feeding There was sugar in the urine, it was true, after taking an amount of carbohydrates that could be taken by a perfectly healthy person without passing sugar, but there was not much distinction and in differentiating cases of this kind testing with food required to be had recourse to They were borderline cases Sometimes there was sugar discoverable in the urine, at other times not, and the condition was most puzzling to medical practitioners. These cases depended upon the amount of carbohydrate which happened to have been previously taken. Were these cases to be considered as of diabetic or non-diabetic glycosuria? Testing with food would decide the point. If such a person were given a large amount of carbohydrate and there was any weakness of assimilative power existing the evidence of that weakness would be brought out. Some time ago an individual in connexion with whose condition different opinions had been given was sent to him (Dr Pavy) by an insurance office to be examined The urine which he passed for examination a few hours after ordinary food for breakfast, including bread and toast, was found to be free from sugar To know whether he really was a diabetic or not he was subjected to a test meal consisting of bread-and butter and marmalade and this was accompanied by a glass of sherry In a couple of hours time the urine which the patient passed was loaded with sugar He had no hesitation in saying that that person was the subject of a mild form of diabetes In reference to mild glycosuria a case was quoted which had extended over 30 years and he thought it was an interesting circumstance that the son of this patient a boy nine years of age had been under Dr S J Gee's care and that Dr Gee had found sugar in his urine Dr Pavy considered that cases of this kind fell into the category of diabetes, but of a very mild form. Experience showed that the condition of these patients with respect to assimilative power might vary at different times They must not look upon the condition of a patient as stereotyped or absolutely fixed, and a condition that existed at one time might be less favourable to the assimilation of carbohydrates than at another time. A striking case of this kind fell under his observation a few years ago The patient had been for some years a comparatively mild glycosuric—if she took much starchy food she had sugar in her urine. But with moderate restriction she could keep her urine free from sugar She became the subject of a severe attack of pneumonia, and through the illness sugar was, apart from food to account for it, persistently present in the urine and the condition passed on into the "composite" type of diabetes There were diacetic acid and oxybutyric acid present in the urine and it seemed at one time as if coma were threatening The patient recovered from her pneumonia and had since reverted to her original condition of mild glycosuria without the acetone series of products Dr Hale White had drawn attention to a case showing the effect of starchy food giving rise to the elimination of a larger amount of sugar than could be derived from the starchy food taken. This result was in harmony with what might be observed in the progress of any ordinary case A person became the subject of diabetes and they would assume that its existence was not known, he went on for some time and progressively found that he was growing worse Supposing it to have been a case which had begun mildly and then gradually advanced the train of phenomena might stand as follows. At the mild beginning the patient could take a considerable amount of carbohydrate without passing sugar, but as time went on he began to pass sugar and then passed more and more The case became gradually more aggravated—in other words, the assimilative power became more and more diminished—and the amount of carbohydrate which would only throw a little sugar into the urine at the commencement would later be found to lead to the passage of a large amount. Exactly the reverse occurred under proper treatment. A patient presented himself who was the subject of an amenable form of diabetes and he was put upon the appropriate treatment Perhaps under the restricted diet the sugar might not at first be susceptible of complete removal from the urine, but after a lapse of time which cannot be foretold—in one case it might be two or three months, and in another it might not be for a year or two—indications would set in of a returning assimilative power The indications were these as long as the restricted diet was required from want of assimilative power the patient maintained his weight and his strength and felt in himself perfectly well. But with the return of assimilative power he complained of an epigastric sinking He also felt weak and lost weight This patient must then be given a small quantity of starchy food, beginning with three ounces of wheaten bread per diem in one ounce portions at each of the three principal meals It would be found that the allowance of bread would not throw sugar into the urine, and the patient would feel relieved at once and his weight would increase By and bye there would be a return of the former symptoms, and a drop in weight and so on, which must be met by an increase in the amount of carbohydrate given, and in this way he (Dr Pavy) had frequently advanced it up to seven, eight, nine, and sometimes to 12 ounces of bread a day without bringing back the sugar The starchy food which was thus taken was properly assimilated and went to the good of the system instead of running off as waste material with the urine This was absolute proof that the condition of the system had changed, there was a return of the assimilative power over carbohydrates to a significant extent As a rule, these cases did not regain their complete power Some were able to take ordinary diet without passing sugar upon it, but the usual event was that there was a return of assimilative power to a certain point which varied in different cases. The inference to be drawn from what he had said was that the presence of only a slight amount of sugar had nothing to do with the classification of glycosuria into diabetic and non diabetic groups. He would speak of non-diabetic glycosuria as independent of the question of carbohydrate assimilation, it arose from conditions unconnected with the character of the food Obstruction of the breathing, for instance, as in asphyxia, might throw sugar into the urine and give rise to glycosuria, but this did not fall within the definition which he had just given of diabetic glycosuria. In whooping-cough there might be sugar in the urine as a result of violent paroxysms of coughing In coma and in convulsions there might be sugar in the urine. An anæsthetic might throw a certain amount of sugar into the urine. There might be sugar in the urine in connexion with lactation and as a result of poisoning by carbon monoxide. All these conditions he classified as non diabetic glycosuria. Cases now and then presented themselves where sugar was met with in the urine simply once and although the patient would be watched for a considerable time no sugar would be again found This sort of case he would not put into the diabetic category As an instance of this kind of case Dr Pavy related that of a man who desired to insure his life and who on several separate occasions after partaking of a meat lunch with lager beer passed sugar in his urine, while all urine passed at other times was quite free from sugar It looked as if the sugar had been put into the urine by the lager beer In Germany lager beer glycosuria was recognised

Dr **ROBERT SAUNDBY** said that he regarded glycosuria in the following way The normal man was capable of assimilating a certain amount of carbohydrate, but, as Dr Pavy had said, there was no fixed quantity Some men tended to store up a great deal of carbohydrate which they ingested in the form of fat, others burnt it off This ingestion of carbohydrates was very much more vigorous in young people than it was in those who were getting older, what might be called the sugar destroying or sugar burning function of the body diminished as time went on and after middle age it certainly diminished considerably That was why it was a fairly common thing to meet with glycosuria in elderly people A good deal of the glycosuria of elderly people was simply alimentary—that was to say, as people got more into years their appetites did not get less, they stayed longer at table and did not take so much exercise, and were more liable to take an excessive quantity of carbohydrate food and therefore to have a surplus which passed off in the urine. Dr Pavy had said that diabetic glycosuria was a glycosuria in which assimilation failed and that non diabetic glycosuria was that in which assimilation was not at fault. He (Dr Saundby) was not able to accept that definition He suggested what seemed to him a more practical and more clinical view of the subject He thought that where they knew the cause and could possibly remove it they should not call that diabetic glycosuria. Where they did not know the cause and where it persisted it was probably diabetes. As an example nothing had been more strongly impressed on him of late years than the truth of what was not generally admitted and had been denied by many great authorities on diabetes—namely, the influence of alcohol in producing glycosuria In a case that had been quoted by Dr Pavy it might have been due to the carbohydrates in the lager beer, but he had seen it produced by whisky many times Dr R. T Williamson of Manchester, who had written on diabetes, was strongly convinced of the effect of alcohol in producing glycosuria. There were many other causes of temporary glycosuria besides alcohol, some of which had been touched upon by Dr Pavy Glycosuria in association with boils and carbuncles was often seen, also in connexion with various surgical wounds and infections. People did not react in the same way to all forms of carbohydrates, and not only did people differ very much in their capacity for assimilating carbohydrates but the same man would react differently to different forms of carbohydrates He had found that many diabetics could take from one to one and a half ounces of lævulose without producing any increase in the amount of sugar excreted. There were other things of more practical importance Lævulose was rather expensive and did not help very much in the diet. Milk was very important in this respect, it was a valuable and popular article of diet, and it was a great thing to know that most diabetics could assimilate definite small quantities of milk without producing any increase in the quantity of sugar excreted. His plan in treating diabetes was invariably to watch the amount of sugar excreted. He collected the whole of the urine excreted in the 24 hours and estimated the whole quantity of sugar passed He was thus able to know the quantity of sugar excreted in a day and could easily see whether an additional half pint of milk made any notable difference in the excretion of sugar The utility of potatoes in the treatment of diabetes had been pointed out. Potatoes contained a very small amount of starch, whereas bread contained about 50 per cent. of starch, potatoes only contained from 15 to 20 per cent of starch. A man might be given a potato weighing six ounces and a large potato like that enabled a man to get through his meal without troubling about toast and bread. Supposing that instead of this potato they gave their patients one ounce of toast, that would be equivalent to 300 or 400 grains of starch. Potatoes did not contain so much starch as gluten bread Dr Saundby then related the histories of three cases which were, he considered, an encouragement to try the effect of potatoes as a substitute for bread. The points which he particularly wished to impress upon the meeting were, first of all, that there were many cases of glycosuria which were not properly diabetic and in which a cause could be found if looked for one of the commonest of them met with in practice being alcohol. The second point was that people varied very much in their capacity for assimilating carbohydrates and that if they wished to treat patients successfully they must calculate the total output of sugar and not be content with mere percentages They must also calculate the total amount of carbohydrates which they were putting into the body and see how these carbohydrates were eliminated The sugar which was eliminated was not wholly derived from the carbohydrates of the food, sugar was also formed from the proteids Another important practical point was to weigh the patients who were the subjects of treatment for diabetes

Dr J ROSE BRADFORD said that the relation of glycosuria to diabetes had always been a point of considerable interest and a debate on diabetic and non diabetic glycosuria would suggest that it was now recognised that sugar might not only be present in small quantities in health but that it might exist in the urine as a result of other morbid processes than those described as diabetic. Glycosuria of non diabetic origin should be carefully distinguished from the mere presence of reducing substances other than sugar in the urine. Some of these reducing substances were really normal constituents of the urine as, for instance, uric acid, creatinin, and glycuronic acid These might give a spurious sugar reduction either owing to their being present in increased quantity or as was not uncommonly the case, simply depending on the urine being rather more concentrated than usual and this, for instance, was notably the case with reference to uric acid In other instances these bodies were present in increased amount owing to morbid processes, as might be the case with uric acid and creatinin and possibly glycuronic acid, all of which, it would seem, might be increased in considerable amount in a number of wasting and general diseases Further, they might be present in largely increased amount as the result of the ingestion of certain substances, and more especially some drugs. This was notably the case with reference to glycuronic acid which might be present in greatly increased amount after the administration of camphor, chloral, or carbolic acid Although these substances were of great practical importance owing to the not infrequent error of diagnosing glycosuria from their presence the further consideration of them did not fall within the limits of a debate on glycosuria, inasmuch as sugar was not really present as could be readily observed as a result of the fermentation and other suitable tests In the next place, other sugars, as, for example lactose and pentose—though especially the former—might be present in quite considerable quantities as, for instance, in the urine of suckling women, and although that technically fell within the definition of the non-diabetic glycosuria the term was generally used as synonymous with the presence of dextrose in the urine. The first question that presented itself if the term "glycosuria" was limited to the presence of dextrose in the urine was really whether there was such a condition as non diabetic glycosuria when they remembered that many of the conditions so described were now capable of explanation with their fuller knowledge as due to the presence of other reducing substances or other sugars in the urine. The fact that sugar was present in small quantity in health was undoubtedly suggestive of the possibility of the occurrence of non-diabetic glycosuria. The conditions, however, in which sugar was undoubtedly present in appreciable amount apart from the presence of diabetes were at any rate not numerous. Instances were occasionally seen of the transitory presence of considerable quantities of sugar in the urine supposed to be dependent on the ingestion of large quantities of carbohydrate material and ceasing not only when the carbohydrate material in the food was cut off, but also when it was only diminished to reasonable proportions. Still, such cases as those were not very far removed from the slighter forms of genuine alimentary diabetes, although possibly they might not lead to the serious developments that occurred in genuine and confirmed diabetes. In very exceptional instances sugar apparently might appear in the urine in quite appreciable quantity as a result either of severe exercise or fatigue. He had seen one such instance in the case of a young man apparently healthy who after a long and fatiguing walk excreted an appreciable amount of sugar in the urine, but where the condition was quite transitory and led to no ill effects. Sugar might appear in the urine after the administration of morphia and possibly after prolonged anæsthesia, and in the latter instance at any rate acetone was not infrequently present But when those various and exceptional cases were put aside there only remained injuries of the head and various intracranial diseases, especially in the vicinity of the medulla, which all would agree to as undoubted causes of non diabetic glycosuria Glycosuria was not uncommon even as an accompaniment of certain forms of cerebral hæmorrhage and so much was that the case that some writers had given a totally different interpretation to these cases and had looked on the hemiplegia and the vascular lesion as the result of diabetes That view, however, was improbable, as the presence of the sugar was often directly related to the acute cerebral lesion and was transitory, and these cases were really strictly comparable to the experimental glycosuria produced by Bernard with his celebrated diabetic puncture. That, however, was a misnomer, as the condition produced by Bernard was really a glycosuria, transitory and apparently dependent on the so-called irritation produced by the medullary hæmorrhage, and was really in no way comparable to the disease spoken of as diabetes It would seem that non diabetic glycosuria might therefore be correlated not only with injuries and perhaps functional disturbance of the central nervous system but also with the excessive ingestion of carbohydrates in certain persons, and probably also as a result of the action of certain toxic substances, and it might, perhaps, be occasionally associated with the results of muscular fatigue Glycosuria might not only be of mixed origin when it was of non-diabetic origin, but even when due to diabetes it was probable that many distinct and separate forms would be recognised in the future, if not at present. Before classifying the various forms of diabetes attention must be drawn to the very remarkable fact that the glycosuria might not only diminish but might even disappear during the course of diabetes, not only when the malady was undergoing improvement, but when fatal complications were present Thus it was well known that glycosuria might disappear either before, or synchronously with, or after, the onset of coma and that in some cases the urine might remain free from sugar for many days before the onset of the coma. Further, the development of inflammatory complications in the course of diabetes was extraordinarily apt to be accompanied by a diminution, if not a disappearance, of the sugar and that quite apart from the development of coma. It would seem, therefore, in the metabolic processes occurring in a diabetic patient where pyrexia was present that the sugar could be oxidised In some complications not accompanied by coma or fever, as, for instance, Bright's disease occurring during the course of diabetes, sugar might also undergo diminution or even disappear Thus, although the presence of glycosuria was so intimately associated with diabetes, yet that disease might exist and be fatal where no sugar was present The undoubtedly mixed group of cases described under the single term "diabetes" might be divided up in a great variety of ways, by classification based either on the clinical symptoms or on the character of the urine excreted Thus there were some cases of diabetes in which the quantity of urine was not notably increased and therefore the quantity of sugar excreted was necessarily moderate and the presence of the sugar was almost the only abnormality in the urine. There were others where the quantity of urine was enormously increased, the amount of sugar correspondingly large, and where in addition, other bodies—acetone diacetic acid, oxybutyric acid &c.—were present. That this distinction was a really vital one was shown by the different course the malady ran in the two instances and the greater beneficial influence of treatment in the first series In the more formidable cases the quantity of nitrogen excreted was very large, associated with the greatly increased tissue waste that was present. Another classification of diabetes might be based on the different age of the patients affected and no doubt, speaking generally, the disease was apt to run somewhat different courses in children, in adults, and in the elderly But before their knowledge of diabetes could be considered thoroughly satisfactory it would probably be necessary to have a classification based on pathological facts rather than on the natural history of the morbid process. From a consideration of diabetes itself, and especially from the results of physiological inquiry, it would seem that some five varieties of diabetic glycosuria might perhaps be described, although in the present state of their knowledge it was not possible to separate all of them clinically First, there was evidence in favour of the existence of glycosuria as a result of disturbed function of the absorptive and other mechanisms of the alimentary canal so that a definite alimentary variety of glycosuria, characterised mainly by the intimate relationship of the glycosuria with the carbohydrates ingested, might be recognised Secondly, most authorities would admit that glycosuria might have a hepatic origin dependent perhaps on the liver not arresting the glycogen brought to it, and possibly in other instances dependent on the liver forming too much sugar Thirdly, a pancreatic diabetes might be admitted to exist, both from the experimental standpoint and from that of human morbid anatomy Fourthly, it was probable that a renal glycosuria existed, especially in the light of experimental results obtained with phloridzin, as it would seem that this glucoside caused glycosuria by an action on the renal cells That opened up the whole question of the relationship of morbid processes in the kidney to diabetes and might place in a new light the well known fact that in certain cases of diabetes the kidney was greatly hypertrophied This, in his opinion, could not be associated simply with the increase of urine excreted, as renal hypertrophy was by no means an invariable accompaniment of diabetes Further, the fact that glycosuria might disappear in cases of diabetes when an acute renal complication such as Bright's disease supervened might also receive a new explanation in the light of these phloridzin results Fifthly, it had been suggested, and should at any rate be admitted as possible, that a diabetic glycosuria might perhaps arise as a result of a primary disintegration of the tissues. In this enumeration of the possible varieties of diabetes the nervous system had been omitted, as although the fact that the nervous system played a part in the production of the disease must be admitted on clinical grounds there was only evidence from the experimental standpoint that lesions of the nervous system produced glycosuria rather than diabetes.

EDINBURGH MEDICO CHIRURGICAL SOCIETY

Exhibition of Cases and Specimens —Gastric Hyperacidity (Hyperchlorhydria) —Disinfection of the Hands

THE seventh ordinary meeting of this society was held on March 4th, Dr C E UNDERHILL (in the absence of Sir THOMAS R FRASER) being in the chair

Dr D CHALMERS WATSON showed a case of Verrucæ Planæ Juveniles. The patient, a boy, aged 13 years, had suffered from the eruption on the face for eight months. A large warty growth (mother wart) had existed on the leg for about two years and several common warts (verrucæ vulgares) had been present on the hands for a year The treatment consisted in the administration of large doses of castor oil given twice a week for the first two weeks and thereafter once a week. At the end of three weeks the eruption on the face had disappeared and that on the hands had improved. Three weeks later the warts on the limb had undergone no change Photographs were shown illustrating the original condition.

Dr F D BOYD demonstrated 1 A case of Localised Syphilitic Meningo-myelitis in a man who had contracted syphilis 20 years ago There were complete anæsthesia of one half of the penis and scrotum and an anæsthetic area on the back of the right thigh and leg, the anal reflex was gone but the bladder was unaffected 2. A case of Ophthalmoplegia. The patient suffered from locomotor ataxia and a year previously had perforating ulcers on both feet. The whole of the muscles of the left eye were paralysed, the pupils were dilated on both sides and nystagmus was present. There were slight paralysis of the tongue and soft palate and complete paralysis of the abductors of the left vocal cord as well as slight paralysis of those of the right side.

Dr G A. GIBSON exhibited 1 A child with combined Obstruction and Incompetence of both Aortic and Pulmonary Orifices There was a history of acute rheumatism and the pain complained of resembled that of angina pectoris The single systolic murmur was conducted over a large area of the chest, one of the diastolic murmurs was musical in character and widely conducted, while the other was only heard over an area of about one and a half square inches 2. A man, aged 22 years, with Raynaud's disease showing interesting features The veins of the leg were like pieces of whip cord and that their condition was due to spasm was shown by the fact that they resumed their normal character under a vapour bath

Dr JOHN THOMSON demonstrated a case of Spasmodic Stricture of the Œsophagus in a boy, nine years of age There was a history of inability to swallow solid or semi solid food during all his life, there were recurrent causeless attacks of vomiting The vomited matters were unchanged because the food did not reach the stomach The œsophagus could accommodate about four ounces He rapidly regained weight when the attacks of vomiting ceased The obstruction was situated about nine and a half inches from the teeth and had given origin to a dilatation also

Mr H ALEXIS THOMSON showed —1. A case of Dupuytren's Contraction of the Palmar Fascia. One hand was treated by Adams's method and the other by excision, and the result was in favour of the former method 2. A case of Infantile Paralysis of the Lower Extremity treated by arthrodesis of the knee and Pirogoff's amputation at the ankle eight years ago The patient could now use the limb fairly well for walking

Mr H. J STILES exhibited —1 A child, aged two years, showing the first stage in the treatment of Double Congenital Dislocation of the Hip The reduction was effected ten days previously when the limb was abducted at right angles, this abduction was gradually reduced, plaster being applied each time, 2. An infant after Excision of Suboccipital Meningocele, complicated with Hydrocephalus, though no permanent improvement was expected.

Mr R A LUNDIE showed a child whose Metacarpal Bone of the Ring Finger of the Right Hand was much shorter than its fellows owing to an early synostosis of the epiphysis and diaphysis

Dr WILLIAM RUSSELL read a paper on Gastric Hyperacidity (Hyperchlorhydria), its Nature and its Relation to Dyspepsia and Dilatation. He said that not many years since it was generally taught and universally believed that gastric hyperacidity was due to the presence of organic acids, the products of the fermentation of food in the stomach, the fermentation being caused by organisms. This widely accepted view was probably the result of observations on the contents of the stomach in pyloric obstruction. The inference that gastric contents underwent fermentation whenever unduly retained came to be applied to all, or nearly all, gastric disturbances In recent years, with increased knowledge of digestive processes, it had become evident that there was a gastric hyperacidity due, not to the fermentation of food stuffs in the stomach, but to a true excess in the amount of the special acid normally secreted by the organ. The term hyperchlorhydria or hyperchylia had been applied to this condition. This hyperchloric acid excess was, in Dr Russell's experience, a much more common cause of dyspepsia and ultimately of gastric dilatation than was at present recognised It was the primary fault in many cases which were classed as nervous neurotic, or irritation indigestion and not infrequently it stood in the same relation to cases named gastric catarrh or gastric dilatation. Of the cases of dyspepsia which he had seen at the Royal Infirmary he would place about 25 per cent. as due to hyperchlorhydria and of cases seen privately even a higher proportion was met with As regards elucidation of the symptoms he began by inquiring how the patient felt on getting up in the morning, then the hour of breakfast and the nature of the meal, how he felt after breakfast and if any pain, discomfort, or other symptoms were experienced during the forenoon and the hour at which these came on, how long they lasted, and whether they continued up to the time of taking the midday meal. If symptoms continued up to this meal he ascertained the effect which the midday meal had upon them, whether they were at once aggravated, materially relieved, or entirely d, at least for the time. He then inquired as to the ition of the midday meal and as to the afternoon ms and so on until bed time, if necessary Exact dge of symptoms was of the greatest value in helping s the determination of the part of the digestive which was at fault. The history thus obtained ten so characteristic as to warrant a diagnosis of hlorhydria without chemical examination. Such a stic history might be as follows The patient felt quite the morning and had no discomfort until during enoon, he could often state the hour at which dis- t or pain began—from one to two and a half hours reakfast—the time varying in different patients, or n the same patient The pain after lasting an r two might pass off, to reappear an hour or after the midday meal. If the pain continued up to the time of taking this meal the par of it removed the pain for a time, the period ef varying from half an hour to an hour The n of the interval of comfort depended upon the y of the condition and the composition of the midday This sequence of events—meals, intervals of relief, re- e of pain or discomfort—might be maintained through- rest of the day If the last meal were taken near e the patient might be wakened from sleep by pain or ymptoms which might prevent sleep for an hour or he pain or discomfort varied within wide limits—severe te and described as grinding gnawing, boring, g or giving sensations of dragging, oppression and ion. The pain was usually referred to the epigastrium, o might be in the back near the spine, behind either r blade, or most acute in the position of the pylorus or e liver behind The measure and site of the pain ed upon the duration and severity of the condition han on any neuropathic tendency in the individual ther department was so much attributed to disordered urbed innervation as in gastric disorders and the ration of this factor tended to relegate to a subsidiary he part taken by diet and altered secretion in pro- the symptoms Symptoms were referred to as *nervous* he nerve condition were the primary factor when it t the sensory index of disordered chemistry Epi- tenderness might be present, but as a rule only in cases of considerable duration. The tenderness was uperficial and was readily relieved by friction of the Other symptoms referred directly to the stomach were t distension, gaseous eructations heartburn and acid ions The eructation of gas or of a small quantity of aterial gave relief often very marked though tem The bowels were constipated or the evacuations were lete. In severe cases there was sometimes great l and mental misery, coming on or attaining its worst the other symptoms were at their height. The most ent of these was a sense of physical and mental ex n, languor, weariness, and weight in the lower limbs ability to apply mind or body to any work. Another m had been well described by Sir William Roberts as ysmal pyrosis," and he regarded it as an "abortive complete act of vomiting' Dr Russell thought, how- hat this latter was a pyloric phenomenon and occurred ly when there was a surplus of acid in the stomach. plain the symptoms a precise knowledge and clear hension of the gastric processes of digestion were ry The three chemical phenomena of starch on, arrest of starch digestion, and proteid digestion those upon which the unconscious comfort or onscious discomfort of digestion primarily de l. When the chemical equilibrium and balance this period were maintained the stomach worked t obtruding its existence on its owner's notice The ect relation" between the amount of proteid and the amount of gastric secretion had to be d. No more gastric juice ought to be poured an could be taken up by the proteid. When this atisfied the secretion of gastric juice ought to cease, pened in normal conditions If this arrest of secretion t occur the equilibrium was upset and the resulting bation depended upon the measure of the excess. The t in the secretion which was the disturbing factor was ydrochloric acid and not the special enzyme. The of this hyperchlorhydria upon the gastric contents was orthy The proteid elements of the food were digested exceptional rapidity and it might be thought that the food substance, especially the finely divided starch food as bread and oatmeal porridge, would readily pass out of the stomach with the dissolved proteids, but this did not happen A considerable portion of unaltered starch was really kept back and retained in the stomach, as Dr Russell had frequently found. The effect of this retained and unaltered starch was to keep up the gastric secretion, while it presented no constituent with which it could combine This undigested starch was ultimately passed on into the duodenum, but only after much local and often general discomfort, though it might also be rejected finally by vomiting A considerable amount of the fat of milk might be retained in the same way in the stomach and Dr Russell had noted this on several occasions when the casein of the milk had disappeared and this even in the case of peptonised milk. In such cases the fat of the milk was diffused through the acid fluid removed from the stomach, partly floating upon it as if it were a mass of mucus This fat also kept up the secretion and presenting no element with which the hydrochloric acid could combine the discomforts of hyperchlorhydria emerged. A third important factor in determining the severity of the symptoms was the kind of proteid food taken The general law was that the less stimulating and the more easily digested proteids caused less discomfort than did those of a contrary character In all three conditions there was the common factor of continued gastric secretion—continued beyond what was required and so beyond what could be utilised. This continued secretion, when examined, was found to contain a high percentage of acidity, much acid being free. At this stage the stomach contents might only measure from one to a few ounces of very acrid material, mainly fluid containing starch, some milk fat, and shreds of undigested material, according to the kind of food partaken of. The main residue in ordinary cases was starch At this period the gastric symptoms were very severe and on withdrawing the contents the smallness of the quantity was remarkable. Why a residuum of finely divided, although undigested, starch should remain in the stomach when other material had passed the pylorus was difficult to explain. The results of clinical observation showed Dr Russell that the unaltered starch was delayed in the stomach and that it was so even when broken up and when digested proteids had escaped Being thus delayed it continued to stimulate the gastric secretion and there being no more proteid with which to combine the secretion accumulated and led to hyperacidity That this hyperacidity was due to a true hypersecretion was proved by the great peptonising power of the filtered contents. When the residuum in the stomach became hyperacid its continued retention was due to the spasm of the pyloric sphincter induced by the acidity As regards etiology it was found that the affection was usually classed under the gastric neuroses—gastrodynia, irritation &c.—though the writers were not always clear as to the meaning of the terms, whether the pain and discomfort were merely subjective nervous phenomena or whether an assumed neurotic diathesis determined an increased secretion of hydrochloric acid. Dr Russell's theory was that the nervous mechanism was the part of the system which was primarily deranged. He thought that this conception was erroneous and full of evil consequences. All deviations of secretion from an average standard all increases of secretion, all modifications of chemico-vital reaction were not explained or defined by the word "neurotic' and it was time that this word and the idea were relegated to a less prominent place when considering disturbances of gastric function. As a result of his chemical experience and the examination of gastric contents he would submit that certain persons were prone to secrete overmuch gastric juice and that possibly the constituent which was primarily at fault was the hydrochloric acid. He had been impressed with the occurence of severe hyperacidity in some gouty and rheumatic subjects and in some persons as a consequence of a diet rich in nitrogenous substances. There was little doubt that to their list of constitutional conditions the acid dyscrasia might be added To regard the intense misery of some hyperchlorhydria as a mere neurosis was unjust to the victims. Apart from this however, he held that the merely neurotic view was disproved by the following phenomena which he had often observed the immediate relief obtained by removing an ounce or two of acrid stomach residuum, a like relief obtained by neutralising the acid by means of alkalies and the measure of relief obtained by mere dilution. That the over secretion was more a chemical and a diathetic error than a neurosis was further supported by the experience that the mechanical removal of the hyperacid residuum in severe cases more promptly overcame the attack than any dietetic or medicinal measure, as if the withdrawal of the acid removed an overflow which otherwise was difficult to arrest and which when not removed looked as if it were absorbed and again and again re secreted. The retention of the hyperacid residuum gave rise further to catarrh and to atonic dilatation In some severe cases relief was ultimately obtained by vomiting and this was associated sometimes with reflux of bile from the duodenum The treatment to be selected depended upon the severity of the condition and the history of the case and he would only refer to general principles In mild degrees associated with constipation the correction of this might be sufficient. In these an alkali taken some time before food neutralised any acid residuum and facilitated the transformation of the starchy elements of the next meal In other instances relief was obtained by the administration of even a small dose of an alkali or as soon as discomfort began Dr Russell had had no success with the administration of acids in this condition, though in some other gastric disorders they were beneficial The diet had also to be determined by the severity of the symptoms. In some cases the prohibition of the commoner forms of starch, such as potato and untoasted bread, was sufficient, in others still greater care had to be exercised in the selection of the most readily digested carbohydrate. Another class might get over their immediate discomfort by the use for a day or two of readily digested pure proteid diet and the gradual addition to this of the most soluble carbohydrates available. In the severest cases he found the removal of the gastric residuum the speediest means of temporary cure He held that the condition being a chemical dyscrasia and not a neurosis a permanent cure or anything approaching it could only be looked for from a dietary adapted to counteract or to prevent the chemical dyscrasia. Considerations determining the dietary were: (1) the proteids ought to be reduced to a physiological minimum and ought to be so selected and cooked as to be easy and ready of digestion, (2) the starches should be as much altered as possible, and (3) the quantity of food should not exceed the physiological requirements Proceeding on these broad lines patients might be confidently assured of recovery and continuance in abstinence and simple living would carry with it the reward of physical and mental well being —Dr GIBSON, Dr J O AFFLECK, Dr JAMES RITCHIE, Dr G LOVELL GULLAND, Dr UNDERHILL, Dr GEORGE HUNTER, Dr BOYD, and Mr STILES took part in the discussion which followed and Dr RUSSELL replied.

Mr R B PURVES read a paper on Disinfection of the Hands. He first considered the question of protecting the hands, especially at non operating times, from all forms of infection He insisted on the importance of such "abstinence" and pointed out that, short of the ideal means of wearing gloves constantly except while operating the infective potentiality of the hands could be materially diminished (1) by the use of gloves when out of doors, (2) by always washing the hands after examining cases, (3) by keeping the nails short, and (4) by wearing rubber gloves when operating on infective conditions, dressing septic wounds, and handling pathological specimens, also by using finger stalls for rectal, vaginal, and oral examinations He advocated a nightly toilet of the hands—viz., washing, thoroughly drying, and applying an emollient. He referred to Krönig and Reinike's observation that hands, if not re infected, become in time germ free, and described his own investigations on the hands of washerwomen. He made 60 observations at different times of the day and found that after five hours' washing cultures yielded no cocci He emphasised the importance of a prolonged preliminary cleansing and suggested a regular system for adoption in the use of the nail brush He urged the necessity of keeping the nails as short as possible and considered that at least ten minutes should be devoted to preliminary cleansing He considered a sand glass—a time recorder—an advantage. He then referred to subsequent purification and believed that success depended rather on the thoroughness with which a method was carried out than upon the use of any particular one and that it was only in most favourable circumstances that active disinfectants could be safely dispensed with. He then touched on Ahlfeld's and Mikulicz's methods. In order to avoid the cost of the alcohol a trial for a year had been given in the Deaconess Hospital to Mikulicz's spirit soap prepared with methylated spirit. Although results improved slightly the soap had to be abandoned on account of its irritating properties He entered into the question of gloves and advocated their more general use, particularly of thread gloves, in the ligating and suturing stage to prevent "implantation infection." He deprecated the use of a reel of catgut unless gloves were worn to prevent contact with the fingers He pointed out the value of control cultures from the hands and operation area and showed a chart with a tabulated series of observations illustrating the facts that the right hand was less frequently sterile than the left and that the patient's skin was sterile in only about one half of cases —Mr STILES, Dr W ALLAN JAMIESON, Mr LUNDIE, Mr C W CATHCART, Mr ALEXIS THOMSON, and Dr J HAIG FERGUSSON discussed the paper and Mr PURVES replied

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EDINBURGH OBSTETRICAL SOCIETY

Exhibition of Specimens —Abdominal Section.—Tubal Gestation.

A MEETING of this society was held on March 11th, Dr JAMES RITCHIE, the President, being in the chair

Dr ANGUS MACDONALD showed (1) An Enlarged Thyroid from a Newly born Infant, causing fatal tracheal compression, and (2) two Enlarged Tubes removed for Hydrosalpinx.

Dr JESSIE MACGREGOR showed an Œdematous Fœtus, the thyroid, liver, and other organs under the microscope exhibited excessive small cell infiltration

Other specimens were shown by Dr F W N HAULTAIN, Dr W FORDYCE, Dr J W BALLANTYNE, and Dr J H FERGUSON

Dr ALBERT E MORISON (West Hartlepool) read notes on five cases of Abdominal Section for emergencies during pregnancy When the first patient was in labour her pelvis was found to be so much diminished in the transverse diameter as only to admit about two fingers, but the sacro subpubic diameter was apparently normal It was impossible to deliver a child *per vias naturales*, so a Porro-Tait operation was performed The operation occupied less than 25 minutes and the patient did not lose more than half an ounce of blood The child was alive and well and the mother made a good recovery In the second case a Porro-Tait operation was performed for sarcoma of the uterus in the ninth month of the patient's third pregnancy The condition of the uterus rendered normal labour improbable. The patient recovered from the operation but died 117 days later, the child was alive and well. In the third case a Porro Tait operation was performed for contracted pelvis. This patient was 4 feet 6½ inches in height, with a history of rickets The operation lasted 35 minutes, the child was alive and the mother's recovery was uneventful In the fourth case Cæsarean section was performed for eclampsia at the sixth month of pregnancy The patient, who was a primipara, had felt in very good health till five months previously, when she fell heavily on the ice, striking her abdomen. After that she suffered from constant headache The urine was found to show one-half albumin Fits occurred and after chloral, bromide of potassium, and injection of saline solution in the median basilic vein had been tried without benefit Cæsarean section was performed. The fœtus had been dead for some time The patient's recovery was uninterrupted except for a slight fit one week after the operation. The urine at the time contained no albumin. In the fifth case rupture of the uterus occurred in the fourth month of the patient's tenth pregnancy The uterus was removed supravaginally The patient rallied and after a severe attack of pneumonia and a prolonged convalescence she ultimately recovered.

Professor J A C KYNOCH (Dundee) communicated a paper entitled "Three Cases of Unruptured Tubal Gestation with Notes of Cases simulating this Condition" In the first case a fixed tender swelling about as thick as the forefinger was felt posteriorly to, and to the right of, the uterus After four weeks, during which pain and hæmorrhagic discharge continued, cœliotomy was performed. The appendages on the right side were found to be adherent and the tube distended, the tube contained a sac with blood stained fluid and numerous branching villi were seen. This patient had been in a hospital 18 months before with all the signs of ectopic gestation on the opposite side, terminating in the formation of a hæmatoma in the broad ligament which became absorbed in six weeks In the second case milk was present in the right breast and a distended tube was found lying to the right and behind the uterus. Cœliotomy was performed and the appendages on the right side were removed The tube was enlarged at the isthmus, a probe could be passed through the fimbriated extremity There was no blood in the pouch of Douglas The tube contained laminated blood clot round a cavity with a smooth membrane containing red tinged fluid but no trace of an embryo. In the third case the patient had menstruated regularly, but there was continuous hæmorrhagic discharge from the last period till admission to hospital. She had only suffered from pain in the right side for four days She was examined under chloroform, when it was found that the uterus was enlarged and that there was a distended tube behind it. On palpating the swelling Professor Kynoch felt something suddenly give way and on recovery from the anæsthetic the patient looked collapsed, pale, restless and showed all the signs of internal hæmorrhage. Cœliotomy was performed when a large amount of clot was found in the abdomen. The right tube was drawn up, when a rent admitting the point of the little finger was found on the posterior wall of the swelling with a blood clot protruding The appendage was removed, the tube was swollen to the size of a pigeon s egg and filled with blood clot, no embryo was found As to the treatment of such cases Professor Kynoch said that most authorities would agree with Werth in regarding an unruptured tube containing a living embryo as demanding immediate removal and permitting no conservative treatment, but with the death of the embryo debateable ground was approached. The researches of Kühne and others went to demonstrate that after the death of the embryo the cells of Langerhans' layer were capable of growing, penetrating, and causing rupture of the tubal wall. In such a condition the necessity for operative interference would arise. In conclusion Professor Kynoch discovered the diagnosis of ectopic gestation from (1) simple abortion occurring in normal pregnancy, (2) hæmorrhage into the ovary, Graafian follicle, or ovarian cyst, and (3) tubal condition with cystic ovarian disease associated with menstrual disturbance —Remarks were made by Dr HAULTAIN, Dr MORISON, Dr BALLANTYNE, Dr. FORDYCE, and Dr J LAMOND LACKIE.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY —A clinical meeting of this society was held on March 6th, Mr. Rickard W Lloyd, the President being in the chair —Mr. J R. Lunn showed a case of Dislocation of the Left Patella in a woman, aged 38 years. Ten days before admission to the St. Marylebone Infirmary she had fallen and had injured her knee. The diagnosis of dislocation of the patella outwards was confirmed by the x rays An attempt to reduce the dislocation under chloroform failed. The patient now found difficulty in getting up from a chair and in extending the knee, but once up she could walk fairly well.—Mr J Jackson Clarke considered that the internal lateral ligament had been ruptured and should be sutured —Mr C R B Keetley said that dislocation of the patella if left unreduced might cause permanent disability although in some unreduced cases strength and good movement might return. In this case he advised operation.—Mr J E. S Fraser thought that the external lateral attachment should be divided and the internal sutured Then careful movements with fixation should be used. This treatment failing it might be necessary to resect.—Mr Jackson Clarke showed two cases of Spinal Caries in children In one patient the products of disintegration were able to escape by means of a psoas abscess. In the other child there was pressure on the cord resulting in paraplegia. To relieve this costo-transversectomy had been performed with good result.—Mr Keetley remarked that time cured nearly every case of paraplegia due to caries if the patient lived long enough He had trephined through the transverse process some time before Vincent of Lyons had suggested a similar procedure. The patient recovered but not probably as the result of the operation. Doubtless the operation had its uses, but the main thing was fixation of the spine, which was best done by means of a plaster jacket.—Mr L. A. Bidwell showed two cases The first was a patient who up to last September had suffered from indigestion for two or three years and vomiting for six months. His stomach was dilated below his umbilicus He was much emaciated The case was regarded as one of cicatricial stenosis of the pylorus and gastro-enterostomy was advised On Sept. 5th the abdomen was opened and a new growth was found at the pylorus. It was not adherent and no enlarged glands were found in the hilum of the liver The jejunum was attached to the posterior surface of the stomach by Halsted's method. A month later pylorectomy was suggested to the patient and this was done on Oct. 4th. The patient left the hospital one month after operation and returned to work and had increased two stones in weight. The second case was that of a patient, aged 60 years, who had had a large tumour in connexion with the left shoulder for nearly 50 years Photographs of the growth were taken in St. Mary's Hospital in 1857 From these it appeared that at that time the general condition suggested sarcoma Excision of the head of the humerus was advised but was refused The tumour was now of the size of a cocoa nut It gave no trouble except for the mechanical interference with movement. There was no sign of pressure or of wasting of the limb There were enlarged veins over the tumour and the skin was rather adherent The diagnosis seemed to lie between simple exostosis and ossifying sarcoma. Probably it was a case of the latter in which ossification had proceeded to such an extent as to destroy completely the sarcomatous elements.—Mr Paton agreed with the diagnosis of ossified sarcoma.—Mr Arthur Evans had under his care a man with an equally large bony tumour of the upper end of the femur A portion removed proved to be osteo-sarcoma. The patient was then treated by injection of Coley's fluid. The tumour was now smaller and harder than it was —Mr J G Pardoe showed a man, aged 37 years, who for three years had suffered with painful and frequent micturition pyuria, and occasional hæmaturia. 18 months ago he had had a stone removed by litholapaxy In a few months the symptoms returned In November last year another stone was detected, crushed, and removed by Mr Pardoe. On the following day the urine was free from blood and clearer 48 hours after the operation there were pain in the left side of the lower abdomen and tenderness above Poupart's ligament. Three days after the operation the tenderness had extended to the umbilicus, the abdomen was motionless, and the pulse was 130, although the temperature was only 99 5° F The abdomen was opened to the left of the middle line and an offensive accumulation of slough, urine, and pus was found. Drainage tubes were inserted. The peritoneum apparently was not opened. Recovery was tedious but uneventful Probably there had been some pouch or sacculus in the bladder to account for the formation of stones and this weak portion of the bladder was damaged in the litholapaxy, with consequent abscess —Dr E. A. Saunders showed a woman, aged 55 years, suffering from myxœdema. Two years ago she began to suffer from frequent headaches, giddiness, and sensation of swelling and choking in the throat. For the last two winters her fingers had gone white in the cold weather. During the last year she had grown stouter than she was formerly and her features had swollen. As regards the possible causation of the disease it was interesting to note that she had a caseating glandular abscess in the neck incised in 1902. The fact that the thyroid gland in these cases was found to be small and fibrotic suggested an analogy with Addison s disease. Possibly the fibrotic process in the thyroid might be the expression of a chronic tuberculous inflammation leading to atrophy of the glandular elements —Dr A. Whitfield showed a child, aged four years, who had been treated by the x rays for Microsporon (Ringworm of the Scalp) After 13 or 14 exposures the hairs on the patches had completely fallen out. In two or three months healthy hair grew again. Dr Whitfield thought that the x rays offered a clean and certain method of cure in circumscribed cases but should only be used with great care. For the disseminated stumps such as were seen in old cases, he thought croton oil needling would still hold its place

MANCHESTER MEDICAL SOCIETY —A meeting of this society was held on March 4th Dr A. M Edge, the President, being in the chair —Dr A. Knyvett Gordon read a paper on Some Points in the Treatment of Laryngeal Diphtheria He pointed out that whereas in America and on the continent of Europe the laryngeal obstruction of diphtheria was treated almost exclusively by intubation of the larynx, in this country tracheotomy was still largely preferred. But tracheotomy as it was described in the later text-books of surgery consisted in the performance of a dissecting operation, under chloroform, through a long incision. To this a diathetic error than a neurosis was further supported by the experience that the mechanical removal of the hyperacid residuum in severe cases more promptly overcame the attack than any dietetic or medicinal measure, as if the withdrawal of the acid removed an overflow which otherwise was difficult to arrest and which when not removed looked as if it were absorbed and again and again re secreted. The retention of the hyperacid residuum gave rise further to catarrh and to atonic dilatation In some severe cases relief was ultimately obtained by vomiting and this was associated sometimes with reflux of bile from the duodenum The treatment to be selected depended upon the severity of the condition and the history of the case and he would only refer to general principles. In mild degrees associated with constipation the correction of this might be sufficient. In these an alkali taken some time before food neutralised any acid residuum and facilitated the transformation of the starchy elements of the next meal In other instances relief was obtained by the administration of even a small dose of an alkali or as soon as discomfort began Dr Russell had had no success with the administration of acids in this condition, though in some other gastric disorders they were beneficial The diet had also to be determined by the severity of the symptoms In some cases the prohibition of the commoner forms of starch, such as potato and untoasted bread, was sufficient, in others still greater care had to be exercised in the selection of the most readily digested carbohydrate. Another class might get over their immediate discomfort by the use for a day or two of readily digested pure proteid diet and the gradual addition to this of the most soluble carbohydrates available. In the severest cases he found the removal of the gastric residuum the speediest means of temporary cure He held that the condition being a chemical dyscrasia and not a neurosis a permanent cure or anything approaching it could only be looked for from a dietary adapted to counteract or to prevent the chemical dyscrasia. Considerations determining the dietary were: (1) the proteids ought to be reduced to a physiological minimum and ought to be so selected and cooked as to be easy and ready of digestion, (2) the starches should be as much altered as possible, and (3) the quantity of food should not exceed the physiological requirements Proceeding on these broad lines patients might be confidently assured of recovery and continuance in abstinence and simple living would carry with it the reward of physical and mental well being —Dr Gibson, Dr J O Affleck, Dr James Ritchie, Dr G Lovell Gulland, Dr Underhill, Dr George Hunter, Dr Boyd, and Mr Stiles took part in the discussion which followed and Dr Russell replied.

Mr R B Purves read a paper on Disinfection of the Hands He first considered the question of protecting the hands, especially at non operating times, from all forms of infection He insisted on the importance of such "abstinence" and pointed out that, short of the ideal means of wearing gloves constantly except while operating the infective potentiality of the hands could be materially diminished (1) by the use of gloves when out of doors, (2) by always washing the hands after examining cases, (3) by keeping the nails short, and (4) by wearing rubber gloves when operating on infective conditions, dressing septic wounds, and handling pathological specimens, also by using finger stalls for rectal, vaginal, and oral examinations He advocated a nightly toilet of the hands—viz., washing, thoroughly drying, and applying an emollient He referred to Krönig and Reinike's observation that hands, if not re-infected, become in time germ free, and described his own investigations on the hands of washerwomen. He made 60 observations at different times of the day and found that after five hours' washing cultures yielded no cocci He emphasised the importance of a prolonged preliminary cleansing and suggested a regular system for adoption in the use of the nail brush He urged the necessity of keeping the nails as short as possible and considered that at least ten minutes should be devoted to preliminary cleansing He considered a sand glass—a time recorder—an advantage He then referred to subsequent purification and believed that success depended rather on the thoroughness with which a method was carried out than upon the use of any particular one and that it was only in most favourable circumstances that active disinfectants could be safely dispensed with. He then touched on Ahlfeld's and Mikulicz's methods. In order to avoid the cost of the alcohol a trial for a year had been given in the Deaconess Hospital to Mikulicz's spirit soap prepared with methylated spirit. Although results improved slightly the soap had to be abandoned on account of its irritating properties He entered into the question of gloves and advocated their more general use, particularly of thread gloves, in the ligating and suturing stage to prevent "implantation infection." He deprecated the use of a reel of catgut unless gloves were worn to prevent contact with the fingers. He pointed out the value of control cultures from the hands and operation area and showed a chart with a tabulated series of observations illustrating the facts that the right hand was less frequently sterile than the left and that the patient's skin was sterile in only about one half of cases —Mr Stiles, Dr W Allan Jamieson, Mr Lundie, Mr C W Cathcart, Mr Alexis Thomson, and Dr J Haig Fergusson discussed the paper and Mr Purves replied.

EDINBURGH OBSTETRICAL SOCIETY

Exhibition of Specimens —Abdominal Section.—Tubal Gestation.

A meeting of this society was held on March 11th, Dr James Ritchie, the President, being in the chair

Dr Angus Macdonald showed (1) An Enlarged Thyroid from a Newly born Infant, causing fatal tracheal compression, and (2) two Enlarged Tubes removed for Hydrosalpinx

Dr Jessie Macgregor showed an Œdematous Fœtus, the thyroid, liver, and other organs under the microscope exhibited excessive small cell infiltration

Other specimens were shown by Dr F W N Haultain, Dr W Fordyce, Dr J W Ballantyne, and Dr J H. Ferguson

Dr Albert E Morison (West Hartlepool) read notes on five cases of Abdominal Section for emergencies during pregnancy When the first patient was in labour her pelvis was found to be so much diminished in the transverse diameter as only to admit about two fingers, but the sacro subpubic diameter was apparently normal It was impossible to deliver a child *per vias naturales*, so a Porro-Tait operation was performed The operation occupied less than 25 minutes and the patient did not lose more than half an ounce of blood The child was alive and well and the mother made a good recovery In the second case a Porro Tait operation was performed for sarcoma of the uterus in the ninth month of the patient's third pregnancy The condition of the uterus rendered normal labour improbable. The patient recovered from the operation but died 117 days later, the child was alive and well. In the third case a Porro Tait operation was performed for contracted pelvis. This patient was 4 feet 6½ inches in height, with a history of rickets The operation lasted 35 minutes, the child was alive and the mother's recovery was uneventful In the fourth case Cæsarean section was performed for eclampsia at the sixth month of pregnancy The patient, who was a primipara, had felt in very good health till five months previously, when she fell heavily on the ice, striking her abdomen After that she suffered from constant headache The urine was found to show one-half albumin Fits occurred and after chloral, bromide of potassium, and injection of saline solution in the median basilic vein had been tried without benefit Cæsarean section was performed. The fœtus had been dead for some time The patient's recovery was uninterrupted except for a slight fit one week after the operation The urine at the time contained no albumin In the fifth case rupture of the uterus occurred in the fourth month of the patient's tenth pregnancy The uterus was removed supravaginally The patient rallied and after a severe attack of pneumonia and a prolonged convalescence she ultimately recovered.

Professor J A C Kynoch (Dundee) communicated a paper entitled "Three Cases of Unruptured Tubal Gestation with Notes of Cases simulating this Condition" In the first case a fixed tender swelling about as thick as the forefinger was felt posteriorly to, and to the right of, the uterus After four weeks, during which pain and hæmorrhagic discharge continued, cœliotomy was performed. The appendages on the right side were found to be adherent and the tube distended, the tube contained a sac with blood stained fluid and numerous branching villi were seen. This patient had been in a hospital 18 months before with all the signs of ectopic gestation on the opposite side, terminating in the formation of a hæmatoma in the broad ligament which been struck by the extreme variability of the interval between the occasion of injury and the subsequent parotitis, by the absence of general septicaemia or pyaemia, and by the mortality of the disease in very many cases, so that dryness of the mouth could not be invoked as a factor. The theory of infection from the mouth, though to some extent supported by the only post-mortem examination he had made, in no way accounted for parotitis occurring more frequently after pelvic than other operations. A nervous influence of the pelvic organs upon the parotid gland seemed to be the most reasonable cause.—Dr. W. Duncan said that the few cases which he had had of parotitis following abdominal section he had always attributed to sepsis; in future he would always investigate the condition of the mouth.—Dr. Bedford Fenwick, Dr. F. A. Purcell, Dr. C. H. Bennett, Dr. J. J. Macan, and Dr. Hugh Woods also spoke.—Dr. Macnaughton-Jones, in reply, said that death in cervical phlegmon might be from direct pressure, but implication of the inhibitory nerve supply would account for cardiac failure. Parotitis was but one of the complications he had ascribed to infection from the mouth and he had expressly stated that it might have a neural origin.

SOUTH-WEST LONDON MEDICAL SOCIETY.—The monthly meeting of this society was held on March 11th, Surgeon-Major Mark Robinson, I.M.S. (retired), the President, being in the chair.—Mr. A. Marmaduke Sheild gave an address on Some Recent Experiences in Diseases of the Breast. The commoner diseases of the breast were reviewed and many practical hints in connexion with their diagnosis and treatment were given. As regarded mammary abscess it was important to adopt prophylactic measures during pregnancy and the nursing period. During the latter period the mouth of the infant should be regularly washed out with glycerine and borax or 1 in 4000 perchloride of mercury and glycerine. Mammary abscess was invariably due to pyogenic organisms entering the gland through the nipple. It was important to diagnose between pus and engorgement of the milk ducts. An incision should never be made unless it was certain that pus was present. If an operation was necessary an anæsthetic should always be given. A free incision should be made and any burrowing passages should be opened up and a counter opening was often desirable. Chronic mammary abscess was often tuberculous and simulated cancer. It should be always incised before removal of the breast was resorted to. Cysts were usually milk cysts (galactocele) or serous cysts, the latter were single or multiple. If there were two or three tumours in a breast it was not cancer. Cysts were painful, early cancer was not painful. Cysts varied in tension, sometimes being hard on one day and fluctuating on another. If it were certain that a cyst was a simple serous one it could be tapped and injected with carbolic acid and glycerine (30 or 40 drops) or it could be dissected out. If there were growths in the cyst or if the breast was riddled with cysts the whole of the organ should be removed. After referring to the characteristic signs of cancer Mr Sheild mentioned a useful diagnostic test—placing the palmar surface of the hand over the surface of the breast and greatly pressing backwards. The tumour if due to a mastitis disappeared—if it did not there was something more than mastitis. Retraction of the nipple occurred in abscess of the breast while soft cancer might not pucker the breast or the nipples. Enlarged glands were never absent though often they were not to be felt. Cases not suitable for operation included those in which the skin was extensively involved, cases of cancer in young pregnant women, and cases of atrophic cancer. Mr Sheild showed a number of excellent drawings.

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MIDLAND MEDICAL SOCIETY.—A meeting of this society was held on March 4th, the President, Dr H W Langley Browne being in the chair.—Dr C E Purslow showed the placenta and membranes from a case of complete Placenta Prævia. They formed a complete sac, the only aperture in which was the hole in the centre of the placenta through which the fœtus had been delivered.—Dr Purslow also showed Uterine Appendages with an Accessory Ovary. They had been removed from a single woman, 29 years old, for severe menorrhagia which had persisted for two years in spite of every method of treatment. The ovaries presented several small cysts and on the left side there was a well marked accessory ovary of the size of a pea situated in the upper edge of the broad ligament about three-quarters of an inch from the ovary proper and immediately beneath the fimbriated extremity of the tube.—Mr Christopher Martin showed a specimen consisting of the Appendages of the Uterus and the whole of the Vagina removed for extreme prolapse. The patient was a widow past the menopause and no form of pessary could be retained. The operation was severe and was only performed as a last resource. The patient made a slow but complete recovery.—Mr William Billington showed specimens from a case of Neuro-fibromatosis (von Recklinghausen's disease). The patient was a man, 33 years of age, who died shortly after the removal of a large swelling on his lingual nerve which almost filled up his mouth and seriously interfered with breathing and swallowing. At the age of three the patient fell and cut his right cheek. Two years later a lump appeared. This gradually increased in size, and in spite of two successful operations the right cheek remained very much larger than the left. Other lumps appeared in other parts of the body, some of which were subcutaneous. The patient remained in good health and suffered very little inconvenience until the year before his death. The specimens which were shown consisted of the lumbar plexus and its branches with the upper part of the sacral plexus. The nerve showed marked diffused thickening at intervals, giving rise to a fusiform swelling. A tumour was found in the lower half of the spinal cord rather larger than an almond. This gave rise to no symptoms [illegible] life and operation intubation of the larynx was certainly preferable and it was with this that it was usually compared The points in favour of the rapid method through a short incision, the knife being guided entirely by the touch of the left forefinger which was kept on the lower edge of the cricoid cartilage until the tracheal dilators were inserted, were (1) that it could be performed almost as quickly as intubation, (2) that no anæsthetic was required, (3) that the trachea was more likely to be opened in the middle line, (4) that the tracheal fascia was disturbed as little as possible, and (5) that it was an easier operation. Compared with intubation it had the advantages (1) that the relief of the obstruction was more complete, (2) that the rest of the child was less disturbed, (3) that subsequent feeding was easier, especially in the hands of an imperfectly trained nurse, (4) that it was more easy to remove false membrane, especially when this was below the tracheal wound and in large masses, and (5) that complete rest was afforded to the larynx. Stress was also laid on the fact that it was possible to remove the tube as soon as an intubation cannula in the same circumstances, tracheotomy tubes being usually left in too long Among the indications for operation the amount of obstruction was not so important as the effect that it was having on the patient, in this connexion restlessness and the amount of epigastric recession were often misleading, the presence of cyanosis being the more important indication for operation. The after treatment was most important and consisted chiefly in insuring absolute rest to the patient, it was particularly important to avoid the use of feathers, steam tents and over feeding, in the majority of cases starvation for 24 hours was desirable. In these circumstances Dr Gordon believed that tracheotomy was usually preferable to intubation, but there were a few cases in which intubation might be resorted to when it was important not to leave even as mall scar The reason why intubation gave such good results in America and on the continent was that antitoxin was given as a rule earlier in the course of the disease than in this country —Dr T A. Goodfellow read a paper on a case of Pylephlebitis following Perityphlitis, in which the occurrence of a period of delirium early in the course of the disease, followed by a series of severe and frequently repeated rigors lasting throughout the whole illness left the diagnosis for a long time in doubt No definite abdominal tumour was felt, but laparotomy discovered the presence of a chronically inflamed appendix with a broken down lymphatic gland containing old pus. Their removal failed to relieve the symptoms, although at a second operation the only abnormal condition found was the presence of ascites Subsequently pus was found in the liver (that organ having become enlarged in the later stages of the disease) but its evacuation was not followed by any improvement and the patient died. The pus from the liver gave cultivations of the bacillus coli and the streptococcus citreus The case extended over 59 days, during the last 46 of which urobilinuria with a moderate amount of jaundice was present A short summary of the present state of knowledge regarding urobilinuria was given.

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM —A meeting of this society was held on March 2nd, Dr Urban Pritchard being in the chair —The discussion on papers relating to Tuberculosis of the Ear, Nose, and Naso-pharynx, already mentioned in THE LANCET of Feb 21st, p 522, was resumed —The President remarked that the theory put forward by Dr W Jobson Horne did not quite account for the chief cause of the pain—namely, pressure on nerve endings, in tuberculous cases there was not very acute inflammation, not very great pressure and therefore absence of acute pain. In selecting cases for operation he thought that the important point was not the amount of local damage, but the general condition of the patient.—Mr C A Ballance thought that tuberculosis of the temporal bone region should be treated and thought of both pathologically and surgically, exactly as tuberculosis of any other bone was. He agreed that where the disease was extensive the operation should be done by stages. He believed that in a considerable number of cases the temporal bone was the seat of the primary disease, and he felt sure that it was the primary source of the disease which it was the surgeon's duty to attack at the earliest possible moment and that it should be removed completely without regard to the facial nerve.—Mr A E Cumberbatch considered that it should not be a question of operating upon these cases simply because they were tuberculous. The question was whether it was possible to remove the disease. If so, it should be done.—Dr A. L. Whitehead referred to a series of records of fatal cases of ear disease. Of the last 100 cases there were only 12 which were distinctly tuberculous, and of these all but three were under two years of age Of the three over that age all had advanced tuberculous mischief elsewhere, chiefly in the lungs. —Mr Hugh E Jones said that it was worthy of consideration whether bovine tuberculosis might not be responsible for the primary mastoid affections.—Mr A. H Cheatle remarked that many times in young children with profuse discharge from the ear, which was suspected to be tuberculous, the smell had been characteristic.—Mr Richard Lake described two cases in which, although there was well marked tuberculous disease of the tympanum and aural accessory centres, yet the pus which flowed down the Eustachian tube had not infected the larynx He thought that cases of tubercle of the middle ear coming on during pulmonary tuberculosis were far commoner in this country than on the continent. He would not advise grafting after operating upon a mastoid for tuberculous disease because of the risk of shutting in tuberculous granulations.—Dr J Dundas Grant quoted a case showing how insidious may be the origin of tuberculous disease of the middle ear even in a robust-looking individual.—Dr. V H. Wyatt Wingrave, Dr Jobson Horne, and Dr W A. Milligan then replied to the various speakers who had taken part in the discussion. Dr Milligan said that the discussion had shown that primary tuberculous disease of the ear was more common than had been supposed and hence the primary focus of the disease should be removed and the whole question of operation should be determined by the general condition of the patient. He advised grafting in tuberculous cases because the disease did not often invade the bone deeply, and it was quite possible to eradicate it in the majority of cases. In his experience the stapes was seldom thrown off as a sequestrum in non tuberculous cases, the reverse being the case in tuberculous disease.—Dr C H Fagge showed two specimens of Tuberculous Disease of the Middle Ear —Mr Cheatle showed a case of Healed Tuberculosis of the Middle Ear and seven specimens of Tuberculosis of the Temporal Bone in Infants, four of whom died from tuberculous meningitis.—Dr James Kerr Love exhibited skiagrams of the Temporal Bone having special reference to the auditory apparatus and the surgical anatomy of the mastoid antrum.

BRITISH GYNÆCOLOGICAL SOCIETY —A meeting of this society was held on March 12th Dr Heywood Smith, the President, being in the chair —Dr H Macnaughton Jones read a paper on the importance of attention to the Mouth in Operations on the Pelvic Viscera, with notes of a fatal case of Parotitis. He reviewed the bacteriology of the mouth in health and during various diseased states He noticed especially the products formed during the presence of pyorrhœa alveolaris with carious teeth and illustrated the effects caused by such morbid conditions of the mouth by cases which had come under his notice in which gastric complications associated with foul conditions of the mouth, and great fœtor, parotitis, with angina Ludovici (post-operative) occurred. He reviewed the arguments for the neural and septic origin of the parotitis, asserting that there were ample grounds for believing in both causes In such patients he thought that the prolonged administration of ether was more likely to increase and to prolong such gastric and digestive troubles than chloroform Doubtless parotitis was often a coincidence rather than a sequence of an operation. He detailed the particulars of a case of parotitis which commenced on the fourteenth day after an operation for cystocele with uterine prolapse and hæmorrhoids The case terminated fatally, notwithstanding free and deep incisions, on the fifteenth day of the attack. Here unquestionably the mischief began in the teeth and mouth. The patient had suffered for some time from the former and had been under dental care immediately before the operation As a factor in causing post-operative digestive disturbances, or such graver complications as that mentioned, or sepsis, the condition of the teeth and buccal cavity before and subsequently to an operation was important The best disinfectants were formalin, peroxide of hydrogen, sulphurous acid, and boric acid, with a basis of glyco-thymoline. Benzo-naphthol had in his experience a most salutary effect in such cases —The President asked what had been the immediate cause of death in fatal cases of parotitis.—Mr Stephen Paget (a visitor) said that in the 101 cases which he had collected he had been struck by the extreme variability of the interval between the operation or injury and the subsequent parotitis, by the absence of general septicæmia or pyæmia, and by the triviality of the trauma in very many cases, so that dryness of the mouth could not be invoked as a factor. The theory of infection from the mouth, though to some extent supported by the only post-mortem examination he had made, in no way accounted for parotitis occurring more frequently after pelvic than other operations A nervous influence of the pelvic organs upon the parotid gland seemed to be the most reasonable cause.—Dr W Duncan said that the few cases which he had had of parotitis following abdominal section he had always attributed to sepsis, in future he would always investigate the condition of the mouth —Dr Bedford Fenwick, Dr F A. Purcell, Dr C H. Bennett, Dr J J Macan, and Dr Hugh Woods also spoke.—Dr Macnaughton Jones, in reply, said that death in cervical phlegmon might be from direct pressure, but implication of the inhibitory nerve supply would account for cardiac failure Parotitis was but one of the complications he had attributed to infection from the mouth and he had expressly stated that it might have a neural origin

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DERMATOLOGICAL SOCIETY OF LONDON —A meeting of this society was held on March 11th, Dr J J Pringle being in the chair —Dr F G Penrose showed a child, aged one year and seven months suffering from a Bullous Eruption which had been first noticed one week after birth The eruption affected the limbs only and showed some tendency to occur in groups The diagnosis offered was that of pemphigus circinatus —Mr Willmott H. Evans showed a characteristic example of Pityriasis-Rubra Pilaris in a woman, aged 56 years The disease was of seven months duration and affected chiefly the neck arms and legs On the lower extremities the rash was diffuse and scaly, but on the neck and upper extremities it consisted of miliary follicular papules each with a central horny plug —Dr J J Pringle showed a woman who had noticed a Lump beneath the Skin on the right side of the trunk seven weeks before. Shortly after this other lumps appeared, and at the time of exhibition she was covered all over with numerous subcutaneous nodules Quite recently, also, she had developed severe headache and ptosis of the left eye One of the little tumours had been excised and showed the case to be one of multiple sarcoma, the primary growth not having been detected.—Dr J H Sequeira showed a woman suffering from Alopecia Areata associated with Anorexia Nervosa.—Dr J M H MacLeod showed a boy who had suffered from Hyperidrosis since he was six months old This especially affected the nose and hands. On the nose, occupying the whole of the lower two thirds, the skin was red and covered with minute papules upon which small drops of sweat were constantly standing The disease was a good example of that described by Jadassohn as granulosis rubra nasi —Dr A. Whitfield showed a child, aged six years, who exhibited an extraordinary eruption of unknown nature On the centres of both cheeks and the chin were patches of persistent erythematous eruption with some infiltration and atrophy The lobes of the ears were occupied by bright purple cushion like swellings with hard cartilaginous edges On both elbows and wrists were raised, reddish, infiltrated discs which showed a faint yellowish colour on pressure Some ill defined patches also existed on the legs The buttocks showed an eruption like that on the cheeks The disease had existed for about three years and the child had enjoyed perfect health. No diagnosis was offered and no member of the society had seen a similar case before —Dr F Parkes Weber showed a man with a Softish Growth on the Right Side of the Scrotum of two years duration The question arose as to whether it was malignant disease or a granuloma —Dr T Colcott Fox showed a case of Large Papular Syphilide, almost all the papules being as large as a shilling. The infiltration was marked but quite superficial and the disease was of quite recent origin —Mr Arthur Shillitoe showed a case of Grouped Large Papular Syphilide scattered all over the back and limbs in a patient who had contracted syphilis nine months previously and had undergone no treatment for it.—Dr James Galloway showed a case of Urticaria Pigmentosa.—Dr E Stainer showed a case of Mycosis Fungoides.

MIDLAND MEDICAL SOCIETY.—A meeting of this society was held on March 4th, the President Dr H. W Langley Browne, being in the chair —Dr C E. Purslow showed the placenta and membranes from a case of complete Placenta Prævia —They formed a complete sac the only aperture in which was the hole in the centre of the placenta through which the fœtus had been delivered.—Dr Purslow also showed Uterine Appendages with an Accessory Ovary They had been removed from a single woman, 29 years old, for severe menorrhagia which had persisted for two years in spite of every method of treatment. The ovaries presented several small cysts and on the left side there was a well marked accessory ovary of the size of a pea situated in the upper edge of the broad ligament about three-quarters of an inch from the ovary proper and immediately beneath the fimbriated extremity of the tube.—Mr Christopher Martin showed a specimen consisting of the Appendages of the Uterus and the whole of the Vagina removed for extreme prolapse. The patient was a widow past the menopause and no form of pessary could be retained. The operation was severe and was only performed as a last resource. The patient made a slow but complete recovery —Mr William Billington showed specimens from a case of Neuro-fibromatosis (von Recklinghausen's disease) The patient was a man, 38 years of age, who died shortly after the removal of a large swelling on his lingual nerve which almost filled up his mouth and seriously interfered with breathing and swallowing At the age of three the patient fell and cut his right cheek Two years later a lump appeared. This gradually increased in size, and in spite of two successful operations the right cheek remained very much larger than the left. Other lumps appeared in other parts of the body some of which were subcutaneous. The patient remained in good health and suffered very little inconvenience until the year before his death. The specimens which were shown consisted of the lumbar plexus and its branches with the upper part of the sacral plexus The nerve showed marked diffused thickening at intervals, giving rise to a fusiform swelling A tumour was found in the lower half of the spinal cord rather larger than an almond. This gave rise to no symptoms during life and operation intubation of the larynx was certainly preferable and it was with this that it was usually compared The points in favour of the rapid method through a short incision, the knife being guided entirely by the touch of the left forefinger which was kept on the lower edge of the cricoid cartilage until the tracheal dilators were inserted, were (1) that it could be performed almost as quickly as intubation, (2) that no anæsthetic was required, (3) that the trachea was more likely to be opened in the middle line, (4) that the tracheal fascia was disturbed as little as possible, and (5) that it was an easier operation. Compared with intubation it had the advantages (1) that the relief of the obstruction was more complete, (2) that the rest of the child was less disturbed, (3) that subsequent feeding was easier, especially in the hands of an imperfectly trained nurse, (4) that it was more easy to remove false membrane, especially when this was below the tracheal wound and in large masses, and (5) that complete rest was afforded to the larynx. Stress was also laid on the fact that it was possible to remove the tube as soon as an intubation cannula in the same circumstances, tracheotomy tubes being usually left in too long Among the indications for operation the amount of obstruction was not so important as the effect that it was having on the patient, in this connexion restlessness and the amount of epigastric recession were often misleading, the presence of cyanosis being the more important indication for operation. The after treatment was most important and consisted chiefly in insuring absolute rest to the patient, it was particularly important to avoid the use of feathers, steam tents and over feeding, in the majority of cases starvation for 24 hours was desirable. In these circumstances Dr Gordon believed that tracheotomy was usually preferable to intubation, but there were a few cases in which intubation might be resorted to when it was important not to leave even as mall scar The reason why intubation gave such good results in America and on the continent was that antitoxin was given as a rule earlier in the course of the disease than in this country —Dr T A. Goodfellow read a paper on a case of Pylephlebitis following Perityphlitis, in which the occurrence of a period of delirium early in the course of the disease, followed by a series of severe and frequently repeated rigors lasting throughout the whole illness, left the diagnosis for a long time in doubt No definite abdominal tumour was felt, but laparotomy discovered the presence of a chronically inflamed appendix with a broken down lymphatic gland containing old pus Their removal failed to relieve the symptoms, although at a second operation the only abnormal condition found was the presence of ascites. Subsequently pus was found in the liver (that organ having become enlarged in the later stages of the disease) but its evacuation was not followed by any improvement and the patient died. The pus from the liver gave cultivations of the bacillus coli and the streptococcus citreus. The case extended over 59 days, during the last 46 of which urobilinuria with a moderate amount of jaundice was present A short summary of the present state of knowledge regarding urobilinuria was given

Otological Society of the United Kingdom —A meeting of this society was held on March 2nd, Dr Urban Pritchard being in the chair —The discussion on papers relating to Tuberculosis of the Ear Nose, and Naso pharynx, already mentioned in The Lancet of Feb 21st, p 522, was resumed —The President remarked that the theory put forward by Dr W Jobson Horne did not quite account for the chief cause of the pain—namely, pressure on nerve endings, in tuberculous cases there was not very acute inflammation, n t very great pressure and therefore absence of acute pain. In selecting cases for operation he thought that the important point was not the amount of local damage, but the general condition of the patient.—Mr C A Ballance thought that tuberculosis of the temporal bone region should be treated and thought of both pathologically and surgically, exactly as tuberculosis of any other bone was He agreed that where the disease was extensive the operation should be done by stages. He believed that in a considerable number of cases the temporal bone was the seat of the primary disease, and he felt sure that it was the primary source of the disease which it was the surgeon's duty to attack at the earliest possible moment and that it should be removed completely without regard to the facial nerve.—Mr A. E Cumberbatch considered that it should not be a question of operating upon these cases simply because they were tuberculous The question was whether it was possible to remove the disease. If so, it should be done.—Dr A. L. Whitehead referred to a series of records of fatal cases of ear disease. Of the last 100 cases there were only 12 which were distinctly tuberculous, and of these all but three were under two years of age Of the three over that age all had advanced tuberculous mischief elsewhere, chiefly in the lungs. —Mr Hugh E Jones said that it was worthy of consideration whether bovine tuberculosis might not be responsible for the primary mastoid affections.—Mr A. H Cheatle remarked that many times in young children with profuse discharge from the ear, which was suspected to be tuberculous, the smell had been characteristic.—Mr Richard Lake described two cases in which, although there was well marked tuberculous disease of the tympanum and aural accessory centres, yet the pus which flowed down the Eustachian tube had not infected the larynx. He thought that cases of tubercle of the middle ear coming on during pulmonary tuberculosis were far commoner in this country than on the continent. He would not advise grafting after operating upon a mastoid for tuberculous disease because of the risk of shutting in tuberculous granulations.—Dr J Dundas Grant quoted a case showing how insidious may be the origin of tuberculous disease of the middle ear even in a robust-looking individual.—Dr V H. Wyatt Wingrave, Dr Jobson Horne, and Dr W A Milligan then replied to the various speakers who had taken part in the discussion. Dr Milligan said that the discussion had shown that primary tuberculous disease of the ear was more common than had been supposed and hence the primary focus of the disease should be removed and the whole question of operation should be determined by the general condition of the patient. He advised grafting in tuberculous cases because the disease did not often invade the bone deeply, and it was quite possible to eradicate it in the majority of cases. In his experience the stapes was seldom thrown off as a sequestrum in non tuberculous cases, the reverse being the case in tuberculous disease.—Dr C H. Fagge showed two specimens of Tuberculous Disease of the Middle Ear —Mr Cheatle showed a case of Healed Tuberculosis of the Middle Ear and seven specimens of Tuberculosis of the Temporal Bone in Infants, four of whom died from tuberculous meningitis.—Dr James Kerr Love exhibited skiagrams of the Temporal Bone having special reference to the auditory apparatus and the surgical anatomy of the mastoid antrum.

British Gynæcological Society —A meeting of this society was held on March 12th Dr Heywood Smith, the President, being in the chair —Dr H Macnaughton Jones read a paper on the importance of attention to the Mouth in Operations on the Pelvic Viscera, with notes of a fatal case of Parotitis. He reviewed the bacteriology of the mouth in health and during various diseased states. He noticed especially the products formed during the presence of pyorrhœa alveolaris with carious teeth and illustrated the effects caused by such morbid conditions of the mouth by cases which had come under his notice in which gastric complications associated with foul conditions of the mouth, and great fœtor, parotitis, with angina Ludovici (post-operative) occurred. He reviewed the arguments for the neural and septic origin of the parotitis, asserting that there were ample grounds for believing in both causes In such patients he thought that the prolonged administration of ether was more likely to increase and to prolong such gastric and digestive troubles than chloroform. Doubtless parotitis was often a coincidence rather than a sequence of an operation. He detailed the particulars of a case of parotitis which commenced on the fourteenth day after an operation for cystocele with uterine prolapse and hæmorrhoids The case terminated fatally, notwithstanding free and deep incisions, on the fifteenth day of the attack. Here unquestionably the mischief began in the teeth and mouth. The patient had suffered for some time from the former and had been under dental care immediately before the operation As a factor in causing post-operative digestive disturbances or such graver complications as that mentioned, or sepsis, the condition of the teeth and buccal cavity before and subsequently to an operation was important. The best disinfectants were formalin, peroxide of hydrogen, sulphurous acid, and boric acid, with a basis of glyco thymoline. Benzo-naphthol had in his experience a most salutary effect in such cases —The President asked what had been the immediate cause of death in fatal cases of parotitis —Mr Stephen Paget (a visitor) said that in the 101 cases which he had collected he had

Reviews and Notices of Books.

Experimentelle Untersuchungen über die entzündliche Neubildung von Bindegewebe (*Experimental Investigations on the Inflammatory Growth of Connective Tissue*) Von Dr Med ALEXANDER MAXIMOW, St Petersburg Jena Gustav Fischer. 1902. Pp 262 and 13 plates Price 20 marks.

UNDER the above title Dr Alexander Maximow has published a very lengthy monograph in book form describing in detail the results of a long series of experiments undertaken by him to discover the exact manner in which connective tissue is formed and regenerated. This very important piece of research has been carried out in Professor E. Ziegler's pathological laboratory in Freiburg, a laboratory from which at one time and another a great deal of work on this subject has emanated The controversial and vexed question of connective tissue formation has a literature of its own which is little less than prodigious and within recent years there is hardly a pathologist of repute who has not contributed some item more or less important towards the elucidation of the vital processes concerned in what is generally called inflammatory growth Indeed, Professor Ziegler himself largely owes his great reputation as a pathologist to his classical "glass chamber" investigations on this very subject, and it has been Dr Maximow's task to substantiate the greater part of his investigations as it has been to reconcile many of the conflicting theories which have been adduced on the general processes of inflammation. Inflammatory new growth has been explained as due to the coalescence and growth of leucocytes derived from the blood stream, to the growth of migratory cells belonging to the lymphatic system, or to specially modified cells of the connective tissue and to the outgrowth of processes of pre-existing connective tissue cells According to Dr Maximow it is to the fibroblasts which are the ordinarily connective tissue cells that we must look for the formation of permanent new tissue. Certain other cells also take part in the preliminary stages of this growth Their function, however is only temporary and evanescent, they act, as it were, as pioneers or carriers to the fibroblasts, which are the permanent bricklayers and masons. These pioneer cells belong chiefly to two classes—firstly, ordinary leucocytes which are of the multinuclear granular variety and which migrate from the blood vessels to the seat of inflammation, and secondly, certain uninuclear round cells, sometimes called lymphocytes and in the author's nomenclature described as polyblasts. These latter cells or polyblasts occasionally originate from pre-existing migratory cells of the connective tissue type. They also appear to develop from clasmatocytes and from the adventitious cells of the blood vessels. However the vast majority of polyblasts are *ordinary* lymphocytes which have migrated from the blood stream. Whether, however they make their appearance at the seat of inflammation directly from the blood stream or wander thither from the intercellular spaces of the connective tissue, it is suggested that these polyblasts are probably of one nature only although under varying conditions of environment their morphological character may have been distinctly differentiated. The ordinary leucocytes and polyblasts, although paving the way for the permanent work of the fibroblasts, are incapable of independent formation of enduring tissue. Leucocytes for the most part degenerate and disintegrate, possibly providing food material for the workers of the permanent structure. The histological methods whereby the author has been enabled to carry out his inquiries are very thorough, complete, and ingenious, and the microscopic appearances of the preparations are very beautifully illustrated at the end of the work in a series of plates.

This monograph is not only a very valuable contribution to the histology of connective tissue formation and regeneration, but it throws very important light on the general processes of inflammation and although possibly it does not represent the last words which have to be said on these biological processes nevertheless it must be regarded as the most trustworthy account which has yet been published.

Die Antikörper Resultate früherer Forschungen und Neue Versuche (*The Anti bodies Results of Previous Researches and New Experiments*) By Dr EMIL FREIHERR of Dungern. With two Drawings and Four Curves. Jena Gustav Fischer 1902. Pp. 114 Price 2s 6d

THE first part of this treatise gives a concise and interesting survey of the researches which have led to the development of the present theory of immunity After a full consideration of the antitoxins and of Ehrlich's theories in regard to receptors, amboceptors, and complements the author proceeds to deal with the other anti bodies, the agglutinins, lysins, cytotoxins, and precipitins, and discusses their origin, nature, formation, and action so far as they have been elucidated by present research In the second part Dr Freiherr describes his own researches. These were instituted to inquire further into the nature and formation of the anti bodies and for this purpose he chose the precipitins. In his experiments he employed the blood plasma of molluscs and injected it into rabbits. An account of these experiments is not called for here but some of the conclusions which he draws from his researches may be mentioned. He finds that precipitins are of an albuminous nature and are specific for the particular sera by which they are called into being, that the precipitable substance of an injected foreign serum enters into some combination with the cells of the organism before katabolic destruction, that such a combination of an injected foreign serum with the cells of the organism is hindered and delayed by a previous injection of another different serum, and that consequently while different sera when injected call forth specific precipitins the same cells of the organism are employed in the reaction On the other hand, it is shown that a previous injection of one serum predisposes the organism to take up the precipitable substance from a second injection of the same serum rather than that of a different serum. The formation of precipitin takes a definite time to develop after injection and its course may be represented by a curve. Finally, Dr Freiherr describes an interesting experiment in which he was able to demonstrate a local formation of precipitin by injection of the serum into the anterior chamber of a rabbit's eye.

Hygiene und Diätetik der Stoffwechselkrankheiten. (*Hygiene and Dietetics of the Diseases of Metabolism*) By F SCHILLING Leipsic H. Hartung and Son 1903. Pp 345 Price 5.50 marks

THE number of diseases which are recognised as due to faulty metabolism is now so considerable that it is as remarkable that Dr. Schilling has been able to condense an intelligible account of the chief varieties within the limits of 345 pages as that a volume so replete with scientific detail has not assumed even larger dimensions It is however, logically certain that if the diseases now acknowledged *to* belong to this classification are indeed due to perverted metabolism the list must be greatly extended in the near future. For inasmuch as all physiological processes represent the activities of protoplasm—in other words, "metabolism"—and inasmuch as pathological processes are was the only lesion present in the central portion of the nervous system.—Mr George Heaton read a paper on the Palliative and Operative Treatment of Enlarged Prostate and showed one of his cases

Laryngological Society of London —A meeting of this society was held on March 6th, Dr P McBride, the President, being in the chair —Dr A. Bronner showed a microscopic specimen of Columnar celled Carcinoma of the Naso-pharynx from a patient who had been under observation for four and a half years —Sir Felix Semon remarked that it was a well-known experience that malignant disease in the nose and naso-pharynx usually pursued a slow course. —Dr W H Kelson showed (1) a man with Dislocation of Bones of the Nose due to Polypi, and (2) Bleeding Polypus in a girl, with microscopic section —Dr H. Tilley showed a case illustrating the Result of Operative Treatment of Adhesion of the Soft Palate to the Posterior Pharyngeal Wall in Tertiary Syphilis —Mr F J Steward showed a case of Clonic Contraction of the palate, adductors of the vocal cords, and certain other muscles The patient had a staggering and reeling gait and slightly increased knee and plantar reflexes, but no other signs indicative of lesion of the nervous system.—Sir Felix Semon considered that the gait was not typically tabetic and suggested the probability of cerebellar tumour —Mr E. Cresswell Baber showed (1) a Tumour of the Vestibule from a woman, aged 26 years, with microscopic section, and (2) a Tongue Depressor for exposing the tonsil. —Mr E D Vinrace showed a case of Lupus (?) of the Nose and Face in a woman about 60 years of age. The case was discussed by Dr H W Fitzgerald Powell, Dr W Hill, Dr J Dundas Grant, and Mr F H. Westmacott.—The President showed a case of Anosmia in a man aged 39 years, who had lost the sense of smell in the beginning of 1901. The principal feature of interest in the case was the intermittent character of the anosmia. The case was discussed by Mr Baber, Mr F de Havilland Hall, Dr Grant, Dr J Donelan, Dr L H Pegler, and Dr P Watson Williams —Dr H L Lack showed various Microscopic Specimens and a man (shown at the January meeting) who was suffering from Spastic Aphonia affecting the speaking but not the singing voice, and who had now completely recovered his power of speech.—Dr Donelan showed a case of Perforation of the Nasal Septum (? trauma or syphilis)

Nottingham Medico-Chirurgical Society —A meeting of this society was held on March 4th, Dr C H. Cattle being in the chair —Mr R. G Hogarth showed the following cases 1 A boy on whom Œsophagotomy had been performed for removal of a toothed clock wheel one inch in diameter from the thoracic portion of the œsophagus where it had been lodged for six days, the œsophagus was opened just above the left sterno clavicular joint. 2. A boy after an extensive operation for Excision of Tuberculous Glands in the Right Side of the Neck, the glands were very numerous but only one or two had broken down centrally 3. Two boys after Excision of the Hip joint. 4 A child after Erasion of the Knee-joint for Tuberculous Disease 5 A case of Congenital Dislocation of the Hip (with skiagram) in which the Lorenz operation had been tried unsuccessfully 6 A boy after Tarsectomy for Talipes Equino-varus —The cases were discussed by Dr Cattle, Dr J S Bolton and Mr W M Willis.—Mr Hogarth read a paper on the Diagnosis of Affections of the Hip-joint. He urged that examination *per rectum* of the condition of the pelvic bones should be more frequently used and advocated early operation in those cases in which tuberculous disease occurred in the acetabulum or in the neck of the femur

Torquay Medical Society —A meeting of this society was held on Feb 19th, Dr F D Crowdy, the President, being in the chair —Dr T Horton related the case of a young man upon whom he had successfully operated by the suprapubic route for the removal of the broken end of a gum elastic catheter from the bladder The case was somewhat mysterious as there was no apparent reason why he should have used a catheter The patient had also the scar of a previous similar operation and another scar in the loin where his kidney had been cut down upon —Mr H. T Newling read a paper on Accidental Hæmorrhage in which after reviewing various former methods of treating this condition and their unsatisfactory results, he commended the method advocated by Dr R. P Ranken Lyle, but first brought under notice by Dr W J Smyly, late master of the Rotunda Hospital, Dublin, which consisted in tightly plugging the vagina with sterilised cotton wool tampons after the bladder and rectum had been emptied, the object being to compress the uterine arteries against the pelvic walls, and then applying an abdominal binder and a perineal band. Mr Newling read notes of two cases in which this treatment was adopted with perfect success —A discussion followed

Edinburgh Royal Medical Society —A meeting of this society was held on March 13th, Dr A B Ross being in the chair —Dr W H Prentice read a paper on Some Aspects of Gynæcology, laying stress on the importance of gynæcological training to the general practitioner on account of diagnosis and treatment. The paper was illustrated by reference to cases which had come under the notice of Dr Prentice and which had been wrongly diagnosed by general practitioners. He gave a *résumé* of the treatment of cases most likely to be met with in general practice and this he considered chiefly from the point of view of treatment medically —Dr A H Firth read notes on two medical cases The first was the case of a miner with symptoms of Cerebral Tumour At the post-mortem examination a gliosarcoma affecting the frontal lobes was found. Dr Firth exhibited sections of the brain and also a microscopic section through the frontal regions The second was a case of Extensive Cancer of the Liver in a middle aged woman. The post-mortem examination showed that the liver was greatly enlarged, weighing 14 pounds. It was the seat of primary carcinoma. Sections of the liver were exhibited.

Glasgow Pathological and Clinical Society —A meeting of this society was held on March 9th, Dr A. E Maylard, the President, being in the chair —Dr A Maitland Ramsay showed a case of Detachment of the Retina which had been treated by subconjunctival injection of saline solution, the fields of vision of eight other cases treated in the same way were also shown, in six there was marked improvement but in the two other cases there was none He also showed a case of Ophthalmoplegia and one of Tuberculous Iritis.—Dr J Crawford Renton read notes of (1) the case of a girl, aged 12 years, operated on for a Ruptured Appendix and ten days afterwards for obstruction of the bowel, and (2) a case in which Recurrent Attacks of Obstruction of the Bowel were caused by a gall stone impacted in a contracting ulcer of the ascending colon.—Dr J Wyllie Nicol showed a patient who was the subject of Generalised Favus.—The President showed specimens of Bowel from two successful cases of Enterectomy —Dr J M Cowan and Dr A. R. Ferguson showed several specimens illustrating Congenital Cardiac Anomalies.

Folkestone Medical Society —A meeting of this society was held on March 6th, Dr T Eastes, the President, being in the chair —Mr M. G Yunge-Bateman read a paper on the Influence of Isolation of Infectious Diseases as applied to Folkestone Charts were exhibited representing figures covering a period of ten years, divided into two equal parts—the first that of inefficient isolation and the second that of efficient isolation due to the more perfect control of infectious cases and to better accommodation and administration He showed that the percentage of isolated cases to the notified cases had increased 20 per cent and that the case mortality had been reduced about 50 per cent —The President expressed the opinion that it was hopeless to endeavour to isolate a patient in a private house for any length of time —Dr P G Lewis, Mr W F Chambers, Dr A E Larking Mr W P Barrett, Mr J W T Gilbert, and Dr W L Chubb took part in the discussion

Glasgow Northern Medical Society —A meeting of this society was held on March 3rd, the President, Dr J Steel Muir, being in the chair —A discussion was opened upon the following subject, "Can anything special be done by the medical practitioner to diminish the frequency of, and to lessen the mortality from, cancer of the uterus?" Dr J K. Kelly opened the discussion by reading a paper dealing with the question and Dr John Ritchie, Mr C F Spinks, Dr James Todd, the President, and Mr J Rutherford spoke, while Dr Kelly replied.

Medical Magistrate —Mr Edward England Phillips, M.R.C S Eng, L.R.C P Edin, has been placed on the commission of the peace for the city of Bath. Mr Phillips was mayor of Bath in 1902 and is already a justice of the peace for Essex and Somersetshire, having been added to the commission in 1886 hich sooner or later he is brought into contact in medical actice. Thus a reference to Raoult's law we should have ought would have afforded the opportunity of mentioning yoscopy as applied to the examination of urine Again, we ight anticipate a reference to the currents employed in ectro-therapeutics and once more in the section on light urely there was the opportunity of discussing treatment by ctinic rays in however small a paragraph The book is ased on the author's lectures for the intermediate examina ons in science at the University of London and for that amination we are quite sure that it will be helpful, but we il to see in what way it is adapted for the specific needs f the medical student.

Organic Chemistry By W H. PERKIN, jun., Ph.D, F.R.S., and F STANLEY KIPPING, Ph D, D Sc., F R.S New and revised edition London and Edinburgh W and R. Chambers, Limited. 1902. Pp 635 Price 7*s* 6*d* —When this book was issued in parts some years ago we ventured to hope that the authors might see their way to incorporate the sections into one volume, so favourably were we impressed with the lucid way in which the facts were presented Not only has this been done, but recently a chapter dealing with the more important constituents of plants and animals has been added in the form of an appendix with a separate index. We have already expressed the opinion that the book admirably meets the requirements of the medical student and since this important chapter has been added our opinion in this regard has been considerably strengthened. With many students organic chemistry is undoubtedly a difficult subject and it is not easy to limit the extent of their studies exactly to their particular requirements The tendency of many teachers is to force the student to face a great number of facts which the exploration of the organic field is constantly bringing to light. The present volume keeps within certain bounds, giving a course of organic chemistry sufficient for the medical student's purpose There is time enough to study complex organic problems when he has mastered the primary points and classification and he will find that the foundations of the science are here dealt with in a clear, comprehensive way without sacrificing details which may be of medical import.

Points of Practical Interest in Gynæcology By H MACNAUGHTON JONES, M D, M Ch Q U I. With 24 plates Third edition. London Bailliere, Tindall and Cox. 1902. Pp. 183 Price 4*s* 6*d* net —The fact that second and third editions of this book have been called for within the year shows that it has met with a ready appreciation. The author has certainly, in the words of Dr Johnson whom he quotes in the preface to the first edition, "stored his mind with acquired knowledge,' and that he is successful in recalling this knowledge in an acceptable manner for the benefit of others is shown by the success of this little work. The most interesting section is that dealing with affections of the female genitalia as causal factors of the neuroses of insanity and their special bearing on the operative treatment of the insane. In other chapters are discussed conservatism in gynæcology and its influence on operative technique, the indications for the operation of hysterectomy, and retroversion of the uterus

The Pharmacological Action and Therapeutical Uses of the Nitrites and Allied Compounds By the late DANIEL JOHN LEECH M D, D Sc., F R.C P Lond Edited by R B WILDE, M D Lond., M Sc. Vict, M.R.C P Lond Manchester Sherratt and Hughes 1902 Pp. 187 Price 10*s* 6*d* —The masterly disquisition on the pharmacological action and therapeutic uses of the nitrites and allied compounds which formed the subject of the Croonian Lectures in 1893 by the late Professor Leech is the principal feature of this book, the publication of which the profession will keenly appreciate since it is the most valuable contribution on the action of that interesting class of compounds containing the NO_2 group The Croonian Lectures were delivered in 1893, but the present volume represents the views held by Professor Leech in 1900 The first chapter contains the exceedingly interesting and classical discourse on "The Relation of Pharmacology to Therapeutics' which formed the introductory lecture delivered at the Owens College on May 1st, 1884 This is followed by a chapter on spiritus ætheris nitrosi and then one on nitrite of ethyl and other nitrites At the end of the book is a somewhat lengthy list of references to the bibliography on the subject which is followed by 28 plates showing muscle curves and contractions and sphygmographic tracings The late Professor Leech's thoroughness of method was well known and to him we owe a contribution of the utmost pharmacological importance, shedding a strong light on the relation between the constitution of nitro-compounds and their therapeutic action.

A Junior Chemistry By E A. TYLOR, B A. London Methuen and Co 1902 Pp 228 Price 2*s* 6*d* —Though we deplore the plethora of elementary manuals of chemistry we can find no objection to this little volume, for it sets forth in a plain and intelligent way the rudiments of chemical science. On the whole we like the author's plan which is to insert experimental directions in the subject matter dealing with theoretical considerations We should have thought that some small reference to helion would have been made considering its significance in regard to the chemistry of the sun and the earth. The author's method of instruction is obviously correct, for he has omitted summaries because ' they help the lazy boy to avoid thinking for himself." "Thinking for himself" is the secret of attaining sound knowledge

The Modern Treatment of Sewage By H C H SHENTON London S Edgecumbe Rogers 1902. Pp 117 Price 2*s* 6*d* —This is a reprint of a number of useful little notes on the engineering side of sewage problems which appeared in the *Local Government Journal* It is evidently the work of a practical man and the chapters are written clearly and will be read with advantage by those desirous of a practical acquaintance with the subject. The account of the methods of disposal is decidedly good and instructive.

Medical Guide to the Hot Mineral Baths at Bath. Published by the Baths Committee of the Bath Corporation Pp 111 —This is an official guide issued by the Bath Corporation and contains useful information for the practitioner bearing upon the methods of treatment at this celebrated health resort. Probably the equipment at Bath comprises all known methods employed in balneo-therapeutic practice The book contains a number of extracts from the report of the Special Commission of THE LANCET (*vide* THE LANCET, Oct. 14th, 1899, p 1055), which "supplied a wealth of valuable information of an unimpeachable character which is here unsparingly drawn upon."

A Manual for Assistants' Examination, Apothecaries Hall By MABEL F STANLEY, Qualified Dispenser, Apothecaries' Hall London Henry Renshaw 1902. Pp 281.—The fact that this book is intended for examination purposes is not disguised and no doubt it will form a useful notebook for those studying for the assistants' examination. We can take no exception to the facts presented under chemistry and materia medica, but of course, both subjects are treated in a scrappy way When the author expresses the view that this little manual should prove a useful adjunct to the ordinary text-books' on materia medica, chemistry and pharmacy criticism is disarmed We hope that the reader will bear in mind the word adjunct."

Sewage Works Analyses By GILBERT J FOWLER M.Sc. Vict, F I.C London P S. King and Son Pp 135. Price 6*s* —In view of the great strides that are now being made in regard to the purification of sewage by bacterial agencies it is important that a systematic scheme for the but narrowly removed from those which are physiological, it follows that all morbid conditions, whether giving rise to structural or to functional change, must in a sense be regarded as of metabolic origin. Thus, strictly speaking, such widely separated pathological conditions as hysteria and tumour formation have the same right to be regarded as diseases of metabolism as have diabetes and gout. The author, however, wisely limits his survey of the diseases belonging to this category to those concerning the nature of which there can be no possible doubt—namely, to that closely allied trio, gout, diabetes, and obesity (*Fettsucht*) and to the auto-intoxications, scurvy, Basedow's disease, myxœdema, and rickets.

The simplest introduction to the study of disturbed metabolism is to survey the same processes in what may be termed normal or physiological conditions, and conformably with this view the opening chapters of the volume are devoted to the elucidation of the chemical and physical processes of protoplasm which result in digestion, assimilation, and dissimilation. Readers are next informed as to the cause and effects of pathological disturbance of these normal processes and the treatment by hygienic and dietetic measures is fully discussed. Finally, the various groups of symptoms described as independent diseases are explained at length and the appropriate treatment is suggested. The manner in which the author handles his subject is altogether admirable and if the reader is disappointed at finding that the biological secret of gout, diabetes, and all the other diseases due to faults of metabolism is still to be discovered his mind at least will be disabused of many of the fallacious beliefs which have heretofore stood in the way of a rational understanding of the vital processes of health and disease. While we have nothing but approval for the want of prejudice and for the extremely impartial manner in which Dr. Schilling handles so controversial a subject as that of tissue metabolism, we cannot help thinking that he has hardly credited the nervous system with the respect to which it is entitled, both as an instrument for the maintenance of normal metabolism and as a factor in the production of those disturbances of equilibrium which give rise to symptoms of disease. While admitting that the nervous system is itself dependent for its activity on the chemical changes which occur in its molecular constitution, it cannot be doubted that it exercises the most potent influence, not only on special metabolism but also on what may be called the vegetative metabolism of all tissues throughout the body.

Although it is hardly probable that this excellent little work will be translated into the English language, nevertheless the original German is written in such an easy and simple manner that anyone who has a slight acquaintance with the German language will find no difficulty in understanding the greater part of the contents and all those who are interested in the subject of metabolism are strongly advised to read it.

Anæsthetics: a Practical Handbook. By J. BLUMFELD, M.D. Cantab. London: Baillière, Tindall, and Cox. 1902. Pp. 109. Illustrated. Price 2s. 6d. net.

WE gather from Dr. Blumfeld's preface that the object he has placed before him in writing this handbook is to supply students with such general information about anæsthetics as may suffice for the needs of examinations and ordinary practice. Within the limits that he thus prescribes for himself the author has been quite successful. No doubt the exigencies of space have obliged him to confine his attention to three anæsthetics—nitrous oxide, chloroform, and ether—but students might have been told that other useful anæsthetics are available and, further, that local anæsthesia offers a wide field of utility if employed with knowledge and judgment. At times we are referred to the writings of other anæsthetists for descriptions of apparatus which had they been included in his volume would have increased its utility. The average student, however, does not refer to larger books and such information as an author does not think it necessary to give the student is content to do without.

Nitrous oxide is dealt with after a brief account of the action of anæsthetics. The use of this gas alone, with air or oxygen, is clearly given. The mixture of nitrous oxide and oxygen is rightly described as an unsatisfactory combination for prolonged operations. It is common to prolong anæsthesia in dental practice by the use of a nasal tube or nose cap and Dr. Blumfeld has taken pains to describe the methods and has done so well, and only very careful writing can do more than indicate the methods of using these valuable contrivances. As no mention is made of Coxon's mouth injector tube for "continuous gas" we suppose its use does not appeal to Dr. Blumfeld. The mode of employment of ether alone or in sequence to nitrous oxide is carefully given and many valuable suggestions are made in this connexion. Clover's method of giving gas with ether by his larger apparatus does not find a place in this manual, but Ormsby's inhaler and the use of Rendle's mask are described. The reference on p. 44 to Mr. W. Tyrrell's two bottle method is somewhat misleading. It is there stated that "ether is sometimes given from the bottle of a Junker's inhaler when chloroform is being also used." The whole object of the method as we understand it is to give chloroform and if occasion arise, to be able to blend some ether vapour with it. The ether is an adjunct and not the predominant partner.

An excellent chapter on chloroform follows, a chapter which appears to us to be of especial value. The illustration of Junker's apparatus might have been replaced by one of the more modern and improved patterns which offer safeguards to many of the undoubted dangers incidental to Dr. Junker's original apparatus. The description given, however, makes up for the error in illustration, as the original apparatus is not dealt with, but the more modern type is taken, in which twin tubes are used and the method of using the inhaler is very well and clearly set forth. Succeeding chapters introduce the subjects Anæsthetics in Succession and in Mixtures, Choice of Anæsthetic, Dangers and Troubles incidental to Anæsthesia, and Position of the Patient and his Preparation and the After-effects. Dr. Blumfeld has compressed into these few chapters much that is valuable and his directions are sensible, succinctly put, and accurate. We can recommend the book as an excellent primer for the use of beginners, while we are sure that more advanced students may benefit by reading with care the closing chapters. Dr. Blumfeld has set himself to accomplish a certain task and we consider that he has performed that task well and in a useful manner. His descriptions are excellent and he possesses a clear style.

LIBRARY TABLE

A Text-book of Physics. By R. A. LEHFELDT, D.Sc. London: Edward Arnold. 1902. Pp. 304. Price 6s.—According to the author in his preface this book has been written from the point of view of the student of medicine in the hope of attracting attention to the intimate dependence of physiology on physical principles and at the same time of supplying a practical handbook of moderate dimensions containing so much of physics as the student amongst his many other claims can find time for. We are aware of the tendency to overburden the medical student with the facts of the collateral sciences, but surely we might expect that a text-book of physics written from the point of view of the student of medicine would have afforded an opportunity of dealing with those physical phenomena with

THE LANCET.

LONDON SATURDAY, MARCH 21, 1903

Efficient Nursing in Workhouses

In most of the workhouses of England and Wales the question of the hour is—What is the best means of insuring a continuous supply of competent nurses for the sick and infirm people forming a large proportion of the inmates of those institutions? The question is one that has steadily gained in urgency during the past 30 years—that is, since the commencement of the movement for the improvement of the treatment of the sick and disabled in workhouses. This movement resulted, after the passing of Mr GATHORNE HARDY'S Act, in the provision of properly constituted wards under the management of skilled and responsible salaried officials The abolition of the pauper nurse was thus assured But notwithstanding the fact that the numbers of trained nurses have been increasing year by year the demand for them is still unsatisfied. In the country workhouses, especially in the smaller institutions, the supply has been quite inadequate, so that the Local Government Board recently nominated a departmental committee and allotted to it the task of finding the cause of and suggesting the remedy for, the difficulty in obtaining probationers. The report issued by that committee has already received critical attention in our columns[1] It was recently dealt with at length by the Hon. SYDNEY HOLLAND in his presidential address to the members of the Central Poor law Conference at their thirty first meeting Many years and much energy have been devoted by Mr HOLLAND to the study of nursing questions, his position as Poor law guardian and as chairman of three London hospitals has afforded him a practical acquaintance with their varied aspects and his observations are consequently worthy of careful attention. We therefore propose to consider some of the points brought forward in his address, which we have before us, and to do so in connexion with the report of the departmental committee on the subject

Mention may first be made of the explanation advanced by Mr HOLLAND, and indorsed by other experts on nursing questions, as to the causes of the difficulty in obtaining and keeping a skilled nursing staff in a small workhouse The most potent of the causes is stated to be "putting a trained woman under an untrained matron" and by so doing making the position of the former person intolerable. While the argument is sound there is something to be said against this wording of the case No evidence has been given that the "intolerable" position is due to the fact of the matron being untrained. No assurance can be furnished that it would be changed into a tolerable position if the matron were trained. On the contrary, many nursing authorities competent to advise on such a matter have condemned the proposal to appoint persons to the double office of workhouse matron and superintendent nurse. The reason for this condemnation will be readily understood after an examination of the General Consolidated Order of the Poor-law Board of 1847 relating to the work of the matron In any but the minor workhouses matrons could not possibly perform in an efficient manner all the duties detailed in that Order and at the same time act as superintendent nurses. There are also medical grounds for pronouncing such a combination of offices to be very undesirable In seeking the causes of the disinclination of nurses to remain in workhouses it will be of some assistance to remember the conditions enumerated below which may, and generally do, affect the comfort of the nurse to a greater or less extent. The powers of the master and matron are almost unlimited in small matters There is no trivial incident in the daily routine that they may not take cognisance of and invest with a gravity out of all proportion to its nature. They have a right to interfere in all questions of discipline, and "discipline" may be a very elastic term, embracing many things in the management of sick wards. The matron is in most workhouses the wife of the master A nurse rarely offends the former without offending the latter The nurse, then, has powerful odds against her on any point of difference, for in dealing with officials the master and matron generally agree. Although the General Order of the Local Government Board of 1897 debars the matron from interfering with the actual medical treatment of the sick it leaves her, under the older order, with many responsibilities for the food, the clothing the discipline, and the condition of the patients and sick wards. She has, therefore, ample opportunity for making her presence felt in the infirmary wards. In other words, there are in the department for the sick all the disadvantages of dual control The hours of duty for the nurse are often very long The times and duration of recreation periods are meagre and badly defined They are not infrequently moved or shortened without notice on the ground of urgency Then there is the difficulty of spending the hours of recreation in an enjoyable or satisfying manner, for many country workhouses are removed from facilities for amusement or instruction. Quite apart from the conditions above stated there are others which make nursing in a small workhouse unattractive to young women. Two may be mentioned. The first is the small number of cases of acute disease to be studied, together with the absence of any instructive amount of surgery Candidates are soon able to realise that with the limited teaching possible they cannot hope to compete with their more highly-educated sisters from the large towns The second is the small market value of the three years' training certificate compared with that of one obtained at a general hospital or a large infirmary

Turning now to the report of the departmental committee we find indications of the methods by the adoption of which it is hoped to bring about a more satisfactory state of affairs in the nursing at country workhouses. Among several suggestions, all more or less good but somewhat lacking in thoroughness, two immediately attract attention chiefly by their unexpectedness and by the fact that they are in opposition to the views and tenets which have steadily taken possession of the minds of all teachers of nursing during the past 20 years. One is that there shall be a examination of sewage and sewage effluents should be adopted by which the character of both may be determined. This little book, therefore, comes at an opportune time and moreover it is written by one whose experience of sewage processes cannot be doubted. Mr. Fowler is the superintendent and chemist of the Manchester corporation sewage works and the methods of analysis described are those which are adopted there. Little more need be said. The methods have been approved by experience and supply all that is required to form an opinion as to the character of the sewage presented for treatment and as to the extent of purification effected by a given process. The book is one to be consulted by all those having anything to do with the control of methods of purification. We cannot help thinking that 6*s.* is rather a high price for this small volume.

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[1] THE LANCET, Feb. 14th, 1903, p. 451.

The Guide to South Africa, 1902–1903 Edition. Edited annually by G. SAMLER BROWN and G. GORDON BROWN for the Union Castle Mail Steamship Company, Limited. London: Sampson Low, Marston, and Co., Limited. Cape Town: J. C. Juta and Co. Pp. 274 and maps. Price 2*s.* 6*d.*—This guide is said to be for the use of tourists, sportsmen, invalids, and settlers. It gives information on how to get to South Africa, with various details as to living in the country, together with articles on farming, mining, health and health resorts, manufactures, and sport. In the article on sport we are glad to see a protest against the hideous and wanton destruction which has caused the entire disappearance of some species of animals and rendered others extremely rare. On p. 260 there is surely a slip. The writer says, "Three species of ibis are found including the red sacred ibis (*Ibis Aethiopica*)." Now the sacred ibis is not red but white with a black head and black tail coverts, while the red ibis (*Eudocimus ruber*) is, we believe, only found in South America and occasionally in the Southern States, unless, indeed, the writer means by "red" the glossy ibis (*Plegadis falcinellus*) which at some seasons of the year is of a ruddy chestnut colour, but in any case the sacred ibis is not red. The information given in the book is very full and should be of use to the various classes of readers for whom it is intended.

Briefhand or Orthographic Shorthand. Published by the author, F. W. WHITE, 26, Browning road, Manor park, E. Price 6*d.*—Various attempts have been made to construct a system of shorthand capable of being written more rapidly than our cumbrous cursive script but which shall be at the same time almost as legible, though, judging from manuscripts which reach us, legibility is not always a characteristic of longhand writing. "Briefhand" is yet another attempt in this direction and is intended, according to the author's preface, "chiefly for the use of the general public who have not the time, the inclination, nor the necessity to study a complicated system of shorthand." It is impossible to judge of the utility of any system of shorthand until it has been used in actual practice, but from a glance through the pages of this little pamphlet, we are inclined to think that "Briefhand" may prove useful for the class of persons indicated by the author. The alphabet, which can be memorised in ten minutes or less (the characters being formed from the diacritical portions of the Roman capital letters), has been ingeniously constructed, while the rules for writing are extremely simple. Provision is made for sounds peculiar to the French, German, and Spanish languages. The inventor believes that the system may also prove useful to writers of phonetic shorthand as an aid in securing the correct spelling of peculiar and unfamiliar words and names which may be difficult to represent by a system of shorthand in which words are written as sounded and not as spelt. In a covering letter the author assures us that he himself, a writer of phonography, does not find that the two systems clash in actual practice.

MEDICINE AND THE LAW

Madame Spitzner's Great Museum.

THE case of Désiree Spitzner and Léon Dekaesmaeker came before the Recorder at the March sessions of the Central Criminal Court. These persons, foreigners, were charged with exhibiting waxwork figures alleged to be obscene and with publishing a catalogue of the exhibition. A description of the figures appeared in THE LANCET of Jan. 24th, p. 275. At the Old Bailey counsel for the prosecution representing the National Vigilance Association applied that the case should stand over until the next sessions upon terms that meanwhile the whole of the exhibits should be removed abroad and that there should be no opposition to an order being made at the Marlborough street police-court for the destruction of the catalogues in the hands of the police. This application the Recorder granted, the persons charged being admitted to bail. Mr. Kennedy, the magistrate who was subsequently asked to make the order for destroying the catalogues, seems to have expressed regret at the leniency of the course adopted. Many, however, will consider that it was on the whole satisfactory, for it causes the withdrawal of the exhibition from England without entailing the discussion which usually follows trials of this kind upon the relative indecency of various works, scientific, literary, and artistic, and upon the views held upon such subjects in various countries. The law in England in such matters was laid down by Chief Justice Cockburn in 1868 in the case of the pamphlet entitled "The Confessional Unmasked." He had referred during the course of the argument to the position occupied by medical works. In the course of his judgment he said: "The test of obscenity is this, whether the tendency of the matter charged as obscenity is to deprave and corrupt those whose minds are open to such immoral influences, and into whose hands a publication of this kind may fall." It is not difficult to apply the principle here laid down to the case of Spitzner and Dekaesmaeker.

A Test of Sobriety.

At the Southwark police-court medical evidence was called recently on behalf of a defendant, a publican, who was charged with being intoxicated upon his own premises. The evidence of the medical man was that the defendant could stand with his eyes shut without swaying, could turn quickly, walk perfectly straight, read and write, and that he could also repeat distinctly, "the scene is truly rural." Mr. Paul Taylor seems to have been struck with the severity of this last test, remarking that it was not a fair one as many men were unable to say "truly rural" even when unquestionably sober. Presumably what the learned magistrate meant was that failure to articulate the prescribed words would not have been convincing evidence of insobriety. In the case in question as the defendant had responded satisfactorily the medical man had applied a test which was decidedly effective. The magistrate in the end dismissed the charge against the accused.

Insanitary Houses.

At the Southwark police court on March 14th James Mahoney, of Friern road, East Dulwich, was fined £10 and 4*s.* costs for failing to remedy the insanitary condition of two houses of which he was the owner. He had apparently had his attention called to their condition and had failed to comply with an order for their improvement. Evidence was given that in one of them inhabited by eight persons there was no water supply for flushing purposes. The magistrate was further informed that the defendant owned property all over the metropolis, that whenever he was fined he went to prison instead of paying the money, and that a distress would not obtain it as the goods in the house where the defendant lived were owned by his wife. In these circumstances Mr. Paul Taylor fixed a month as the term of imprisonment to be undergone in default of the fine being paid, at which defendant loudly protested. Cases of this kind show that however much passive resistance and delay may be capable of effecting the law can apply considerable pressure in sanitary matters if those who have the power to set the law in motion will do so with energy and perseverance.

Among structures which act as "thoracic supports" of the diaphragm are enumerated "all the structures within the thorax, the heart, the great vessels, the pericardium, the cervical and mediastinal fasciæ, the dorsal mesentery of the thorax and the lungs," the latter by virtue of the negative pressure within the pleural sacs.

Attention is drawn by Dr. Keith to a striking difference in the level of the diaphragm during rest (expiration) in different adult bodies, a difference so great that what corresponds to full inspiration in one individual may be the level of full expiration in another. The evidence, however, that the individuals with low diaphragms suffered from what would be clinically described as enteroptosis needs some corroboration. Dr. Keith observes that the movement of the central tendon is decidedly more free than has hitherto been taught. A further observation as to the extent to which the heart is pulled downwards during the inspiratory descent of the muscle is contrary to the observations of others and certainly should be further investigated. The x rays show that the cardiac displacement as viewed from the front, in some individuals at least, is rather upwards than downwards, and possibly due to contraction of the abdominal muscles in forced expiration. Observations of the position and movements of the abdominal viscera in cases of indurative inflammation of the mediastinum should be of value in this connexion and might throw some light on the importance of the mediastinal supports of the diaphragm. Great importance is laid upon the effect of the abdominal muscles in replacing the abdominal viscera when these have been displaced by the contraction of the diaphragm, and the occurrence of enteroptosis is held to be in part a result of the failure of this action of replacement. Abdominal contraction, however, is probably not the only factor concerned for in the recumbent position at any rate the same replacement can be felt to occur during examination, when the abdominal muscles are certainly not in action to effect the reposition. An ingenious hypothesis is propounded by Dr. Keith to explain the comparative immunity of the left kidney from displacement, the easily displaced splenic flexure of the colon being supposed to act as a safety valve. Among other things which need to be explained are the occasional occurrence of enteroptosis in adult males without any constricting force having been applied or muscular paralysis being present, the occurrence of Riedel's lobe in infants without other abnormality, isolated displacements of the right kidney or another viscus, and those curious and localised temporary contractures of the large bowel which, by giving rise to sausage-shaped tumours in the regions of the cæcum, transverse colon, and iliac colon, mimic appendicular inflammation, intussusception, and malignant infiltrations.

We have indicated a few of the difficulties which still present themselves in attempting to understand the mechanism of these displacements. Dr. Keith's work has certainly added to our knowledge of the subject but the impression which remains is that the matter is not even yet satisfactorily cleared up. We have to record further work in parallel directions. We publish this week a note from Dr. C. T. Andrew, one of the demonstrators of anatomy in the University of Aberdeen, which deals with some interesting points allied to those raised by Dr. Keith in his Hunterian lectures. Dr. Andrew publishes the result of observations made with a view to ascertain the height of the diaphragm in the two sexes, the object of the inquiry being to find if any relation could be established between the height of the dome, the position of the viscera and the thickness of the abdominal wall. A sufficient number of examinations have not yet been made for any definite conclusions to be drawn, but from the study made in the dissecting room of nine consecutive bodies two male and seven female the frequency of many so-called abnormalities in the position of the viscera may be inferred.

Liquid Air and Typhoid Bacilli.

The paper communicated to the Royal Society on March 12th by Dr. Allan Macfadyen of the Jenner Institute marks a very decided advance in our knowledge of the cell-physiology of the bacillus typhi abdominalis whilst the full confirmation of the preliminary results obtained by the author promises a prophylactic and therapeutic agent in the treatment of typhoid fever which may replace the anti-typhoid "vaccines" and anti-typhoid sera at present in use. The typhoid bacillus is a member of that class of organisms which, although probably producing a powerful toxin as the result of its cell activity, has so far resisted all attempts to separate that toxin from the cell protoplasm of the bacillus itself. In other words, although the bacillus produce a toxin whilst actively multiplying within the body tissues—which toxin is undoubtedly responsible for many of the clinical manifestations of enteric fever—this toxin is insoluble in the ordinary nutrient media employed in the artificial cultivation of the bacillus under laboratory conditions. Hence such 'anti' sera as have been elaborated are bactericidal or anti-bacterial and not actively antitoxic. For some years past Dr. Macfadyen has been experimenting with various members of the class of bacteria which form these intracellular or so-called "insoluble" toxins, attempting at first to obtain the cell juices by trituration of the bacteria with fine silver sand and subsequent expression by means of a hydraulic press. In all these operations, however, an appreciable amount of heat is evolved, thereby inducing chemical changes in the juice obtained and introducing numerous fallacies in the interpretation of the results of the experiments.

At this juncture the physicist came to the assistance of the biologist. Professor Dewar's remarkable observations on the liquefaction of various gases, made during his attempts to reach the absolute zero showed that at such low temperatures all chemical interchange ceased although, contrary to preconceived ideas, life was not necessarily destroyed by this suspension of chemical activity. His discoveries further resulted in the appearance of machines capable of the cheap production of liquid air on a commercial basis. Dr. Macfadyen, working in conjunction with Professor Dewar, next showed that many species of bacteria could be exposed to the temperature of liquid large reduction in the numbers of the superintendent nurses. The other may be briefly described as a proposal to give to young women 12 months' residence in a small workhouse, allowing them to receive so much instruction as they may be able to obtain (the amount is not defined), and then to send them forth with the title of "qualified nurses." In 1897 the General Order of the Local Government Board stated that it was expedient that superintendent nurses should be appointed and it was required that they should have undergone "for three years at least a course of instruction in the medical and surgical wards of any hospital or infirmary being a training school for nurses and maintaining a resident physician or house surgeon." In 1903 superintendent nurses of this quality are to be reduced in number and young women of the so-called 12 months' training are to be held good enough to take their places. Some may ask with tongue in cheek, "Why not in the small workhouses return to pauper nursing? It would be cheaper and, from the patient's point of view, almost, if not quite, as valuable as that which will be provided should the suggested changes be effected." In the event of such a contingency we may imagine the rush of housemaids anxious to possess the coveted qualification or title for which there is so little to be paid. We may also picture the disgust of those who have borne the burden of three years' exhausting work, not only at the bedside but at the desk, when they perceive the daily diminishing value of the certificate which they have striven so laboriously to obtain. That the many matrons and medical men who have in the past given a large amount of time and thought to the training of probationers will accept without protest the recommendations of the committee or that they will, if these recommendations become established methods, continue to exhibit the same interest and zeal in their efforts cannot for one moment be expected. The following sentence from Mr. HOLLAND'S address well sums up our own view: "It is miserably disappointing to find that in the face of all public opinion, and contrary to every feeling of humanity, the standard of Poor-law nursing is to be thus lowered throughout the country."

Having now considered some of the causes of the failure in the supply of nurses for the workhouses of the country, and having rejected as unsuitable and retrograde the proposals made for an increase in that supply, attention may be drawn to certain factors in the situation which point to the possibility of an improvement in the numbers and quality of the trained nurses annually sent forth. There is no doubt that the teaching capacity of the metropolitan hospitals and infirmaries is not being utilised to the utmost extent. At the large infirmaries a greater number of probationers could be trained. The chief obstacle to increase in the numbers would be the limited residential accommodation possessed by some of them. The extensive hospitals of the Metropolitan Asylums Board, though established for special diseases, constantly receive cases of other diseases and other diseases again arise in their wards as complications; yet these hospitals, with such a wealth of acute ailments available as teaching material, give no systematic training. They absorb the certificated nurses of other institutions and make them their charge nurses. Their own assistant nurses leave in order to go to infirmaries to be trained. With an increase of only 20 per cent. in the numbers of the probationers taught in the infirmaries, and with every hospital of the Metropolitan Asylums Board occupied in teaching, there would be a valuable augmentation in the supply of trained nurses. A word in conclusion upon the training itself. It is to be regretted that there is no uniformity in the systems in operation at the various schools. The numbers of lectures given, the demonstrations attended, the durations of them, and the extent of the subjects treated are all matters of individual arrangement. There is no standard as to the difficulty of the examination, no consensus of opinion as to the best method of giving marks to candidates or as to the percentage that should constitute a "pass." The examiners may or may not have had any experience in teaching nursing. The matrons and medical staffs of the infirmaries have taken up the training of nurses voluntarily and gratuitously. The work is not demanded by the General Consolidated Order. All these are points for consideration by the next departmental committee having to deal with nursing matters. Upon that committee would it not be well that a few hospital and infirmary teachers of nursing should be asked to take seats? In our view this is the first step towards securing a report of practical value.

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Enteroptosis or Glenard's Disease.

IN his recently delivered Hunterian lectures Dr. ARTHUR KEITH has after a most painstaking investigation attempted to throw further light upon this exceedingly common, and as yet but little understood, condition. That many and complicated factors are at work may be judged from the fact that his researches have led him to range from the roof of the pharynx to the floor of the pelvis and to investigate the bodies of infants as well as those of persons of advanced years. The lectures, which we have published at full length,[1] teem with points of interest and open up a wide field for controversy. Dr. KEITH evidently approaches his subject more as an anatomist than as a clinician, which is a distinct advantage in that it leads him away from the beaten track usually followed by writers on the subject in question. At the same time he must be prepared to meet objections to his theories which will at once present themselves to the minds of those familiar with the disease in its clinical manifestations. Briefly, Dr. KEITH'S conclusions, which the profuse illustration of the lectures helps to bring out, are as follows:

1. The contraction of the diaphragm is the factor which produces the displacement of the viscera in enteroptosis or Glénard's disease, and further, that of the various parts of the muscle the crura are the most important agents in producing this result.

2. Before the displacement can be produced, either what he terms the "thoracic supports" of the diaphragm must have yielded or the antagonistic abdominal muscles have been hampered or weakened in their action, as, for example, by tight corsets.

3. The bonds which fix the viscera to the walls of the abdomen are of quite subsidiary importance.

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[1] THE LANCET, March 7th (p. 631) and 14th (p. 709), 1903.

Revenue would indorse the age of matured spirit by means of certificates attached to the labels. The authorities must know from the books of the distillers that the whisky is of the age that it is represented to be. Such a system of control need not be feared by the grain spirit industry since they are confident in their view that grain spirit or a blend of whisky and grain spirit is preferred by the public or is held by them to be more wholesome than an all malt spirit. Oddly enough, however, the dealer in grain spirit recoils at the idea of such an innovation, judging from the views expressed by writers in the trade journals. We can never understand why vendors have such an aversion to describe their goods accurately when they hold at the same time that they supply these goods in accordance with the demands or the preference of the consumer. In the same way, however, margarine is often maintained to be a better food than butter and yet the temptation cannot be resisted at times to label it butter. We still maintain that the consumer should have some guarantee of the nature, substance, and quality of the beverage which he is drinking as well as of the food which he is eating, and in accordance with this principle, the morality of which nobody can honestly gainsay, some plan is called for which will help him to gain the genuine article. Surely it is not too much to maintain that the Government should take the lead now in this manner and encourage honest dealing. Honest dealing is open to everybody and therefore it is absurd to say that by adopting a system of Government guarantee an unfair monopoly would be created.

BACTERIAL LIGHT.

A TELEGRAM through Reuter's Agency was published in the daily papers on March 16th announcing the discovery by a professor in Prague of a lamp lighted by means of bacteria. We suppose that the discovery amounts to an improved method of feeding photogenic bacteria, the existence of which has been known for some years. In THE LANCET of Oct. 13th, 1900, p. 1057, for example, we published particulars which would enable anyone to demonstrate for himself the properties of phosphorescent bacteria. The experiment is quite simple and easily succeeds. All that is necessary is to place the flesh of fresh haddocks or herrings in a 2 or 3 per cent. solution of common salt, keeping the culture at a temperature of about 7° C. above freezing point. After a few days it will be found that not merely the flesh of the fish but also the whole of the liquid in which it is immersed gives off a pale greenish light which becomes much more brilliant if a little sugar is added. We remarked at the time of writing these particulars that "it is not possible to say whether the culture will ever be carried to such a pitch that the vessel containing it may be used with advantage as a street lamp or a lamp upon our tables, or as a Chinese lantern at our garden parties." Doubtless by paying attention to the needs of these specific bacteria—by employing, for example, highly stimulating food—more intense light than was hitherto the case has been obtained. It is even suggested that the bacterial light might afford a safety lamp for the miner.

THE POSITION OF THE MEDICAL PROFESSION.

A WRITER in *Baily's Magazine of Sports and Pastimes*—an unexpected quarter, by the bye, for serious treatment of a professional question—discourses in the February number upon "the position of the medical profession in this country and the modes of entering it. As to the latter portion of this subject the writer merely details, as might be expected, the various universities and examining bodies giving some additional information as to length of curriculum and such matters in the various instances. In his estimation of the position of our profession, however, this writer lays himself open to controversy, although in the main we agree with his conclusions. No one can deny that, politically speaking, the medical profession in Great Britain is non-existent. The few individual Members of Parliament who are also medical men combine the qualities by mere coincidence. As medical men their position in Parliament is no different from that of any other Member. As a political force, in fact, the medical profession does not count. Medicine has no Minister and the medical profession as a profession is unrepresented in the councils of the State. Compare this state of matters with that which obtains in the professions of the ecclesiastic and the lawyer. Practically ever since there was a Parliament in England the Archbishop of Canterbury and the Lord Chancellor have sat in that Parliament. Moreover, besides the Lord Chancellor there are other law officers of the Crown. But as to social position we do not agree with the idea of the writer. In our opinion the social position of the medical profession is not, *cæteris paribus*, as a rule, lower than that of members of either of the other two learned professions. With the suggestions for the raising of the status of the profession which are laid down in the article before us we cannot altogether concur. The one-portal system—i.e., an examination in addition to the examinations held by the universities and other bodies and analogous to the "State examination" of foreign countries—*may* come—some day. It would solve many practical and professional difficulties and is the reform for which all interested in British medicine should work. There is certainly room for greater State encouragement of scientific research, but we cannot understand how a practitioner is to be debarred from dispensing his own medicines or restricted in his midwifery practice.

DRAINAGE OF THE PERICARDIUM.

THE first suggestion to evacuate the fluid in a case of pericardial effusion was made more than 250 years ago, for Riolan in 1648 in his "Encheiridium Anatomicum" advocated tapping the pericardium through a trephine opening in the sternum. The recommendation was repeated 100 years later by Sénac, though he advised that the opening should be made to the left of the sternum where the left pleura leaves a vacant space. In spite of repeated suggestions that paracentesis or incision of the pericardium should be made in cases of serous or purulent effusion it does not appear that any surgeon ventured to put into practice any of the procedures advised until, in 1793, Desault endeavoured to incise the pericardium in a case which had been diagnosed as pericarditis with effusion, but unfortunately it proved to be a localised pleurisy situated in front of the pericardium. The first successful incision of the pericardium appears to have been performed by Romero of Barcelona in 1819. He made an incision between the fifth and sixth ribs on the left side opposite the junction of the ribs and cartilages, but as he does not seem to have wounded the pleura some have doubted whether the effusion was really pericardial. For serous effusion the use of a trocar or aspirator is usually sufficient and this operation has now been performed a large number of times. Incision is seldom resorted to now unless the fluid is purulent or it is desired to drain the pericardial sac. A very important case of drainage of the pericardium was recorded by Dr. Samuel West in 1883. In this case over 80 ounces of pus escaped and recovery ensued. At the present time there is a lack of unanimity as to the best route by which to approach the pericardium. Usually the fourth or fifth space is chosen for the incision and a portion of the fifth rib may or may not be resected. In the present number of THE LANCET a case is reported from St. George's Hospital which was under the care of Dr. Arthur Latham and Mr. H. S. Pendlebury in which the pericardial cavity was greatly air for considerable periods of time—in some cases as long as six months—without destruction or indeed, loss of vitality At this temperature, too, bacterial cells are frozen into hard fragile masses which can be successfully triturated *per se* and at a temperature which precludes the possibility of autolytic changes and the cell plasma can be subsequently obtained from the disintegrated mass The cell juice obtained in this manner from the bacillus typhi abdominalis, Dr MACFADYEN finds, is extremely toxic, although control experiments prove conclusively that no living typhoid bacilli are present in the material and, further, that this toxin can be easily handled, exactly standardised, and measured into accurate doses Proceeding onwards in the investigation this typhoid cell juice was employed in the immunisation of animals with the remarkable result that animals thus treated were found to yield an "anti" serum which was at once actively bactericidal and also antitoxic That the serum possessed both these properties was shown by the result of actual experiments Animals inoculated first with the "anti" serum and subsequently either with lethal doses of living typhoid bacilli or of toxic cell plasma were completely protected, on the other hand, control animals receiving only living bacteria or toxin succumbed. Again animals were inoculated with lethal doses of living bacilli or of toxin and some time later were injected with curative doses of the "anti" serum These animals recovered, whilst death resulted in the control animals which were similarly inoculated but were not treated with the serum.

A wide field for research is at once opened up should further experiments prove the accuracy of the hypothesis, the obvious deduction from a consideration of these experiments, that a perfect antitoxic and anti bacterial serum can be formed and stored in the blood serum of an animal carefully immunised by the inoculation of the toxic cell plasma of given bacteria. For it is only fair to infer that this hypothesis will equally apply to many other pathogenetic bacteria which resemble the typhoid bacillus in the production of intracellular toxins, and in the fight against which we are at present supplied with but imperfect "anti" sera—e.g, the gonococcus, the streptococcus, the pneumococcus, the cholera vibrio, and so on This means that the medical profession will have to its hand protective and curative remedies of undoubted potency, whilst the practical value of their application—the substitution of exact dosage of bacterial cell juice for the present uncertain method of the inoculation of living bacteria—cannot fail to be appreciated by those engaged in the immunisation of animals for the production of commercial "anti" sera The outcome of this work by Dr MACFADYEN illustrates in a strikingly beautiful manner the interdependence of research work in apparently widely separated spheres and in this connexion a sentence occurring in THE LANCET of Sept. 20th, 1902 p 821, in some comments on Professor DEWAR'S presidential address to the British Association for the Advancement of Science, may almost be regarded as prophetic "This line of research [i.e, the extraction of the cell plasma from bacteria by trituration at the temperature of liquid air] is calculated to throw fresh light on the nature and treatment of disease" were the words we used, and this is what has exactly occurred.

Annotations.

"Ne quid nimis"

THE UNCONTROLLED SALE OF POTABLE SPIRITS

As we have pointed out before it is a stigma upon the administration of this country that there is practically no control exercised over the sale of spirituous liquors comparable in any sense with the system of supervision over the food supply The Sale of Food and Drugs Act, it is true, is not a perfect measure, for now and again it is discovered that its clauses are not able to deal effectively with some species of undoubted fraud. The example of milk-blended butter is a case in point, for a special regulation has had to be framed for dealing with this ingenious sophistication. So far the Government seems to show some concern as to the consumer being fairly dealt with, but it is regrettable to learn that, according to the reply of the Revenue authorities to a well known firm of Irish whisky distillers, it refuses to entertain any idea of recognising in an official way honest trading in potable spirits. It is nothing short of scandalous that any wicked stuff which contains alcohol of some sort or other may be sold as genuine whisky, rum, or brandy without let or hindrance All that the Government seems to care about is to secure a huge prize in the shape of revenue without having any regard at all to the character of the spirit which is sold ultimately to the public for the purpose of consumption We have already alluded in these columns to the very extensive practice of blending grain spirit with malt spirit which prevails in this kingdom, the product being sold in the most audacious way as pure "genuine malt" or "Highland," and so on. It is not true to say that this practice was the result of public demand or taste, it was unquestionably introduced in order that the trade might reap bigger profits than heretofore There is a vast difference between the price of grain spirit and genuine malt whisky, but the public pays the same whichever article it gets. Such a condition of things is obviously unfair to the public and to the vendor and distiller of genuine malt whisky The question as to which spirit is better from a health point of view, though that is an important one, has nothing whatever to do with the case, for the practice of substituting a foreign spirit for the genuine article is not justified whatever opinion on hygienic grounds may be held. Unfortunately the practice is so profitable to the blender and the trading in blending has grown to such dimensions that the opposition to any decisive measure of reform is bound to be very great The trade would vigorously resist such a measure and the Government would shirk the question because it would affect such large interests. No one would wish to interfere with honest commercial transactions, but is it honest to describe a given spirit as malt whisky which contains 80 per cent. or more of spirit derived from grain? It is certainly unfair to the distiller who makes his whisky from the one material—namely, barley malt—from which whisky alone should be made and was, as a matter of fact, entirely made. The Government, however recognises no distinction between genuine malt whisky and grain spirit, nor will it incur any responsibility as regards guaranteeing either the nature or the age of a given spirit. And yet it is everywhere admitted that for the sake of the health of the consumer such a guarantee should be available to him. False labeling, it would thus appear, is to go on unchecked, though the stuff so described is under the eye of the Revenue authorities who take care to see that duty is paid upon it. It would be but an easy step, and a step of advantage to the whole country, if the Board of Inland when it arrived after exposure to three days of torrential rain it had become as hard as stone. Even in this unpromising condition, however, he was able to make some use of it by breaking the mass up into small pieces and re-baking them in the soldiers' bowls.

CHRISTIAN SCIENCE AND THE CLERGY

WE are glad to see that some at least of the clergy are instructing their flocks as to the fallacies of the heresy which calls itself Christian Science. There lies before us a report of a sermon preached in the church of St. Mary, Plaistow, by the vicar, the Rev John Bond, on March 1st. The average lay churchman knows but little theology, so that it is refreshing to find a parish priest pointing out in simple language that Christian Science is merely a revival of old heresies We ourselves drew attention to this fact in THE LANCET of Nov 22nd, 1902, p 1109 Gnosticism, Manichæism, and Docetism are all revived in Mrs Eddy's fatuous description of her belief, and Mr Bond drew attention to the fact that "Gnostic" is merely the Greek for "Scientist," It is not our province to interfere with anyone s religious belief, but it is our duty to point out the harmfulness of Christian Science from a medical point of view We congratulate Mr Bond, however, upon his plain exposure of the craze from his side of the question.

PILOCARPINE IN THE TREATMENT OF PNEUMONIA

PILOCARPINE has been recommended as a therapeutic agent in cases of lobar pneumonia by Dr Poulet in France, by Dr Szik'ai and Dr Palkovics in Hungary and in the *Wiener Medicinische Wochenschrift*, Nos 48 and 49, 1902, Stabsarzt Otto Pelzl records his experience of an extended trial of this drug in a military hospital at Budapest. A solution of 0 1 gramme of pilocarpine hydrochloride in 10 grammes of distilled water was employed, of which 20 drops containing 0 0125 gramme were given by the mouth on sugar, which in most cases produced copious sweating If this failed a further 10 drops were administered, though as a rule one dose only was given, since repeated smaller doses are much more likely to cause depression of the heart and subsequent collapse and less likely to produce the sweating desired. Occasionally a second dose was given on a subsequent day The general treatment of the cases was as follows infusions of digitalis and ipecacuanha, ice applications to the chest, but no antipyretics, narcotics, or alcohol except some wine from the fourth or fifth day onwards. The results of the pilocarpine treatment are that the pain on breathing and coughing becomes much less or completely disappears, the breathing is deeper and slower, and the patient is evidently more comfortable, although the fever and the pulmonary physical signs remain the same and the inflamed lobe passes through the usual stages though somewhat more quickly The administration of pilocarpine does not prevent the spread of the disease to other lobes which if it occur gives rise to the customary cycle of changes though the inflammation may be of a milder degree than in the part of the lung originally attacked When the pilocarpine is given between the third and fifth days the crisis usually occurs from 24 to 48 hours later, if given between the sixth and eighth days the crisis may occur almost at once, and if given after this date it appears to be without any influence on the temperature curve. The critical fall after pilocarpine is apt to be slightly prolonged compared with that which occurs in other cases. Various explanations have been suggested of the beneficial influence of pilocarpine. According to Dr Poulet its action is due to the increased secretion from the bronchi promoting the removal of the pneumococci, while, according to Dr Palkovics, the increased sweating aids the elimination of the toxins formed by the pneumococcus Dr Pelzl himself suggests that the loss of pain is due firstly, to the general dilatation of the vessels producing *inter alia* slight serous exudation on to the pleural surfaces thus rendering their movements less painful and secondly, to an increased exudation from the bronchi and alveoli, in virtue of which the expectoration becomes more fluid and is easily coughed up, and hence the ultimate resolution is promoted, in other words, the action of the pilocarpine is mechanical not specific Apparently the general type of the disease in the above series of cases was mild, as no fatal case occurred either in those treated with pilocarpine or in those treated in the ordinary way and it might be objected that pneumonia was less severe and fatal among the presumably healthy young adults from whom the army is recruited, but the general statistics of the Imperial army showed in 1899, 2002 cases of pneumonia and in 1900 1744 cases with a percentage case-mortality of 7 1 and 6 8 respectively As a result of his employment of pilocarpine Dr Pelzl concludes that in almost all cases it renders the patient more comfortable, shortens the disease, promotes resolution, and accelerates convalescence and in no case did he observe any untoward effects, such as cardiac failure or collapse, even though the drug was administered in asthenic cases and in one patient who was the subject of coexistent mitral regurgitation No mention is made of alcoholism in the notes of the cases

THE MEDICAL OFFICER OF THE BALLACHULISH SLATE QUARRIES

WE have upon various previous occasions referred to the case of Dr Lachlan Grant, medical officer to the Ballachulish slate quarries [1] Dr Grant was dismissed from the service of the company on July 6th 1902, and at the time no reason was alleged for the dismissal Later it came out that Dr Grant had on entering into the company s service signed an agreement by which his service at the quarries and his general practice in the district should cease on a month s notice being given. These conditions had never been seen by the medical committee of the workmen, which committee had been recognised by the present company which leased the quarries in 1894 The committee had control of all matters pertaining to medical arrangements and had practically existed for some 40 years. No such conditions as were imposed upon Dr Grant had been imposed upon any former medical officer, the manager had no instructions to impose them upon Dr Grant, and the company had no authority to enter into any agreement with Dr Grant for medical attendance on the men. The men therefore re elected Dr Grant and declined to permit the company to interfere in the affairs of the medical club. The company then applied to the Court of Session to have Dr Grant interdicted from attending on the men or from practising in the district This action is still pending The men are at present locked out and they have now determined to appeal to the Law Courts to have the agreement of Dr Grant with the company set aside on the grounds that the manager went beyond his instructions in imposing the conditions referred to above upon Dr Grant and that the company had no authority to make any agreement concerning the medical club We may mention that Dr Grant only signed the agreement on representations from the manager that the conditions were attached to the appointment. As Dr Grant s case is *sub judice* we are precluded from making any comment but with regard to the men s action a fund is being raised to enable them to fight their case. Subscriptions to the fund will be received by the editor of the distended. By tapping 95 ounces of serous fluid were withdrawn, but as it reaccumulated the pericardium was drained by a procedure suggested in 1890 by Mr H. Allingham. By this method the pericardium is opened through the space between the xiphoid cartilage and the seventh costal cartilage and the drainage tubes are thus inserted in the most dependent portion of the sac. The operation has the further advantage that it does not require the removal of any rib cartilage, though in this respect Mr Pendlebury deviated from Mr Allingham's method, for he excised about two inches of the seventh cartilage in order to obtain more room. This operation appears to have been first described by Larrey in 1829. It was suggested to him by a case of a soldier who had been wounded by a stab. The weapon had pierced the pericardium, passing between the seventh rib and the xiphoid cartilage, the patient recovered and Larrey was impressed with the ease and apparent safety with which the pericardium was reached. He also expressed the opinion that adhesion between the heart and pericardium would be less likely to follow this operation than any other. There is much to be said in favour of this route and its dangers are few. The risk of wounding the peritoneum is small and should be avoided by care, the danger of opening the pleura is practically non existent, and even if the internal mammary artery or its derivative the superior epigastric artery is wounded it may be tied with ease. On the whole, the method appears to be one well deserving of the attention of surgeons. Mr Pendlebury's case seems to be the first in which this method has been employed and its successful issue is a further argument for its employment in future.

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[1] THE LANCET, August 2nd (p. 300) and 16th (p. 449), and Nov 1st (p. 1229) and 15th 1902 (p [illegible]).

POLYDACTYLISM IN A LAW COURT

CASES in which there has been an excess in the number of fingers have been recorded at intervals from a very early period of history. In the time of King David a Philistine was slain who "had on every hand six fingers and on every foot six toes, four and twenty in number," and, indeed, in the most usual form of polydactylism both hands and feet are affected. A curious medico-legal case is reported from Jamaica. In a paternity suit the mother adduced as confirmatory evidence the fact that the child resembled the alleged father in having six fingers on each hand. The value of this evidence depends partly on the hereditariness of the deformity and partly on its rarity. That polydactylism tends to be transmitted from father to child there can be no doubt. Numerous cases are recorded where a father so affected has begotten a son similarly deformed. No small number of instances have been published in which three generations have been affected. There are a few cases on record in which the deformity has involved four or even five generations. A very good instance of this is published in the *Revue Internationale des Sciences Médicales* for November, 1886. The original person affected, a man, was born in 1752, and in all 14 members of the family possessed some abnormality of the fingers or toes, the majority possessing six fingers on each hand, with or without a similar affection of the toes. A still more remarkable case was recorded by Mr C. E. Whitcher of Hove in THE LANCET of March 21st, 1893, p. 804. He delivered a young woman of a male child having six digits on each hand and he was informed by the patient's mother that this peculiarity had occurred in her family for eight successive generations. Of course, such lengthy histories as this must be received with some caution as eight generations must have in all probability extended over 200 years. Still, after making all due allowance for the very natural tendency to exaggerate the duration of a family peculiarity, we are justified in concluding that polydactylism is markedly hereditary. The rarity of such a deformity must also be taken into account in estimating its value as evidence of paternity, and it is certainly rare, but by no means extremely rare, and it may appear in a child where no history is obtainable of its having occurred in any of his ancestors. There is yet another point that must be borne in mind in bastardy cases. The occurrence of such a deformity might suggest to the mother the man to whom the child might most readily be attributed. On the whole, therefore, the mere fact that an infant had six fingers on each hand would not suffice to prove that he was the child of a man similarly endowed and even as confirmatory evidence it would not be of any great value. Of course, it would appeal strongly to the popular mind and few juries would resist such evidence. The report of the Jamaica case already mentioned does not inform us of the result, and we are therefore in doubt as to the value that the court put on the polydactylism.

PROFESSOR VON BERGMANN ON DRESSING MATERIAL IN MODERN WARFARE

IN Professor von Bergmann's opinion[1] the greatest progress which has been realised with regard to dressing material in war time consists in the adoption by civilised nations of conventional models. The medical officers of the victorious army being under the necessity of treating the enemy's wounded are thus enabled to do so effectually and economically by utilising the captured materials and appliances with the employment of which they are familiar. It is of secondary importance, continues Professor von Bergmann, whether dressing materials are impregnated or not with antiseptics. Gauze impregnated with iodoform or corrosive sublimate gradually loses its antiseptic properties, and owing to the complicated way in which it is packed, as well as to a widespread but exaggerated belief in its virtues, the user often fails to appreciate the need for re-applying disinfection. In the case of ordinary gauze, however, he does not hesitate to submit the readily opened packet to the sterilising influence of steam. In all base hospitals, and more especially in such as are nearest to the front, it is desirable that disinfecting appliances should be provided in which not only dressing material but also bedding and clothing can be sterilised. It would be difficult to attach these machines to moveable field hospitals, but nowadays there should be no lack of dressing requirements in establishments of this description. Thanks to compression they can now carry a hundred times more than they could formerly. In the ambulance at Tutchenitza, at a time when neither gauze nor cotton wool was known in a compressed form the supply of both of these substances was nevertheless sufficient, so it seems probable that notwithstanding modern exigencies their provision in the future is assured. Professor von Bergmann objects to ready made splints—even those recommended by Hessing. The bulk of the stock would be so enormous that the entire transport of an army corps would be insufficient for its conveyance. He recommends thin elastic slabs of beech similar to those used by German cobblers for insertion between two layers of sole leather (Schusterspäne). The injured limb having been lightly swathed in cotton wool the Schusterspan should be moulded *in situ* and retained in position by a few turns of plastered gauze. If this process be adopted the operator will save not only his gauze but also his time. Cardboard cannot be employed as a substitute for the beech slabs, even when it has been treated with amianth. In combination with gypsum cardboard often remains soft and flexible. Professor von Bergmann is well aware of the great difficulty in procuring gypsum fit for use on active service, as well as of its liability to injury from moisture. At Plevna he ordered a cartload of modeller's plaster from Bucharest, but post-operative psychoses were very variable They comprised maniacal excitement, delusions of persecution, and melancholic depression with or without delusions. Operations involving the loss of one or both breasts in women, castration, and colotomy with the formation of an artificial anus tended to favour the development of melancholia. The following cases serve to illustrate the points already mentioned. In Case 1 the patient was a Jewess, aged 36 years. Her father was a drunkard and she had a cousin who was insane. The patient herself was an excitable woman. After undergoing a slight surgical operation she developed melancholia with delusions that parts of the body were dead or non existent, hallucinations, and suicidal impulses. In Case 2 the patient was a man, aged 47 years, and of intemperate habits For about 15 years he had suffered from attacks of vertigo and occasionally he had passed urine involuntarily during an attack. He had marked facial asymmetry 18 months after an operation for inguinal hernia it was found that considerable mental deterioration had occurred and that fixed delusions of ruin were present. This condition was the result of a steady and progressive mental alienation which set in after the operation and in the course of which he suffered from attacks of stupor with loss of consciousness. Dr Picqué and Dr Briand cite in considerable detail the details of seven other cases illustrating various points in regard to the etiology and development of post-operative psychoses and come to the conclusion that in predisposed subjects insanity may definitely show itself immediately after surgical operations

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[1] First Aid on the Field of Battle. Jena. G. Fischer. 1902.

CHYLIFORM ASCITES

In the *Boston Medical and Surgical Journal* of Jan. 29th Dr P P Corney and Dr. W W McKibben have published a case of the comparatively rare condition of chyliform ascites which is of unusual interest A man, aged 61 years, became ill on March 18th, 1902, with chill severe pain in the right groin and leg, and high fever The right leg became red and swollen and the inflammation extended across the abdomen to the other side and also across the back and loins, but not to the other leg After a few days the inflammation and the symptoms began to subside but the patient was confined to bed in consequence of the swelling of the leg He improved so much as to be able to get up though the leg remained swollen. About June 1st a second attack of cellulitis occurred with the same symptoms, but the inflammation extended to the left shoulder and down the arm to the elbow and also to the left leg About July 20th he had a third attack which was less severe than the others but the œdema became general and his appetite began to fail. He grew more and more bloated, his breathing was laboured, and the abdomen became so swollen that paracentesis was performed on August 18th. About seven pints of what seemed to be pure chyle escaped. This fluid was discharged until his death which took place on Sept. 14th. During the illness the urine was several times examined but was always found to be normal. At the necropsy the abdomen was found to be half full of bloody fluid. The abdominal lymphatics were enlarged and on the intestines they were varicose and presented a beaded appearance The left pleural cavity was full of straw-coloured fluid. The thoracic duct was much enlarged. It appeared to have been obstructed near the left apex of the lung, which contained an old tuberculous focus and was firmly adherent to the parietal pleura. The effused fluid showed under the microscope extremely minute granules, so minute that they could not be recognised as "fat globules." A litre of the fluid yielded on analysis [illegible] grammes of fat. It is interesting that all the parts drained by the thoracic duct —both legs, the abdominal cavity, the left thorax, and the left arm—contained effused fluid, while the parts drained by the right lymphatic duct did not. Evidently the obstruction had predisposed to the attacks of lymphangitis of the legs. Dr Corney and Dr McKibben have described their case as one of chylous ascites but there is no evidence that the effusion contained chyle. The case seems to have been an example of chyliform ascites and the lactescent character of the fluid seems to have been due to degeneration of extravasated cells

THE FOURTEENTH INTERNATIONAL CONGRESS OF MEDICINE, MADRID

It is of the utmost importance that members of the Congress who intend to visit Spain next month should comply with the requirements of the railway companies in regard to the issue of tickets at reduced rates. Each passenger must be provided with a letter of invitation signed personally by the President of the Congress and he must send this letter of invitation with his card of membership (1) to Messrs. Cook and Son, Ludgate Circus London, E C who will make all the necessary arrangements from London to the destination, (2) to M. Sartiaux, Ingénieur en Chef de l'Exploitation, Chemin de Fer du Nord, Paris. M. Sartiaux will indorse the letter of invitation and on its return tickets to Paris can be obtained at a reduced rate at Charing Cross or Victoria Stations Passengers must re-book in Paris at the Orleans station and again present their letter of invitation, and it is probable that they must book again at Irun. No letters of invitation have yet been received by members in England so far as is known and it is desirable, therefore, that each member should write to the Secretary-General at Madrid, Dr Fernandez Caro, Facultad de Medicina, asking that one shall be sent to him as soon as possible. The letter of invitation is a much more important document in the eyes of the railway companies than the card of membership and unless it is presented properly *visé* no reduction of fare will be granted. Members who wish to travel from Paris by the Sud Express train de luxe should book their places beforehand. Sleeping-car places by the night express from Paris should also be engaged beforehand by writing to the Continental Inquiry Office S.E. & C Railway, Victoria Station, London, S W The additional cost over the first-class fare is rather more than £2 for each person. Every traveller should provide himself with a passport

MEMORIAL TO THE LATE PROFESSOR MAX VON PETTENKOFER

A MEETING of the general committee formed in this country to coöperate with the Munich committee for the purpose of providing the above memorial was held at 19 Savile row on March 16th A small executive committee was elected consisting of Dr W H Corfield, Dr R. Deane Sweeting and Dr Christopher Childs. This executive committee was empowered to complete the arrangements for collecting subscriptions in this country and to forward the amount collected to the Bürgermeister of Munich The amount of subscriptions promised by individuals varies from one to five guineas Smaller sums than these would gladly be accepted by the committee. It is believed that there are many in this country who recognise the great services rendered by von Pettenkofer to the science of hygiene and would like to be associated in this act of homage to his memory The general committee comprises many of the higher authorities on hygiene and public health in the United Kingdom In Germany over £3000 have been subscribed Committees have been formed in Paris, Vienna, and

Highland News, Inverness, or by any of the following Donald Macmillan, Angus Clark, and Peter Mackenzie, all of Ballachulish, and respectively the chairman, secretary, and treasurer of the medical committee. We may point out that the question of the legality or not of the company's action is an important one to the medical profession in general

THE DISTRIBUTION OF PLAGUE

As regards the Mauritius, a telegram from the Governor received at the Colonial Office on March 13th states that for the week ending March 12th there were 2 fatal cases of plague As regards Hong Kong a telegram from the Governor received at the Colonial Office on March 17th states that for the week ending March 14th there were 17 cases of plague and 17 deaths from the disease.

THE HOSPITALS OF ICELAND

THE *Archives de Médecine Navale* for the current month opens with an illustrated article on the hospital establishments of Iceland by Dr Fallier, medical officer of the first class in the French navy Until recently Reikiavik, the capital of the island, possessed only one small hospital where foreign sailors were admissible for treatment. It contained ten beds in one ward and was well managed by the Sisters of Saint Joseph of Chambéry, but besides being "a little primitive and insufficient" it was also excessively damp in wet weather For the Icelanders another so-called hospital of ten beds exists in the town, but it is little worthy of the name, being merely an old dwelling house almost entirely destitute of suitable arrangements Last summer a new hospital of 40 beds was constructed for the Sisters by means of contributions from France, Denmark, and England. It is capable of accommodating 50 patients and contains, moreover, two spacious glazed galleries facing south for the reception of tuberculous cases. The accommodation thus afforded is ample for all requirements and yet another new hospital has been started under the auspices of the Société Dunkerquoise. In Dr Fallier's opinion there is no need at all for this establishment which might be advantageously located elsewhere and, moreover, the difficulty of finding an efficient staff would seem to be almost insuperable, as the Sisters, owing to paucity of numbers, are unable to take charge. At Faskrudfjord the Sisters of Saint Joseph keep up another well ordered hospital, but here, too, the Société Dunkerquoise proposes to establish one of 20 beds to replace an existing structure for ten beds from which operating rooms, mortuary, lavatory, and laundry are all lacking In this case, as at Reikiavik, Dr Fallier anticipates trouble in securing qualified hospital attendants. At Seydisfjord there is an Icelandic hospital with beds for 17 patients and two isolation wards It is well managed and arranged, but owing to the inaccessible situation of the town at the head of a narrow winding fjord the fishing fleets do not make much use of it. Akreyri, the second town in Iceland is even less accessible, as it is more than 60 miles from the coast For many years not a single foreign sailor has been treated in the hospital which contains 16 beds In this establishment the operating room, with its rounded angles, cemented walls, and mosaic flooring, "would not disgrace a modern hospital in continental Europe" Isafjord has a hospital with 16 beds which are in medical charge of Dr Thorsteinsson, a young Icelander who can speak French fluently The subordinate staff would, however, seem to leave something to be desired. It consists of three females, two ward servants and a cook. The last hospital on the list is at Patrixfjord It was opened last May but the equipment is not yet entirely available. When completely furnished the building will contain 12 beds and as it is well situated in a sheltered position at the entrance of a fjord it should be largely utilised by the fishermen. In conclusion, Dr Fallier points out that while the eastern and western coasts are fairly well supplied with hospital accommodation, and to a less extent the northern, the southern, although the most dangerous as well as the most frequented during the first part of the fishing season, remains absolutely destitute. Instead of duplicating hospitals at Reikiavik it would be better, he thinks, if a small establishment were to be located on one of the Westmann islands where already the services of a qualified medical resident are available.

CHEMISTRY AT INTENSELY LOW TEMPERATURES

IT is well known from the classic researches of Professor Dewar on low temperatures that under the influence of intense cold the great majority of, and probably all (if the temperature be sufficiently reduced), chemical interactions are entirely suspended According, however, to a paper recently communicated by M Moissan to the French Academy of Sciences that highly energetic element fluorine enters readily into affinity with hydrogen even at a temperature as low as 20° absolute (– 253° C) When pure fluorine gas was allowed to come into contact with liquid hydrogen there was a violent explosion By means of liquid hydrogen fluorine, isolated in the pure state by M Moissan, has been liquefied and its melting point proves to be about 40° absolute Fluorine is a remarkable, if not a unique, instance of an element preserving its powerful affinity for another element at excessively low temperatures As an example of quite the reverse kind sodium will float on liquid air without the slightest sign of combining

ON MENTAL DISTURBANCES FOLLOWING SURGICAL OPERATIONS

IN the *Archives de Neurologie* for March Dr Lucien Picqué and Dr Marcel Briand publish a lengthy and important paper on mental disturbances or psychoses following surgical operations and make an attempt to summarise those facts which are well established and to add certain new observations made by themselves. Under the term "post-operative psychoses" they include only delusions with or without mental confusion and affecting the intellectual functions only Other mental disturbances of a neurasthenic or hypochondriacal character which may manifest themselves after operation, and which have been already described in THE LANCET,[1] are not included in the category of post-operative psychoses. Moreover, all forms of cerebral excitement or delirium which may persist after the operation and which may be attributable to an undue sensitiveness of the patient to the anæsthetic are grouped by Dr Picqué and Dr Briand in a separate class—viz., as forms of toxic pseudo-delirium. These are of transitory character, not lasting, as a rule, more than one or two days, whereas the true post-operative psychoses are serious forms of mental disturbance which require care and treatment in an asylum. Such cases of post-operative insanity usually reveal on inquiry a history of hereditary predisposition to mental disorder Thus among the cases personally investigated by Dr Picqué and Dr Briand or collected from published records it was usual to find on inquiry a pre existing taint or history of mental weakness, hysteria, hypochondriasis, or other neurosis. Gynæcological operations on women were not found to be more often followed by mental disorder than other operations when cases of neurasthenia were excluded. The symptoms of the post-operative psychoses were very variable They comprised maniacal excitement, delusions of persecution, and melancholic depression with or without delusions. Operations involving the loss of one or both breasts in women, castration, and colotomy with the formation of an artificial anus tended to favour the development of melancholia. The following cases serve to illustrate the points already mentioned. In Case 1 the patient was a Jewess, aged 36 years. Her father was a drunkard and she had a cousin who was insane. The patient herself was an excitable person. After undergoing a slight surgical operation she developed melancholia with delusions that parts of the body were dead or non existent, hallucinations, and suicidal impulses. In Case 2 the patient was a man, aged 47 years, and of intemperate habits For about 15 years he had suffered from attacks of vertigo and occasionally he had passed urine involuntarily during an attack. He had marked facial asymmetry 18 months after an operation for inguinal hernia it was found that considerable mental deterioration had occurred and that fixed delusions of ruin were present. This condition was the result of a steady and progressive mental alienation which set in after the operation and in the course of which he suffered from attacks of stupor with loss of consciousness. Dr Picqué and Dr Briand cite in considerable detail the histories of seven other cases illustrating various points in regard to the etiology and development of post-operative psychoses and come to the conclusion that in predisposed subjects insanity may definitely show itself immediately after surgical operations

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[1] Unusual Forms of Nervous Prostration following Operation, THE LANCET, May 17th 1902, p 1415

CHYLIFORM ASCITES

In the *Boston Medical and Surgical Journal* of Jan. 29th Dr P P Corney and Dr. W W McKibben have published a case of the comparatively rare condition of chyliform ascites which is of unusual interest A man, aged 61 years, became ill on March 18th, 1902, with chill severe pain in the right groin and leg, and high fever The right leg became red and swollen and the inflammation extended across the abdomen to the other side and also across the back and loins, but not to the other leg After a few days the inflammation and the symptoms began to subside but the patient was confined to bed in consequence of the swelling of the leg He improved so much as to be able to get up though the leg remained swollen. On June 1st a second attack of cellulitis occurred with the same symptoms, but the inflammation extended to the left shoulder and down the arm to the elbow and also to the left leg About July 20th he had a third attack which was less severe than the others The oedema became general and his appetite began to fail. He grew more and more bloated, his breathing was laboured, and the abdomen became so swollen that paracentesis was performed on August 18th. About seven [illegible] of what seemed to be pure chyle escaped This fluid was discharged until his death which took place on Sept. 14th. During the illness the urine was several times examined but was always found to be normal. At the necropsy the abdomen was found to be half full of bloody fluid. The abdominal lymphatics were enlarged and on the intestines they were varicose and presented a beaded appearance The left pleural cavity was full of straw coloured fluid. The thoracic duct was much enlarged. It appeared to have been obstructed near the left apex of the lung, which contained an old tuberculous focus and was firmly adherent to the parietal pleura. The [illegible] fluid showed under the microscope extremely minute granules, so minute that they could not be recognised as fat globules. A litre of the fluid yielded on analysis [illegible] grammes of albuminoids and 1 23 grammes of fat. It is interesting that all the parts drained by the thoracic duct —both legs, the abdominal cavity, the left thorax, and the left arm—contained effused fluid, while the parts drained by the right lymphatic duct did not. Evidently the obstruction had predisposed to the attacks of lymphangitis of the legs. Dr Corney and Dr McKibben have described their case as one of chylous ascites but there is no evidence that the effusion contained chyle. The case seems to have been an example of chyliform ascites and the lactescent character of the fluid seems to have been due to degeneration of extravasated cells.

THE FOURTEENTH INTERNATIONAL CONGRESS OF MEDICINE, MADRID

IT is of the utmost importance that members of the Congress who intend to visit Spain next month should comply with the requirements of the railway companies in regard to the issue of tickets at reduced rates. Each passenger must be provided with a letter of invitation signed personally by the President of the Congress and he must send this letter of invitation with his card of membership (1) to Messrs. Cook and Son, Ludgate Circus London, E.C who will make all the necessary arrangements from London to the destination, (2) to M. Sartiaux, Ingénieur en Chef de l'Exploitation, Chemin de Fer du Nord, Paris. M. Sartiaux will indorse the letter of invitation and on its return tickets to Paris can be obtained at a reduced rate at Charing Cross or Victoria Stations Passengers must re-book in Paris at the Orleans station and again present their letter of invitation, and it is probable that they must book again at Irun. No letters of invitation have yet been received by members in England so far as is known and it is desirable, therefore, that each member should write to the Secretary-General at Madrid, Dr Fernandez Caro, Facultad de Medicina, asking that one shall be sent to him as soon as possible. The letter of invitation is a much more important document in the eyes of the railway companies than the card of membership and unless it is presented properly *visée* no reduction of fare will be granted. Members who wish to travel from Paris by the Sud Express train de luxe should book their places beforehand. Sleeping-car places by the night express from Paris should also be engaged before hand by writing to the Continental Inquiry Office, S.E. & C. Railway, Victoria Station, London, S.W The additional cost over the first-class fare is rather more than £2 for each person. Every traveller should provide himself with a passport

MEMORIAL TO THE LATE PROFESSOR MAX VON PETTENKOFER

A MEETING of the general committee formed in this country to coöperate with the Munich committee for the purpose of providing the above memorial was held at 19 Savile-row on March 16th A small executive committee was elected, consisting of Dr W H Corfield, Dr R. Deane Sweeting and Dr Christopher Childs. This executive committee was empowered to complete the arrangements for collecting subscriptions in this country and to forward the amount collected to the Bürgermeister of Munich The amount of subscriptions promised by individuals varies from one to five guineas. Smaller sums than these would gladly be accepted by the committee. It is believed that there are many in this country who recognise the great services rendered by von Pettenkofer to the science of hygiene and would like to be associated in this act of homage to his memory The general committee comprises many of the highest authorities on hygiene and public health in the United Kingdom In Germany over £3,000 have been subscribed Committees have been formed in Paris Vienna and Athens to coöperate as national representatives with the Munich committee It is understood that the memorial will take the form of a monument to be set up in Munich The subscription list (for this country) will be closed on March 31st. All subscriptions should be sent to the honorary treasurer Dr Christopher Childs, 10, Manchester square, London, W

THE CRUSADE AGAINST MEASLES

WE have frequently drawn attention in THE LANCET to the very high death toll which is annually levied by measles in England and Wales, and especially among the infantile population Accordingly we are gratified to note that in two important English cities, at any rate, the crusade against this disease is proceeding in earnest. Thus we find that in Norwich the city council has, on the advice of its medical officer of health, agreed to continue for another year the payment of a fee to medical practitioners for the voluntary notification of cases of measles In the administrative County of London the provisions of the Public Health (London) Act of 1891 have been (by a vote of the county council) made to apply to measles In other words, the county council has statutorily declared measles to be a dangerous infectious disease and has resolved to take steps under the Act for its suppression Having regard to the almost universal prevalence of this infantile scourge we fear that the authorities will find the cost of notification somewhat heavy, but there is no doubt that an accurate knowledge of the whereabouts of fresh cases of measles, especially in schools, will enable the authorities to check the spread of the disease At any rate, the experiment is well worth trying and we shall watch the result with keen interest

THE BLOOD AND ITS REACTION IN MENTAL DISEASE

THE character and reaction of the blood in mental disease and the variations which they undergo in the course of different forms of insanity are matters regarding which little is as yet known That important changes occur in the blood, however, is now known from systematic observations made by many investigators upon epilepsy and epileptic insanity and from isolated observations made on other forms of mental disease. In the *Journal of Mental Science* for January last Dr Robert Pugh, assistant medical officer of the Claybury Asylum, has published an interesting series of studies on the reaction of the blood in mental disease. The method of estimating the relative degree of alkalinity of the blood was that introduced by Dr A E Wright and already described in THE LANCET[1] In estimating the normal alkalinity of the blood "control cases" were selected from the staff of Claybury Asylum for comparison with the studies made on patients Care was taken to avoid the times during which the alkalinity of the blood is stated to vary—e.g, after food and after severe muscular exercise—and the blood was taken at a stated time, 11 A.M, on successive days for each case. In all 98 patients were thus examined. The information obtained in different classes of mental disease are summarised as follows Epilepsy 40 cases were examined The typical conditions as regards the blood consisted of, first a low average alkalinity in the period between epileptic fits, secondly, a sudden and pronounced fall immediately prior to a fit, and, thirdly, a further diminution soon after the fit was over All the cases studied showed low alkalinity This condition may be explained, adds Dr Pugh, by "the gradual accumulation of toxins of an acid nature in the blood," probably arising from deficient metabolism of the body tissues generally The second condition was difficult to account for, while the third was regarded as due to the production of sarco-lactic and carbonic acids during the violent tonic and clonic convulsions of the epileptic fit. General paralysis of the insane 23 cases were examined, two of these being juvenile cases. All showed a low degree of alkalinity of the blood much below the average of the control cases, the more acute cases of general paralysis showing an exceptionally low value in this respect. The lowering of the alkalinity in this disease, concludes Dr Pugh, is constant, well marked, and varies according to the type, duration, and progress of the disease The most marked lowering of the alkalinity occurred in connexion with the convulsive seizures of general paralysis Dementia 10 cases were examined These included six cases of secondary dementia, three cases of senile dementia, and one of organic dementia The alkalinity in these cases did not show any marked variations beyond physiological limits. Mania 15 cases were examined. Of these 10 were cases of acute and five of chronic mania. In the acute cases and especially in those patients who manifested intense motor restlessness the alkalinity was lowered. During comparative repose the alkalinity remained within normal limits. Melancholia 10 cases were examined. Of these eight suffered from acute and intense depression, the remaining two were chronic cases. The alkalinity in these cases was fairly constant and varied within normal limits. One of the general conclusions reached was that the alkalinity of the blood was normal in chronic mania, chronic melancholia, and chronic dementia Lowering of the alkalinity occurred in epilepsy especially before a fit, in mania during the period of restlessness and agitation, and in general paralysis of the insane, and with this lowered alkalinity there were associated a state of depraved bodily nutrition and a co-existent toxæmia which profoundly disturbed consciousness.

RECENT OBSERVATIONS ON REFLEX ACTION AND TENDON PHENOMENA IN HEALTH AND DISEASE

THE earlier observers were unable to obtain the knee jerk in a certain proportion of healthy children and adults—e.g, Eulenburg found it absent 16 times in 338 healthy children and Mobius noticed that it was not infrequently absent in the aged. However since the introduction of certain methods for "reinforcement," of which the best known is that of Jendrassik, consisting in the execution of some voluntary movement, such as grasping the hands in front of the trunk and pulling as if to separate them, it has been shown by Sternberg and others that the knee-jerk is rarely, if ever, absent in health either in infants, children, or adults even in advanced age. Dr Jenö Kollarits in the *Deutsche Zeitschrift für Nervenheilkunde*, Band xxii., 1902, S 89, records the results of his investigation of the condition of the knee jerks, the Achilles and triceps tendon reflexes, and the scapula periosteal reflex in 100 healthy individuals and in 100 cases of tabes dorsalis In the former, by adopting various methods of reinforcement like that of Jendrassik, he obtained all these reflexes in every case. In the tabetics, adopting similar precautions, he found that all four were absent in 31 cases, all four were present in 25, in 11 the tendo-Achillis jerk was alone absent, and in one case the knee jerk alone was not elicited Dr A. Bickel in the same journal (Band xxii., 1902, S. 163) records the result of an investigation of Babinsky's sign (the dorsiflexion of the toes on stroking the sole of the foot) in 300 persons, in which he found, as previous investigators have done, that the sign is very seldom obtained in health and only exceptionally in hysteria, while it is always distinct in patients with a lesion of the pyramidal tract On the other hand, in a considerable number of healthy persons it was obtained in a very definite and striking manner during sleep, although quite absent in the waking condition. Moreover, at a certain stage of chloroform narcosis a positive reaction can be obtained

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[1] THE LANCET, Sept. 18th, 1897, p. 719

IMPORTED FRESH AND STERILISED MILK

WE have often urged that a sharp look out should be kept upon the milk sent to these shores from other countries. It would appear that hitherto the attention of the Government laboratory has not been directed to this question to the extent to which in the interests of the public it should be. During the year 1902, for example, only 11 samples were obtained and examined, and two of these were sterilised milk which proved to be deficient in fat We are glad to learn, according to the reply of Mr Ritchie to a question upon the subject asked by Sir Edward Strachey in the House of Commons last week, that arrangements have been made, with the concurrence of the principal of the Government laboratory, whereby a considerable number of samples of this class of article are to be obtained in future. That such a step is necessary is obvious from the fact that the total imports of fresh milk during 1902 amounted to 13 559 hundredweights, and of preserved milk, including sterilised milk, to 3058 hundredweights We think that it is very important that these examinations should include a bacteriological analysis.

THE FIFTH INTERNATIONAL CONGRESS ON DERMATOLOGY

THE following, three themes have been arranged for by the organising committee of the Fifth International Congress on Dermatology which is to take place in Berlin in 1904 from Sept. 13th to 17th—viz., (1) The Syphilitic Diseases of the Circulatory System, (2) Skin Diseases with Metabolic Anomalies, and (3) Epithelioma and its Treatment. All these subjects are of importance. The vascular changes in syphilis are numerous but we should have thought they would prove of more interest to those who devote their attention to general medicine than to those who are concerned with syphilography and dermatology Still the subject is very wide and deserves discussion, for the vascular manifestations of syphilis are frequently disregarded or if noticed, their syphilitic origin is not recognised. The second subject, skin diseases with ametabolic nomalies, is one of great interest. The anomalies of metabolism which may occur during the course of skin diseases are in many cases great, for the skin disease may be only the outward expression of a serious nutritional change, but even in diseases which primarily affect the skin the general metabolic changes deserve more attention than they often receive. The course that the discussion takes will depend greatly on the opening speeches. The third subject for debate is the treatment of epithelioma and the name is undoubtedly extended to include *rodent ulcer* The main novelty in the subject will probably be the utility of the Finsen light and the x rays in the treatment of malignant affections of the skin and it is not unlikely that somewhat contradictory opinions will be expressed That both these methods are of some value few will be found to deny but the limits of their usefulness are more difficult to gauge Altogether the subjects are such as appeal not only to the dermatological specialist but to all who practise medicine or surgery

HIS Royal Highness the Duke of Cambridge K G, President of the Sanitary Institute, will preside at the annual dinner of the institute to be held on Friday, May 15th at the Hotel Cecil.

DR. C F HUTCHINSON has been elected Member of Parliament for the Rye Division of Sussex by a majority of 5[illegible] votes Dr Hutchinson who has retired from medical practice graduated as M D of the University of Edinburgh in 1874 and is a Justice of the Peace for East Sussex. He formerly practised at Scarborough and has been more than once an interesting contributor to our columns.

THE London School of Tropical Medicine announces that the Craggs Research Prize of £50 will be awarded in October to a past or present student of the school who during the current year has made the most valuable contribution to tropical medicine. Full information may be obtained from the medical tutor at the school, Royal Albert Docks, London.

A CASE is coming on for hearing shortly in the King's Bench Division in which a householder who has had smallpox in his house is bringing an action for damages against the sanitary authority of the district concerned The questions at issue are of some importance to sanitary authorities generally

OUR readers may be interested to know that Richard Gordon Gatling the inventor of the celebrated Gatling gun, whose death was recently announced was a medical man Mr Gatling, who at the time of his death had reached the ripe age of 84 years, graduated 62 years ago at the Ohio Medical College

Professor Sir Michael Foster, K.C B, has announced his intention of resigning the chair of Physiology in the University of Cambridge at Michaelmas.

THE METROPOLIS WATER ACT

THE Local Government Board, under the provisions of the Metropolis Water Act, 1902 has issued the following regulations as to the first meeting and proceedings of the Metropolitan Water Board —

To the persons appointed as members of the Metropolitan Water Board, to the London County Council, to the County Councils of Essex, Hertfordshire, Kent, Middlesex, and Surrey, to the Mayor and Commonalty and Citizens of the City of London and to the Mayor, Aldermen, and Commons of the said City in Common Council assembled, to the councils of the several Metropolitan Boroughs, to the Mayor Aldermen, and Burgesses of the Borough of West Ham, to the urban district councils of East Ham Leyton, Tottenham, Walthamstow and Willesden, to the Conservators of the River Thames, to the Lee Conservancy Board, to the several councils grouped as constituent authorities under the Metropolis Water Act, 1902, for the appointment of members of the Metropolitan Water Board, to Almeric William FitzRoy, Esq, Commander of the Royal Victorian Order Clerk in Ordinary of His Majesty's Most Honourable Privy Council, and to all others whom it may concern.

[After referring to various provisions of the Act the Order continues —]

Now therefore, we, the Local Government Board, in pursuance of the hereinbefore recited powers and of all other powers given to us in that behalf do hereby order as follows —

Article I—The first meeting of the Water Board shall be held at the Council Chamber of the Privy Council on Thursday April 2nd 1903, at 3 o clock in the afternoon.

Article II—At the first meeting of the Water Board Almeric William FitzRoy, Commander of the Royal Victorian Order, Clerk in Ordinary of His Majesty's Most Honourable Privy Council or in the absence of the said Almeric William FitzRoy, a person appointed for the purpose by us shall take the chair and shall preside until a temporary chairman is appointed in pursuance of this Order but shall not, while presiding in pursuance of this article, be entitled to vote.

Article III—1 The first business at the first meeting of the Water Board shall be the appointment of a person to act as temporary chairman 2 The temporary chairman shall take the chair as soon as he is appointed and shall thereafter preside at the first meeting of the Water Board and at any meeting held by adjournment from the first meeting But if at the first meeting or at any meeting held by adjournment from the first meeting the chairman or vice-chairman is appointed and is present the temporary chairman shall immediately after the appointment vacate the chair, which shall thereupon be taken by the chairman or vice chairman. 3. At their first meeting, or at any meeting held by adjournment from the first meeting, the Water Board shall take into consideration and may, if they think fit, determine the following matters, that is to say (*a*) the question whether any and, if so, what salaries shall be assigned to the offices of chairman and vice chairman, and (*b*) the appointment of persons to the offices of chairman and vice-chairman 4 At their first meeting, or at any meeting held by adjournment from their first meeting, the Water Board may, if they think fit, appoint a person to act temporarily as clerk of the Water Board until the clerk of the Water Board is appointed 5 At their first meeting the Water Board shall determine whether the next meeting shall or shall not be held by adjournment from the first meeting, and in either case they shall fix the time and place for the next meeting and may make any necessary regulations for the notification and convening of that meeting and for the proceedings and business to be transacted at the meeting 6 Subject as aforesaid, the Water Board may at their first meeting transact such business as they may think necessary

Article IV—1. As between two persons who receive an equal number of votes upon any appointment to be made in pursuance of this Order to the post of temporary chairman priority shall be determined by lot. 2. As between two persons who receive an equal number of votes, in the case of the first appointment either to the office of chairman of the Water Board or to the office of vice-chairman of the Water Board, if that appointment be made at the first meeting of the Water Board, or at any meeting held by adjournment from the first meeting, the presiding chairman shall have a casting vote

Article V—In the case of the first meeting of the Water Board the said Almeric William FitzRoy shall appoint such person as he may think fit to record the proceedings of the Water Board at that meeting

The following is the list of the members of the Metropolitan Water Board —Ernest Avern, Fulham borough council, Charles Edmund Baker, Beckenham, Bromley, Chislehurst, Penge, Bexley, Dartford, Erith and Footscray urban district councils, Edward Broughton Barnard, Hertfordshire county council, R. Melville Beachcroft, London County Council, Ion Hamilton Benn, Greenwich borough council, Henry William Bradford, Westminster city council, John Henry Brass, Chelsea borough council, John Burns, M P, London County Council, William Burrell, Lewisham borough council, Charles Burt, Surrey county council, Henry Burt, Hornsey and Wood Green urban district councils, Henry Joseph Butter, Woolwich borough council, Thomas Chamberlen, Hammersmith borough council, Henry Clarke, London County Council, Lieutenant-Colonel Charles Frederick Colvile, Kensington borough council, E A Cornwall, London County Council, George John Courthope, Kent county council, Richard Benyon Croft, Lee Conservancy, James Arthur Dawes, Southwark borough council, W H Dickinson, London County Council, Charles Fitzroy Doll, Holborn borough council, George Samuel Elliott, Islington borough council, John Glass, Stoke Newington borough council, John Harry Sanders, Edmonton, Enfield, and Southgate urban district councils, Lord Sandhurst, London County Council, Henry Taylor Sawell, Shoreditch borough council, Sir Charles Scotter, Kingston town council and East and West Molesey, Esher and the Dittons, Ham, Surbiton, Barnes, the Maldens and Coombe, and Wimbledon urban district councils, William Richard Smith Deptford borough council, Leslie William Spratt West Ham town council, Joseph Thornley, St. Pancras borough council, Augustus Hall Tozer, Buckhurst Hill, Chingford, Loughton, Waltham, Holy Cross, Wanstead, and Woodford urban district councils, Henry Ward, London County Council, William Watts, Battersea borough council, Lord Welby, London County Council, Edward White, London County Council, Peter Alexander White, Poplar borough council, J W Whiter, Hackney borough council, Charles Thomas Wilkinson, Walthamstow urban district council, and T McKinnon Wood, London County Council

THE STATISTICAL REPORT OF THE HEALTH OF THE NAVY FOR 1901

From the summary given in the report of the statistical sick returns for the total force serving afloat (amounting to 98,410) we learn that in this respect the year 1901 may be regarded as very satisfactory Notwithstanding that there was an increase of *personnel* of 2580 as compared with the previous year there was a reduction under all three headings of cases, invalidings, and deaths. It has to be remembered, however, that the conditions in 1900 were somewhat exceptional and that 74 of the deaths in that year were from wounds in action while in 1901 there were no such cases returned.

The aggregate number of cases of disease and injury recorded in the year 1901 furnishes a ratio of 853 83 per 1000, which shows a decrease of 28 46 per 1000 as compared with the ratio for 1900, and of 36 87 when contrasted with the average of the last four years. These figures compare favourably with the returns for 1899 in which year the case ratio was the lowest recorded since 1856, when these reports were first published in their present form. The ratio of cases per 1000 of force shows a reduction on the East Indies, China, and Australia Stations, and in the irregular force, the China Station showing the substantial reduction of 363 1 per 1000 The invaliding ratio of the total force—viz, 31 58 per 1000—shows a decrease of 4 25 as compared with 1900, but an increase of 0 51 in comparison with the average for the last four years The highest invaliding rate was on the Mediterranean Station. As regards the death rate the ratio per 1000 was 5 34, showing a decrease of 1 93 per 1000 compared with 1900 and of 0 36 when contrasted with the last four years' ratio The highest death rate appears on the Cape of Good Hope and West Coast of Africa Station—viz, 7 9 per 1000 Next in order come the China Station (6 32), home (5 6), and Australia (5 46) The lowest mortality was in the irregular force—viz, 2 66.

The prevalence of, and mortality from, enteric fever and dysentery have, the report tells us, greatly declined since 1900 Four cases of plague with one death and 12 cases of yellow fever with two deaths are returned in 1901, but none of cholera in that year Among the general diseases we notice that in 1901 there were 208 entries for enteric fever with 38 invalidings and 35 deaths, as compared with 464 cases, 98 invalidings, and 124 deaths in the previous year There were 287 cases of Mediterranean fever, and in connexion with this disease it may be well to call attention here to two very excellent and exhaustive reports of research work on that form of fever which are published in the appendix and are well worth reading

The report of the health of the navy being almost entirely statistical does not readily lend itself to the purpose of review and comment, but we may say that in the text of the remarks accompanying the statistical tables and describing the health and prevalent diseases of the various naval stations the reader will find a good deal of useful and interesting information. To refer to some of these we may point to the brief remarks on the cases of cerebro-spinal fever on board the training ship for boys at p 30, to the paragraphs relating to enteric and Mediterranean fevers at pp 32 and 33, and on malarial fever and yellow fever at pp 35, 38, and 41, and to the section on the China station at p. 47 *et seq* We have already called attention to the articles on research work in regard to Mediterranean fever in the appendix to the report and to these we may add the paper containing some very interesting notes on a case of actinomycosis in the same section of the volume.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND

An ordinary meeting of the Council was held on March 12th, the President, Sir Henry G Howse, being in the chair

A report from the Laboratories Committee was received. It stated that during the last three months 8175 doses of diphtheria antitoxin, each containing 3000 units, had been supplied to the hospitals of the Metropolitan Asylums Board, making a total of 24 525,000 units, and that during the quarter further batches of antitoxin supplied by Messrs. Parke, Davis, and Co had been tested in the laboratory and a certificate granted showing its strength, sterility, and freedom from excess of antiseptic.

The Council elected as a member of the board of examiners in dental surgery Mr. William A. Maggs, M R C S., L.D.S. Eng., dental surgeon and lecturer on dental anatomy and physiology at Guy's Hospital.

Mr A. PEARCE GOULD was re elected a representative of the College upon the Senate of the University of London for four years.

The Senior VICE PRESIDENT reported the delivery of the Hunterian Oration by the President, Sir Henry Howse, and the best thanks of the Council were given to the President for his oration and he was requested to publish it.

The PRESIDENT reported that at the Hunterian dinner on Feb. 14th, Field Marshal Earl Roberts was admitted to the Honorary Fellowship of the College

AN IMPROVED COAL-TAR DISINFECTANT

WE have received from Dr E Klein an account of a series of experiments undertaken with the "Jeyes' Special Fluid"

The experiments were of the following kinds, viz —I. Experiments to test the germicidal action of the fluid on staphylococcus pyogenes aureus in various dilutions and after varying periods of exposure of the microbes to the fluid. II. Experiments to test the germicidal power of Jeyes Special Fluid in various dilutions on tuberculous sputum the time of action being 24 hours and the microbe materials having been applied to the surface of wood.

Dr. Klein's report, the results of which he rightly considers important and of considerable medical interest, runs as follows —

"The staphylococcus pyogenes aureus, as is well known, is the chief microbe found in most purulent inflammations and on account of its wide distribution is an important microbe both in medical and surgical practice, it is at the same time a microbe of considerable power of resistance to influences affecting vitality under many adverse conditions under which other microbes—in fact most non sporing microbes, pathogenic as well as non pathogenic—succumb Provided the staphylococcus pyogenes aureus is derived from an active and recent culture, growing under ordinary favourable conditions, its resisting power to a disinfectant does for the above reasons represent a valuable index of the power of the disinfectant. The bacillus tuberculosis occurring abundantly in tubercular sputum (derived from the lung of a consumptive patient) is known by inoculation into guinea pigs to be infallibly productive of disseminated tubercular deposits in various viscera. The tubercular sputum derived from a consumptive patient is admitted to be one of the chief means by which tuberculous infection in man is carried out and therefore the disinfection of the tubercular sputum deserves always careful attention.

I proceed now to describe the experiments in detail—viz.

Series I. Experiments with staphylococcus pyogenes aureus. In the experiments to be described in this series a 24 hours' culture of the microbe grown on the slanting surface of alkaline nutrient agar at 37° C, was used in this manner A particle of the growth is taken up with a platinum needle and distributed in a few drops of sterile water (owing to the composition of Jeyes Special Fluid the emulsion should not be made with salt solution) so as to form a uniform turbid emulsion

Of a particular dilution of the Jeyes Special Fluid one to two cubic centimetres are poured into a sterile test tube, to this is added the emulsion of the microbe just mentioned and that be well shaken. After the lapse of the required time a loopful of the mixture is taken out and with it the slanting surface of the nutrient agar is inoculated, similarly a loopful of the mixture is transferred to nutrient alkaline bouillon. Both tubes (agar and bouillon) are then incubated at 37 C. and the result watched. The addition of a loopful of the [illegible] of the disinfectant does not render the nutritive media unsuitable for the development and growth of the microbe as was found in those instances in which the culture test was positive—i.e., in which subsequent growth of the medicated microbes did occur The number of microbes in the emulsion that has been added in all instances to the 1–2 cubic centimetres of the dilution of Jeyes Special Fluid is so great that the single loopful actually used yielded in a control agar plate so great a number of the colonies as to be uncountable. It follows from this that the tests were of a severe nature, inasmuch as a comparatively large number of the microbes were subjected to the action of a comparatively small amount of the disinfecting fluid.

The following table (A) explains without further description the results obtained, it may be added, however, that the sign + means in general growth, — no growth in the culture tubes inoculated with a loopful of the mixture (disinfectant plus microbe) after exposure.

TABLE A.—*Result of Cultivation after Exposure of Stapylococous Pyogenes Aureus to Dilutions of Jeyes Special Fluid*

Nature of dilution.	5 minutes		10 minutes.		15 minutes.	
	Broth.	Agar	Broth.	Agar	Broth.	Agar
1 300	—	—	—	—	—	—
1 400	—	—	—	—	—	—
1 500	+	+	+	+	+	+

These experiments were repeated with the same results. From this it follows that a dilution of 1 in 400 is a complete disinfectant for staphylococcus pyogenes aureus in five minutes exposure.

Series II—In this series the sputum (expectoration) of a person affected with pulmonary tuberculosis was used. Microscopic examination showed that the sputum contained an abundance of the bacilli of tuberculosis. This sputum was applied to the surface of wood and for control on a piece of paper It took 48 hours for the sputum to dry The wood was then placed into the solution of Jeyes Special Fluid and left there for 24 hours After this time the sputum, now swollen up into a voluminous jelly like mass was scraped off from the wood and injected subcutaneously into one guinea pig At the same time the dried sputum was scraped off from the control paper distributed in a small quantity of sterile saline solution and injected subcutaneously into the control guinea pig Four weeks later the animals were killed and a post mortem examination was made in order to ascertain whether the glands at or near the seat of inoculation and the abdominal and thoracic viscera contained deposits with tubercle bacilli in them The control guinea pig just named showed on post-mortem examination the typical appearances of tuberculosis both locally and viscerally with the characteristic tubercle bacilli in the tubercular deposits, thus proving that the original tubercular sputum was of the normal virulence.

Table B shows the result of the experiments made on guinea pigs with the sputum after its treatment for 24 hours with Jeyes' Special Fluid on wood The sign + means tuberculous deposits were found in the inoculated animals and the sign — means the animals remained unaffected.

TABLE B

Nature of dilution.	Time of exposure.	Result of inoculation.
1 500	24 hours	–
1 600		–
1 700		–
1 800		–
1 900		+

From these experiments it follows then that the virulent tubercle bacilli deposited and dried on wood became completely disinfected by solutions of Jeyes Special Fluid up to 1 in 800 time of exposure 24 hours

(Signed) E. KLEIN

St Bartholomew's Hospital London, E.C"

Looking Back.

FROM

THE LANCET, *SATURDAY*, MARCH 19, 1825

THE STOMACH PUMP

An impression very generally prevails that the above instrument is of recent invention, and this erroneous belief has arisen from its not having been generally known until within the last eighteen months, in fact the public, previous to that period, were entirely unacquainted with it, and by far the greater portion of the medical profession in equal ignorance of its existence, and had it not been for the publicity which it received through the pages of THE LANCET, in all probability even to the present hour it would have remained a dead letter, as it had been for the *one hundred and twenty five years* after its discovery! Several surgeons and instrument-makers have within the last four or five years, laid claim to the merit of the invention, a statement of facts contained in a letter addressed to us by Mr ALCOCK, an eminent surgeon, in Dec. 1823, clearly shows to whom that honour is due, which statement we will here re insert for the information of those of our numerous friends who did not at that period peruse our pages

Boerhaave proposed the use of the flexible tube passed into the stomach, that which Dupuytren and Renault perfected Boerhaave published his proposal in the year 1698

Renault's Dissertation, containing the description of the perfected instrument, in the year 1803.

1814—Orfila's republication of Renault's description and experiments.

1818—Orfila's work was translated into English and published.

1822.—Mr Jukes's observations and experiments published in the *Gazette of Health*, and, subsequently, in the *Medical Repository*, and *London Medical and Physical Journal*

1822.—Mr Bush's communication, published in the *Medical and Physical Journal*

Thus it appears that the instrument was suggested one hundred and twenty five years ago, that an account of it was subsequently published at various intervals, and that all the leading journals of *the day*, in the year 1822, published a description of it, and vainly attempted to do that which the influence of THE LANCET was enabled to accomplish by a single notice, viz. cause it to be universally known, and as universally adopted by the medical profession To Boerhaave, then is due the credit of having discovered THE STOMACH PUMP, and to THE LANCET the greater credit of having brought it into general use.[1]

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

In 76 of the largest English towns 8846 births and 4977 deaths were registered during the week ending March 14th. The annual rate of mortality in these towns, which had been 16 6 per 1000 in the two preceding weeks, increased last week to 17 2 per 1000 In London the death rate was 16 3 per 1000 while it averaged 17 6 per 1000 in the 75 other large towns. The lowest death rates in these towns were 6 8 in Ipswich, 7 3 in Hornsey, 8 0 in East Ham, 8 3 in Walthamstow, 9 3 in West Hartlepool, 9 5 in Grimsby, 9 7 in Leyton, 11 0 in Warrington and 11 5 in Barrow in Furness, the highest rates were 21 2 in Stockport, 21 4 in Huddersfield, 22 3 in Hanley and in Blackburn, 22 6 in Manchester, 22 8 in Liverpool, 24 1 in Burnley, 24 6 in Swansea, and 27 7 in Wigan The 4790 deaths in these towns last week included 483 which were referred to the principal infectious diseases against 452, 452, and 501 in the three preceding weeks, of these 501 deaths 142 resulted from measles, 118 from whooping-cough 68 from diphtheria, 63 from diarrhœa, 48 from scarlet fever, 26 from "fever" (principally enteric), and 14 from small pox. In Willesden, Bournemouth, Northampton, Devonport, King's Norton, Grimsby, Middlesborough, West Hartlepool, Sunderland, and seven other smaller towns no death from any of the principal infectious diseases was registered last week, the highest death rates from these diseases were recorded in Croydon, Tottenham, West Ham, Hanley, Wigan, South Shields, and Swansea The greatest proportional mortality from measles occurred in Croydon Tottenham, Walthamstow, Wigan, Manchester, Salford, Hull, and Swansea, from scarlet fever in Hanley, Bolton, and Oldham, from diphtheria in Hanley, West Bromwich, Stockton on Tees, and Swansea, from whooping-cough in Croydon, Hornsey, West Ham, Reading, Hanley, Stockton, Wallasey, and Preston, and from diarrhœa in Oldham and South Shields. The mortality from "fever" showed no marked excess in any of the large towns Of the 14 fatal cases of small pox registered in these towns last week, seven belonged to Liverpool, and one each to Birmingham, Leicester, Birkenhead, Manchester, Rochdale, Burnley, and Leeds The number of small pox cases under treatment in the Metropolitan Asylums hospitals, which had been eight, five, and six in the three preceding weeks, had risen again to seven at the end of last week, two new cases were admitted during the week, against seven, one, and two in the three preceding weeks. The numbers of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday, March 14th, was 1798, against numbers declining from 2528 to 1791 on the 11 preceding Saturdays, 231 new cases were admitted during the week, against 205, 197, and 193 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London which had been 274, 271, and 251 in the three preceding weeks, rose again last week to 258, but were 293 below the corrected average number Influenza was returned as the primary cause of 20 deaths in London last week, against 25, 15, and 31 in the three preceding weeks The causes of 62, or 1 3 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner All the causes of death were duly certified in West Ham, Leicester, Nottingham, Salford, Bradford, Leeds, Newcastle on Tyne, and 45 other smaller towns, the largest proportions of uncertified deaths were registered in Northampton, Hanley Birmingham, Liverpool, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 18 1, 17 7, and 18 5 per 1000 in the three preceding weeks, rose again to 19 7 per 1000 during the week ending March 14th, and was 2 5 per 1000 in excess of the mean rate during the same period in the 76 large English towns. Among these Scotch towns the death rates ranged from 18 0 in Greenock and 18 3 in Leith to 24 3 in Dundee and 27 9 in Perth The 645 deaths in these towns included 28 which resulted from whooping cough, 15 from measles, 12 from diarrhœa, five from diphtheria, four from scarlet fever, and three from "fever," but not one from small pox. In all 67 deaths were referred to these principal infectious diseases last week, against 76, 59, and 75, in the three preceding weeks. These 67 deaths were equal to an annual rate of 2 0 per 1000, which was 0 3 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 23 and 32 in the two preceding weeks, declined again last week to 28, of which 16 occurred in Glasgow, eight in Edinburgh, and two in Dundee. The deaths from measles, which had been 12, nine, and 15 in the three preceding weeks, were again 15 last week, and included seven in Aberdeen, five in Edinburgh, and two in Leith The fatal cases of diarrhœa, which had been 18, 13, and 21 in the three preceding weeks, declined again last week to 12, of which four were registered in Glasgow, three in Dundee, and two in Greenock The deaths from diphtheria, which had been five, six, and one in the three preceding weeks rose again to five last week and included four in Glasgow The fatal cases of scarlet fever, which had been seven, five, and four in the three preceding weeks, were again four last week, and included two in Paisley The deaths from "fever" which had been two in each of the two preceding weeks, increased last week to three, and were all registered in Glasgow The deaths referred to diseases of the respiratory organs in these towns, which had been 109, 92 and 97 in the three preceding weeks, further rose last week to 117, but were 72 below

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[1] The remaining portion of the observations referring to an improved stomach pump and the illustration thereof have not been reproduced

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING FEBRUARY, 1903.

(*Specially compiled for* THE LANCET.)

Cities and Boroughs	Estimated population in the middle of 1903.	Notified Cases of Infectious Disease.										Deaths from Principal Infectious Diseases											Deaths from all causes.	Death-rate per 1000 living	Deaths of infants under one year to 1000 births.
		Small pox	Scarlet fever	Diphtheria.*	Typhus fever	Enteric fever	Other continued fevers.	Puerperal fever	Erysipelas	Cholera.	Total.	Annual rate per 1000 persons living	Small pox.	Measles	Scarlet fever	Diphtheria.*	Whooping cough.	Typhus fever	Enteric fever	Other continued fevers	Diarrhœa.	Total	Annual rate per 1000 persons living			
LONDON...	4,613,812	11	943	743	2	126	8	26	837	—	2191	6·2	1	174	31	78	223	—	30	2	92	681	1·8	5848	16·5	129
West Districts																										
Paddington	146 032	—	28	9	—	2	—	—	11	—	50	4·5	—	—	—	—	9	—	—	—	—	9	0·8	160	14·3	92
Kensington	178 409	—	11	7	—	4	—	—	6	—	27	2·0	—	—	—	1	26	—	2	—	1	30	2·2	212	15·5	161
Hammersmith	116 803	—	34	21	—	1	—	—	11	—	67	7·5	—	—	1	5	4	—	1	1	4	16	1·8	132	14·9	144
Fulham	147 780	—	41	30	—	3	—	1	14	—	89	7·9	—	1	1	4	8	—	2	—	3	19	1·7	156	13·8	116
Chelsea	74 169	—	12	10	—	1	—	1	1	—	25	4·4	—	1	—	—	5	—	—	—	3	9	1·6	110	19·3	207
City of Westminster	179 052	—	33	13	—	4	1	—	8	—	59	4·3	—	—	—	1	5	—	2	—	3	11	0·8	201	14·6	84
North Districts																										
St. Marylebone	131 234	—	36	18	—	8	—	—	19	—	79	7·8	—	1	2	1	6	—	—	—	5	15	1·5	166	16·5	86
Hampstead	85 197	—	12	6	—	2	—	1	4	—	25	3·8	—	3	—	1	4	—	1	—	1	10	1·5	70	10·7	125
St. Pancras	235 716	—	43	49	—	8	—	1	16	—	117	6·5	—	13	2	6	16	—	1	—	2	39	2·2	340	18·8	143
Islington	339 137	—	55	44	—	6	1	1	19	—	126	4·8	—	14	3	11	24	—	2	1	7	62	2·4	414	15·9	135
Stoke Newington	52 069	—	18	3	—	2	—	—	4	—	27	6·8	—	4	—	—	3	—	—	—	—	7	1·8	51	12·8	101
Hackney	224 082	1	48	69	—	10	—	2	18	—	138	8·0	—	5	—	7	4	—	1	—	5	22	1·3	247	14·4	111
Central Districts																										
Holborn	57 845	1	15	3	—	3	—	1	6	—	29	6·6	—	2	—	—	2	—	—	—	1	5	1·1	105	23·7	79
Finsbury	99 717	—	11	27	—	2	—	1	3	—	44	5·8	—	2	—	2	7	—	3	—	1	15	2·0	159	20·8	168
City of London	24 539	—	6	6	—	1	—	—	—	—	13	6·9	—	1	—	1	—	—	—	—	1	3	1·6	32	17·0	91
East Districts																										
Shoreditch	117,513	—	18	14	—	5	—	1	8	—	46	5·1	—	2	1	4	5	—	—	—	1	13	1·4	164	18·2	132
Bethnal Green	130 028	—	17	17	—	1	—	2	19	—	56	5·6	—	14	—	2	2	—	1	—	1	20	2·0	196	19·6	140
Stepney	302 163	7	46	60	—	16	—	3	27	—	149	6·4	1	19	2	7	14	—	2	—	11	56	2·4	457	19·7	114
Poplar	169 650	1	19	26	—	1	—	—	12	-	59	4·5	—	17	1	4	13	—	3	—	—	38	2·0	268	20·6	140
South Districts																										
Southwark	207 369	1	54	46	—	5	—	1	20	—	127	8·0	—	11	4	2	12	—	—	—	6	35	2·2	300	18·9	139
Bermondsey	129 801	—	35	12	1	6	—	1	7	—	62	6·2	—	7	2	1	1	—	2	—	4	17	1·7	203	20·4	164
Lambeth	307 711	—	63	32	—	7	1	4	14	—	121	5·1	—	13	4	4	17	—	2	—	5	45	1·9	397	16·8	112
Battersea	173 422	—	47	36	—	3	—	1	7	—	94	7·1	—	4	2	2	8	—	1	—	5	22	1·7	208	15·6	170
Wandsworth	249 678	—	74	72	—	7	—	2	27	—	182	9·5	—	2	1	3	14	—	2	—	8	30	1·6	247	12·9	149
Camberwell	265 562	—	60	42	—	8	—	—	27	—	137	6·7	—	14	1	4	4	—	1	—	3	27	1·3	333	16·3	136
Deptford	112 537	—	30	24	1	3	—	—	9	—	67	7·8	—	8	1	2	5	—	1	—	4	21	2·4	153	17·7	168
Greenwich	99 624	—	20	13	—	5	—	2	11	—	51	6·7	—	5	1	—	1	—	—	—	2	9	1·2	100	13·1	111
Lewisham	136 405	—	33	38	—	3	—	—	4	—	78	7·5	—	8	2	—	2	—	—	—	1	13	1·2	131	12·5	110
Woolwich	121 478	—	23	16	—	1	—	—	5	—	45	4·8	—	3	—	3	3	—	—	—	4	13	1·4	136	14·6	100
Port of London	—	—	1	—	—	—	—	—	1	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup

the number in the corresponding period of last year The causes of 22, or more than 3 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN

The death rate in Dublin, which had been 20 6, 25 9 and 27 8 per 1000 in the three preceding weeks, declined again to 26 6 per 1000 during the week ending March 14th During the past four weeks the death rate has averaged 25 2 per 1000, the rates during the same period being 16 7 in London and 17 8 in Edinburgh. The 193 deaths of persons belonging to Dublin registered during the week under notice showed a decline of nine from the number in the preceding week and included 10 which were referred to the principal infectious diseases, against 18, 14, and nine in the three preceding weeks, of these, two resulted from diphtheria, two from whooping-cough, two from "fever," and one each from small pox, measles, scarlet fever, and diarrhœa. These 10 deaths were equal to an annual rate of 1 4 per 1000, the death rates last week from the same diseases being 1 8 in London and 2 2 in Edinburgh The fatal cases of whooping cough, which had been five and three in the two preceding weeks, further declined last week to two The deaths from diarrhœa, which had been four and two in the two preceding weeks further decreased to one last week. The mortality from measles and from scarlet fever corresponded with that in the preceding week, while that from diphtheria and from "fever" showed a slight excess. No fatal case of small pox had been registered in any of the six preceding weeks. The 193 deaths in Dublin last week included 28 of children under one year of age and 48 of persons aged 60 years and upwards, the deaths both of infants and elderly persons showed a decline from the numbers recorded in the preceding week. Eight inquest cases and eight deaths from violence were registered, and 76, or nearly two-fifths, of the deaths occurred in public institutions The causes of eight, or more than 4 per cent., of the deaths registered in Dublin last week were not certified.

VITAL STATISTICS OF LONDON DURING FEBRUARY, 1903.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 6 2 per 1000 of the population, estimated at 4,613,812 persons in the middle of the year In the three preceding months the rates had been 9 1, 7 4, and 6 5 per 1000 respectively The rates were considerably below the average in Paddington, Kensington, Chelsea, City of Westminster, Hampstead, and Poplar, while they showed the largest excess in Fulham, St. Marylebone, Hackney, Southwark, Wandsworth and Deptford The prevalence of small pox showed a slight decrease from that recorded in the preceding month, of the 11 cases notified during February, seven belonged to Stepney and one each to Hackney, Holborn, Poplar, and Southwark. The Metropolitan Asylums hospitals contained five small pox patients at the end of February against 17, 14, and seven at the end of the three preceding months, the weekly admissions averaged three, which was the average weekly number in each of the four preceding months also. The prevalence of scarlet fever showed a slight decline from that recorded in the preceding month, this disease showed the highest proportional prevalence in Hammersmith, Fulham, St. Marylebone, Stoke Newington Bermondsey, Battersea, and Wandsworth The number of scarlet fever patients under treatment in the Metropolitan Asylums hospitals, which had been 2705, 2327, and 1980 at the end of the three preceding months, had further declined to 1820 at the end of last month, the weekly admissions averaged 205, against 301, 236, and 212 in the three preceding months The prevalence of diphtheria showed a slight increase as compared with that in the preceding month, this disease was proportionally most prevalent in Hackney, Finsbury, the City of London, Southwark, Wandsworth, Deptford, and Lewisham. There were 1030 diphtheria patients under treatment in the Metropolitan Asylums hospitals at the end of February, against 1019, 981, and 936 at the end of the three preceding months, the weekly admissions averaged 152 last month, against 157, 136, and 131 in the three preceding months. The prevalence of enteric fever showed a slight decrease from that recorded in the preceding month, the greatest proportional prevalence of this disease occurred in St. Marylebone, Hackney, Holborn, Stepney, Bermondsey, and Greenwich. The number of enteric fever patients in the Metropolitan Asylums hospitals, which had been 339, 210, and 172 at the end of the three preceding months, had further declined to 125 at the end of February, the weekly admissions averaged 13 last month, against 37 30, and 22 in the three preceding months. Erysipelas was proportionally most prevalent in St. Marylebone, Bethnal Green, Holborn, Wandsworth, Camberwell, and Greenwich The 26 cases of puerperal fever notified during the month included four in Lambeth, three in Stepney and two each in Hackney, Bethnal Green, Wandsworth, and Greenwich.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in public institutions having been distributed among the several boroughs in which the deceased persons had previously resided. During the four weeks ending Feb. 28th the deaths of 5848 persons belonging to London were registered, equal to an annual rate of 16 5 per 1000, against 18 2 per 1000 in each of the two preceding months The lowest death rates last month in the various metropolitan boroughs were 10 7 in Hampstead, 12 5 in Lewisham, 12 8 in Stoke Newington, 12 9 in Wandsworth 13 1 in Greenwich, and 13 8 in Fulham, the highest rates were 19 6 in Bethnal Green, 19 7 in Stepney, 20 4 in Bermondsey, 20 6 in Poplar, 20 8 in Finsbury, and 23 7 in Holborn The 5848 deaths from all causes included 631 which were referred to the principal infectious diseases, of these, one resulted from small pox 174 from measles, 31 from scarlet fever, 78 from diphtheria, 223 from whooping cough, 30 from enteric fever, two from simple continued fever, and 92 from diarrhœa, but not one from typhus fever The lowest death rates from these principal infectious diseases were recorded in Paddington, City of Westminster, Hackney, Holborn, Camberwell, Greenwich, and Lewisham, the highest rates were recorded in Kensington, St Pancras, Islington, Stepney, Poplar, Southwark, and Deptford. The fatal case of small pox belonged to Stepney The 174 deaths from measles were slightly in excess of the corrected average number, among the various metropolitan boroughs this disease was proportionally most fatal in Stoke Newington, Bethnal Green Stepney, Poplar, Deptford, and Lewisham. The 31 fatal cases of scarlet fever were 25 below the average number in the corresponding periods of the ten preceding years, the greatest proportional mortality from this disease occurred in St. Marylebone, Southwark, Bermondsey, Lambeth, and Lewisham. The 78 deaths from diphtheria showed a decline of 96 from the corrected average number, this disease was proportionally most fatal in Hammersmith, Fulham, Islington, Hackney, and Shoreditch. The 223 fatal cases of whooping cough slightly exceeded the average number in the corresponding periods of the ten preceding years, among the various metropolitan boroughs the greatest proportional mortality from this disease was recorded in Kensington, Chelsea, Islington, Finsbury, and Poplar The 32 deaths referred to "fever" showed a decline of 14 from the corrected average number, the highest "fever" death rates last month were recorded in Kensington, Hammersmith, Fulham, Finsbury Poplar, and Bermondsey The 92 fatal cases of diarrhœa were 41 in excess of the average number in the corresponding periods of the ten preceding years, among the various metropolitan boroughs this disease was proportionally most fatal in Hammersmith, Chelsea, St Marylebone, Stepney, Deptford, and Woolwich. In conclusion, it may be stated that the aggregate mortality from these principal infectious diseases in London last month was more than 12 per cent. below the average.

Infant mortality in London during February, measured by the proportion of deaths among children under one year of age, was equal to 129 per 1000 The lowest rates of infant mortality were recorded in Paddington, City of Westminster, St. Marylebone, Holborn City of London and Woolwich, and the highest rates in Kensington, Chelsea, Finsbury, Bermondsey, Battersea, and Deptford

THE SERVICES

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified —Surgeon E H Gill to the *Sirius*.

The appointment of Surgeon E A Shaw to the *Sirius* is cancelled.

Staff Surgeon D J P McNabb succeeds Staff Surgeon R R D Fasken at the Royal Naval Hospital, Stonehouse.

ROYAL ARMY MEDICAL CORPS

Captain E W Slayter has embarked for India. Lieutenant-Colonel H. E. R. James, the Commandant and Director of Studies at the Medical Staff College, is to have the rank and draw the pay and allowance of a Colonel R.A.M.C

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel T S Weir, Principal Medical Officer of the Quetta District, proceeds to Obbia to take up the appointment of Principal Medical Officer with the Somaliland Force.

IMPERIAL YEOMANRY

Herts Surgeon Major L. Drage resigns his commission. Dated March 14th, 1903.

VOLUNTEER CORPS

Royal Garrison Artillery (Volunteers) 2nd Kent Surgeon-Lieutenant-Colonel F Smith resigns his commission, with permission to retain his rank and to wear the uniform of the corps on retirement. Dated March 14th, 1903. 1st East Riding of Yorkshire Robert Athelstan Draper to be Surgeon Lieutenant Dated March 14th, 1903. *Rifle* 3rd (Duke of Connaught's Own) Volunteer Battalion the Hampshire Regiment Surgeon Captain C S Ticehurst resigns his commission and is granted the honorary rank of Surgeon Major, with permission to wear the uniform of the battalion on retirement Dated March 14th 1903. 4th (Perthshire) Volunteer Battalion the Black Watch (Royal Highlanders) Surgeon Lieutenant W Haldane resigns his commission, with permission to retain his rank and to wear the uniform of the battalion on retirement. Dated March 14th, 1903. 3rd Volunteer Battalion the Essex Regiment Supernumerary Surgeon Lieutenant D Mowat to be Surgeon Captain and to remain Supernumerary Dated March 14th, 1903 19th Middlesex (Bloomsbury) Supernumerary Surgeon-Lieutenant J G Fraser to be Surgeon Captain and to remain Supernumerary Dated March 3rd, 1903.

THE FRENCH ARMY

As our readers are aware, the unsatisfactory state of health of the French army as shown by its heavy death rate has been attracting a good deal of attention of late A long debate took place quite recently in the Senate concerning the sanitary condition of the French army, in the course of which M Clemenceau dwelt upon the fact that, whereas the general death rate in Germany was about the same as that of France, the annual rate of mortality in the French army was double that of the German army He thought that it was time that parliament insisted upon the introduction of reforms into the sanitary, medical, and other services of the army Several other speakers took part in the debate and General Andre replied He indicated a number of reforms which he proposed to introduce. These were chiefly of a sanitary nature or concerned the treatment of sick men in barracks. The chiefs of the health service, however, would in the future be able to correspond directly with the Minister Eventually an order of the day was passed urging on the Minister of War the necessity of the greatest vigilance being shown in the choice of men at the moment of recruiting, and taking note of his undertakings, it invited him to pursue with the greatest vigour those measures having for their object the improvement of the sanitary condition of the army

REFORM IN THE ARMY MEDICAL SERVICE.

The *Broad Arrow* of March 14th says The resuscitation of the Army Medical Service is a matter on which Mr Brodrick is to be congratulated. No doubt the improvement is mainly due to the encouragement and support which the profession has given to Mr Brodrick's policy But he has approached the question in an open minded and open handed manner and this has been recognised and responded to The Nursing Service has not yet been fully reconstituted, and the employment of ladies as departmental officials is not yet—to speak plainly—an assured success, but the authorities—be they men or women—have time on hand, and no doubt a satisfactory organisation of the nursing establishment will ultimately result '

DEATHS IN THE SERVICES.

Fleet Surgeon John Linton Palmer (retired) at Rock Park, Cheshire, on March 5th, in his seventy ninth year He was appointed surgeon in 1848, fleet surgeon in 1870, and retired in February, 1874

After presenting medallions and certificates to ambulance students at Batley on March 14th General Sir Redvers Buller paid a high tribute to the value of the ambulance brigades attached to his force during the late war.

Correspondence.

' Audi alteram partem."

REMOVAL OF FOREIGN BODIES FROM THE ŒSOPHAGUS

To the Editors of THE LANCET

SIRS,—In THE LANCET of Jan. 3rd, p. 70, there appears an annotation upon this subject specially dealing with the dangers attending the removal of the larger forms of foreign bodies which may become impacted in the œsophagus Speaking of the difficulties of removal, the writer states that the Roentgen rays serve to locate these bodies, thus affording much help in the extraction, but the full amount of assistance which the x rays can render was not appreciated until the idea occurred that the fluorescent screen could be utilised during the process of extraction, the shadow of the foreign body could be seen and also the shadow of the coin catcher or forceps employed for its extraction. That the x rays can be employed as suggested is quite true and as occasion demanded I have made use of this method for the last four or five years. Apart, moreover, from the facilities afforded in the removal of a foreign body, it is useful to see the shadow of the object itself at the very time of operation The first case of a coin seen and photographed by means of the x rays was reported by me early in 1896 and the advantage of being able to see the coin at the time of operation was impressed upon me then, because the first attempt at removal by one of my colleagues failed and the next photograph taken showed that the coin was no longer in the position in which it had been originally seen.

Of the valuable aid, therefore as pointed out in the annotation referred to which the x rays afford in such cases there can be little doubt particularly nowadays when we have apparatus at our command powerful enough for most cases, but inasmuch as difficulties and dangers are constantly arising during the extraction of foreign bodies it is well to remind your readers also that our armamentarium has in addition to the x rays, been greatly enriched of late years by the different instruments for direct examination In this country many attribute the methods of direct examination of the œsophagus to Killian (himself the last to make such a claim) whose great work in this way has been the direct examination of the trachea and bronchial tubes. The earliest works of Kussmaul, Semeleder Stoerk, and Waldenburg led the way for Mackenzie's œsophagoscope, but the introduction of electric incandescent lamps of suitable construction has brought the instrument to its present stage. The three names associated with this work are those of Mikulicz, von Hacker, and Rosenheim, but it is only fair to state that Killian's set of instruments suitable for the examination of the trachea and œsophagus are amongst the most practical in existence Speaking of the method Killian says that ' it may be employed in most patients by practical hands—as a rule local anæsthesia with cocaine is sufficient, in excitable patients and children general narcosis is necessary By means of œsophagoscopy the gullet may be systematically searched from above downwards, we are able to recognise the exact place and form of the foreign body its shape, its position, and its relation to the gullet wall, and we can see whether the latter is inflamed or has been injured by previous vain attempts at removal or pushing forward the foreign body Thus œsophagoscopy will show us everything that may be of importance for the purpose of the removal of a foreign body and it will further allow us to make an attempt at extraction *under the strict supervision of the eyes* "

At the last meeting of the British Laryngological Association I showed a photograph of a case illustrative of the value of both methods above referred to Briefly stated it was as follows The patient, a girl aged 10 years, was sent to me by her medical attendant on account of a doubtful history of a penny having been swallowed three months previously Instruments had been passed by others without detection of the coin The patient began to suffer from ill health and discomfort in the throat and on being placed in front of an x ray tube, using the fluorescent screen, I immediately and through the clothes saw the shadow of the coin in the commonest situation—viz , at the upper part of the œsophagus—and a stereoscopic photograph was taken. On the following day, under chloroform, the œsophagoscope was passed and with a simple hook the coin was easily and safely removed without the least risk to the tissues The operation was followed by the usual history of recovery to health after successful extraction.

In July last in association with Professor Killian I had the honour of introducing a discussion upon this subject at the Laryngological Section of the British Medical Association The general impression of those present was expressed by the *President, Dr Hodgkinson,* who in summing up the discussion indicated that in the diagnosis and extraction of foreign bodies in these regions the two methods—that of x rays and that of direct illumination—were complementary to each other, each had its advantages and yet in some instances each could aid the surgeon where the other absolutely failed Patients can only get full advantage of the most advanced operative procedure when both these methods in addition to many of the older ones are at the disposal of the surgeon

As an example of what can be accomplished by direct illumination Killian's brilliant instance of successfully removing a vulcanite plate from the gullet at the depth of 35 centimetres may be quoted In this case he attempted first of all to extract the plate, but the resistance was so great and the risk of injury to the tissues so imminent that he decided if possible to divide the plate. This he succeeded in doing by means of a snare with an incandescent platinum wire and, to use the words above quoted, under the strict supervision of his eyes Since the introduction of the x rays I have had many, and an ever increasing number of, cases of foreign bodies in the gullet and respiratory tract referred to my wards in the hospital and I now find use for both methods. Such patients should first be examined by means of the fluorescent screen and afterwards a photograph taken if the condition of the patient permit of the time required to do so It is much to be regretted for many reasons that Mackenzie Davidson's stereoscopic fluorescent screen has not been thoroughly developed for practical purposes. A stereoscopic photograph is to be preferred to the ordinary one inasmuch as it gives us an excellent idea of the position and the relation of the foreign body to the surrounding parts. It may be noted here that all attempts at instrumentation in the first instance may now be set aside unless in exceptional instances where it may be desirable for special reasons—say, of measurement—to make use of the probe Occasionally it may also be of advantage to pass an electric probe such as I described at the above mentioned discussion—that is, if the foreign body be a metallic one. Having commanded all available information as to the situation and nature of the foreign body its relation to the surrounding parts, the history, &c. the surgeon may select the instrument which he considers most suitable for removing the body, but all the others should be at hand If the operator, after considering all the points, elects to try to remove the foreign body by means of the x rays, using the fluorescent screen, there can be no doubt that he will find them of advantage, especially if he should take the precaution of operating in a room which may be thoroughly darkened if necessary (the light of the tube itself also being excluded) and with a diaphragm of a dense material placed between the source of the rays and the patient. These precautions apply equally whether the patient is sitting upright or lying on a table. This method, moreover, has the advantage of being less troublesome to the patient than the passage of the œsophagoscope. On the other hand, notwithstanding the difficulties of œsophagoscopy, the trouble to the patient, or the necessity of narcosis sometimes, too much consideration must not be paid to these. There can be no question of the supreme advantage of actually being able to touch, to examine, and to extract under direct illumination. Serious risks to the tissues in the extraction of foreign bodies are always present and in cases where there is reason to believe that there has already been injury either during the act of swallowing or subsequently the greatest care is necessary It is probably in such cases that œsophagoscopy will offer the greatest advantages. But Killian goes further and states that if one sees that the wall of the œsophagus has been deeply injured extraction should not be attempted—that is to say, in these circumstances he limits his instruments to purposes of diagnosis—rather recommending early œsophagotomy as it is easier to locate the injured parts while the foreign body is still fixed in the walls No doubt the passage of such instruments into the œsophagus and trachea is attended with difficulties and requires practice, and it is only within late years that the methods became practical. These facts, no doubt, account for the hitherto limited use of the œsophagoscope in this country at least but after the results already recorded by many it is reasonable to expect that it will be more frequently used in the future.

I am, Sirs, yours faithfully,

John Macintyre, M B , C M. Glasg , F R.S Edin ,
F R M S ,

Surgeon for *Diseases* of the Nose and *Throat Glasgow Royal* Infirmary, and Lecturer on Diseases of the Nose and Throat Anderson s College Medical School

March 16th 1903

RECENT ACTS AFFECTING THE COMPENSATION OF WORKMEN FOR INJURY

To the Editors of The Lancet

Sirs,—May I, through your columns, direct the attention of the profession to the working of the Workmen's Compensation Acts and to the effect of the various regulations of the insurance companies (to which the legal responsibilities of the employers are, in most cases, now transferred) on the immediate treatment of injuries and the payment of surgeons for carrying it out. Formerly, when called in to accidents occurring at neighbouring works my account was rendered to, and paid by, the employers without question. Of recent years things have changed In many cases the men, if injured, were still directed to go or to be taken to me, the accounts were too frequently however, repudiated by the firms and I was referred to the injured men for payment, although sometimes they had been subsequently taken to a hospital or had no permanent address In one case I received a cheque for attending on a workman who was *not* insured, though for the remainder of the account, which was for attending an insured man brought to me in precisely similar circumstances, I was referred to the patient, who, indeed, paid me without application on my part, which I refused to make to the surprise of his superiors who said that they knew the man would pay and affected to misunderstand why I would not, by rendering the account to him, accept his liability instead of theirs. In another case, although the foreman told the injured man to come to me and had daily certificates, the disability did not last 14 days , hence, no compensation was forthcoming from the insurance company and the firm refused me payment, alleging that the foreman was not authorised to ask for the certificates and that the man was liable for the attendance , they did not know his address and I had only that of the firm he had worked for This very firm, a large employer of labour, undertaking huge Government contracts, after I had declined on account of the previous case to go to their works again without a written order from the head office or a responsible servant, actually removed a man with a badly smashed thigh to a hospital in a hansom cab without any apparatus for steadying the fragments after keeping him for nearly two hours on the ground (he had fallen 20 feet and his face was terribly contused and wounded also) rather than themselves call a surgeon in face of the insurance company's request *not* to summon one result, three and a half inches shortening of the femur which I measured myself when removing the plaster case in which he was discharged from the hospital The employing firm told me in a written communication that they had orders from the insurance company in all cases to leave the injured man or his friends to send for professional assistance

This brings me to the climax I lately received the following form, issued, as I am told by the employers, by one of the largest insurance companies, though bearing no name or superscription or anything to indicate its origin and forwarded by the employers through the medium of the injured man —

I CERTIFY that ..
of .. .. is suffering
from .... that he is totally
disabled from work, that I am of opinion that such disablement is
the direct and evident consequence of an accident to
on the .... day of and that I expect
said disablement to continue for weeks from
Date
Signature ..
Qualifications
Address

The fee for this certificate (if any) to be paid by the injured person

This certificate is very precise in its terms, is obviously for the protection of the insurance company, and certainly, involving as it does a possible sum of £300, is, should a dispute arise and the case come into court, fraught with considerable possibilities of professional discredit to any man who carelessly fills it up The footnote, *implying* that a fee is an imposition, induced me to trouble you with this account of a small portion of my experiences which, I fear, must be multiplied ten thousand times daily up and down the country The manager of the firm who forwarded it to me and who pay the issuing insurance company an *extra* premium (it, at least, does nothing for nothing) in order that their men may receive pay during the fortnight following injury as well as that prescribed by the Acts, apologised for the form, said, as an expert himself, that he should certainly not sign a document giving a professional opinion without a fee and quite appreciated my objection to doing so, at the same time he stated that so far as he was concerned it was a necessary preliminary to obtaining the man's money from the insurance company. It is limited liability concerns in association with insurance companies which are (though not always) the chief offenders The private firms and individual employers of labour are still honest enough to pay for what they require (one firm paid me a guinea last week for a similar certificate) and humane enough to provide, at any rate, skilled first aid and, in many instances, surgical attendance throughout for their unfortunate employés as they did before these Acts were passed. I do not now attend men who are unknown to me except the fee is paid at the time or unless the man is provided with a written order or accompanied by some responsible member of the firm employing him.

I trust that some more influential members of the profession will take up the question of this new and considerable tax and legal responsibility sought to be imposed on us by these companies without fee or reward and with, I think, an accompanying insult (*vide* footnote to certificate above) The fee might be graded in proportion to the sum involved, so as not unduly to tax small compensations for trifling injuries, but a fee should certainly be paid in all cases As it is the hospitals are now treating many cases which used to come under private surgeons and in many more cases are receiving their patients in a far more highly damaged state than was the case before. I have made quite a lot of bad debts by attending workmen for whom their masters would formerly have willingly paid but who now plead the instructions of the insurance companies to whom they have transferred their obligations as their excuse for omitting to do so At any rate, these insurance people ought to be made to pay for the certificates they require for their own protection (since they have for a consideration taken over the responsibility of those to whom the facts were known) without the wretched suffering employé, out of wages for a fortnight and on half pay afterwards, being mulcted in the cost or the surgeon being compelled to grant one gratis I think too that where an accident occurs and the man is unable to obtain efficient first aid the employer should be responsible for any further injury resulting from neglect on his part to provide the same for his servant within a reasonable time.—I am Sirs yours faithfully

WM J TOWNSEND BARKER M R C S Eng,
L R C P Lond L S A, D P H Cantab
Late Physician's Assistant Bristol General Hospital
Fulham S W March 10th 1903

THE RISE OF BLOOD PRESSURE LATER LIFE

To the Editors of THE LANCET

SIRS,—May I be allowed a few further remarks on this important subject? It is no little satisfaction to me to find myself arriving at the same conclusion as Sir Richard Douglas Powell in regard to the situation and nature of the resistance in cases of protracted high systemic arterial pressure—i e., that it is situated in the systemic arterioles and due to their widespread hypertonus, and I am grateful for his courteous reference to my former letter I may say in regard to Sir Richard Powell's remarks on the low blood pressure in Addison's disease that I too have been accustomed to associate it with a deficiency in the blood of adrenalin, and if deficiency of this substance is capable of causing protracted *hypo*tonus, why, it may be asked, should not an excess of it or some other vaso-constrictor be competent to induce a protracted *hyper*tonus?

That vascular resistance is, as Professor T Clifford Allbutt presumably holds, essentially due to the friction of the blood particles against one another rather than against the vascular walls, there can, I imagine, be little doubt, and granting this it is evident that, other things being equal, marked alterations in the degree of viscosity of the blood would induce corresponding modifications in resistance, but my contention is that other things are not likely to remain equal and that given a rise of viscosity so great as to cause a very decided augmentation of resistance, the compensatory action of the vaso-motor system would come into play and lower the resistance to the degree most compatible with the well being of the organism, for any uncompensated increase of resistance could only lead to harm by wearing out the heart and arteries without any countervailing good and I cannot think that the organism would self inflict this purposeless injury when it possesses a readily available means of avoiding it We know that large quantities of blood may be injected into the vessels of an animal and large quantities withdrawn and yet the blood pressure remain the same, so nicely does the vaso-motor system adjust the capacity and resistance of the arteries to the altered conditions, and if it is capable of effecting this adjustment to modifications of blood mass, why not also to modifications of blood viscosity? A further argument may be advanced against the hypothesis of augmented viscosity, as we may call it All are, I believe, agreed that these cases of protracted high pressure involve essentially the systemic arteries, the pulmonary arteries tending to escape Now, on Professor Allbutt's hypothesis ought there not to be a proportionate increase of blood pressure in both these systems, seeing that the hyperviscous blood must circulate through each system alike? On the other hand, the limitation of the increased pressure to the systemic arteries finds a ready explanation in the view advanced in my former letters

In considering how far the capillaries constitute the chief seat of resistance it is very necessary that we should all be agreed as to what precisely we mean by "capillaries" The term does not seem to have quite the same meaning for many of our continental brethren as for most of us on this side of the Channel. By capillaries I mean the non muscular blood tubes which connect the muscular arterioles with the non-muscular venules Now it seems to me to be quite incredible that the resistance in these tubes can ever be augmented to a degree equivalent to a rise of 60, 70, 80 Hg mm. of blood pressure in the systemic arteries, yet these elevations are by no means rare. Such an assumption implies that the pressure would fall to this extent during the passage of the blood through the capillaries—that the blood pressure at the beginning of a capillary system might be 60, 70, 80 Hg mm. greater than at the end of it What effect this would have upon the delicate capillary vessels what distortion of them it would cause, how far it would disturb the normal interchange between the intra and extra-capillary fluids, what havoc it would play with metabolism generally, I forbear to discuss, for the assumption is to me inconceivable And, again I would ask, as I have asked in reference to the hypothesis of increased viscosity if the augmented resistance in the cases in question is situated in the capillaries, ought not pulmonary resistance to increase *pari passu* with systemic, since the capillaries of each system are equally subjected to the influence of the poisoned blood?

The fact that arteriolar aneurysms are common in cases of prolonged high pressure Sir William H. Broadbent regards as allow us to make an attempt at extraction *under the strict supervision of the eyes* "

At the last meeting of the British Laryngological Association I showed a photograph of a case illustrative of the value of both methods above referred to Briefly stated it was as follows The patient, a girl aged 10 years, was sent to me by her medical attendant on account of a doubtful history of a penny having been swallowed three months previously Instruments had been passed by others without detection of the coin. The patient began to suffer from ill health and discomfort in the throat and on being placed in front of an x ray tube, using the fluorescent screen I immediately and through the clothes saw the shadow of the coin in the commonest situation—viz , at the upper part of the œsophagus—and a stereoscopic photograph was taken. On the following day, under chloroform, the œsophagoscope was passed and with a simple hook the coin was easily and safely removed without the least risk to the tissues The operation was followed by the usual history of recovery to health after successful extraction.

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I am, Sirs, yours faithfully,

JOHN MACINTYRE, M B , C M. Glasg , F R.S Edin., F R M S ,

Surgeon for Diseases of the Nose and Throat, Glasgow Royal Infirmary and Lecturer on Diseases of the Nose and Throat Anderson's College Medical School

March 16th 1903

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This brings me to the climax I lately received the [illegible]—Ure's Dictionary of Arts, [illegible] p. [illegible] (seventh edition), [illegible].

It is also described thus in [illegible]:

"Magnesium [illegible] [illegible] [illegible] [illegible] [illegible] has been [illegible] [illegible]."—Thorpe's Dictionary of Applied Chemistry, [illegible].

From these descriptions it will be seen that it is a salt possessing some very remarkable properties. My attention was first called to it by a paper by Dr. Kuemmell[1] of Hamburg, who advocated its employment in place of boric acid [illegible] [illegible]. I have reason to believe that it has properties which are favourable to the inhibition of the [illegible] [illegible] of calculi. Some evidence of this is offered in my recent address at the [illegible] Medical Congress.[2] I have, however, chiefly used it as a substitute for boric acid, for the reasons already assigned. Patients will take it in sufficient doses for considerable periods without complaining of dyspeptic symptoms, and under its action the urine, as in chronic cystitis or pyelitis, will often assume normal properties. There is a reference to its preparation and use in the last edition (1892) of Martindale's "Extra Pharmacopœia," under the designation of "compound powder of borocitrate of magnesium" (p. 71). In this form it is made up with some sugar. I prefer it so [illegible] for making up the solution. For all other purposes I use the borocitrate without the sugar in the proportion of a teaspoonful or more in a pint of warm water. It is more soluble than boric acid and in some cases of chronic cystitis with alkaline urine the mixture of its [illegible] is more efficacious. In fact, as stated, I have for some years past not placed much reliance on boric acid in [illegible] bladder work. Previously boiled water is equally efficacious. I shall be glad to be permitted to make use of this opportunity for offering a few remarks in favour of the substitution of borocitrate for boric acid and your comments in reference to the [illegible] [illegible].

I am, Sirs, yours faithfully,

REGINALD HARRISON.

Lower Berkeley-street, W., March 14th, [illegible].

ASEPTIC AND ANTISEPTIC SURGERY.

To the Editors of THE LANCET.

SIRS,—In the interesting address by Mr. W. Watson Cheyne on the above subject, published in THE LANCET of Jan. [illegible], p. 347, it is contended that one trained solely in aseptic methods is less able to adapt himself to his surroundings once he has to practise surgery far from the polished walls of a modern operating theatre. For 5 years I have been engaged in operative work in the Sudan and certainly have not found this to be the case. [illegible] there are many lessons learnt in an aseptic school that may still be followed out. A small portable steriliser is capable of boiling instruments and steaming sufficient dressings, swabs and gauze for the most exacting operation. I still, too, wear cotton gloves steamed along with the gauze. The instruments may be disinfected by [illegible] in a little [illegible], which is set on fire and allowed to burn out. In treating tuberculous abscesses I have a tin reservoir wrapped in a towel and boiled in the kitchen. This is brought in immediately before the operation. In abdominal cases sterilised water for wringing out gauze pads and protecting the bowel is brought in in two saucepans. One of these, covered by a towel to prevent the ingress of dust, contains cooled water that has previously been boiled, the other is brought in hot from the kitchen. By this means I am able to mix a sufficient quantity of water in an ordinary pudding basin for use at any time during the course of the operation. I will not occupy more space with further details of technique, but this should suffice to show that one need not necessarily give up all aseptic methods because the walls are of mud and, may be, the floor too. Though there be no enamelled floors or foot-taps to look after there is still some scope for following up the same idea in paying attention to the enamel of all the vessels employed and such like matters. Carbolic towels, of course, must needs be used, but this does not mean that any less care is given to having them carefully washed and boiled after each operation. I certainly think that in a country where these [illegible] are not [illegible] and [illegible] summer [illegible] in thousands, the use of [illegible] [illegible] [illegible] [illegible]. I do not agree, however, that one trained in an aseptic school is more likely to blunder with chemical methods [illegible] [illegible] [illegible] disinfecting the operator's hands, [illegible] [illegible] [illegible] the previous thorough use of soap and water. To be of germicidal value the hands must needs be immersed so long that the skin will be [illegible] [illegible] [illegible] (right or wrong) [illegible] [illegible] [illegible]. For instance, [illegible] [illegible] the results of each of surgeons [illegible] [illegible] equally good [illegible] [illegible] [illegible]. Such a man, and I have met him, [illegible] considerable danger.

My own results (as one who with an aseptic training at St. Thomas's Hospital has since had to make shift with mixed methods) perhaps may be of interest. For the purpose of comparison I like to take the radical cure of inguinal hernia. I find that since coming to the Sudan I have operated on exactly 20 cases, all of which have healed by first intention. I have employed Bassini's method, using silkworm gut for the deepest sutures and [illegible] the aponeurosis of the external oblique. The skin has always been tied with silk. In only one instance has there been any trouble with the ligatures. In that case two months after the operation two small boils formed in the line of the incision and after producing two silk sutures gave no further trouble. Though I have always used only steamed gauze with [illegible] (not sterilised) absorbent wool as a dressing, I am of opinion that in circumstances such as we have in this country dressings permeated with antiseptics should have the advantage. In a well-ordered hospital at home, where the [illegible] that a dressing has been soaked with urine or has come through is promptly [illegible] and attended to, the matter is of little moment, but where such is not the case an antiseptic in the wool ought to [illegible] the danger should there be any delay in changing the dressing.

I am, Sirs, yours faithfully,

A. [illegible], F.R.C.S. Eng.

Wad Medani, Sudan, March 16th, [illegible].

MIDWIVES FOR THE RURAL POOR.

To the Editors of THE LANCET.

SIRS,—As a result of the conference on March 3rd, which you so kindly reported, an association has been formed to train and to supply midwives for rural districts, either to add to nursing associations already formed or to help very poor parishes unable to support a nurse or midwife without assistance. It is earnestly hoped that many who read this will gladly help in starting this good work, for there must be necessary expense at first in organising, training suitable women, and assisting needy districts. At the same time every effort will be made to teach the people to help themselves by small subscriptions and payments, as has been found to answer so well in Miss Broadwood's scheme.

The association will be on a broad basis, including various schemes suitable to different districts, but [illegible] [illegible] will be sought in every [illegible] and her fee paid whenever [illegible]. The midwives [illegible] are to be homely women willing to help the poor [illegible] as much as they [illegible] in the [illegible]. I shall gladly hear from any willing to help or to co-operate in the work of the association.—I am, Sirs, yours faithfully,

JOSEPHINE JOHNSON,

[illegible] Hon. Sec. of the [illegible].

[illegible] Park, [illegible], Sussex, March 14th, [illegible].

COTTAGE HOMES FOR PAUPER CHILDREN.

To the Editors of THE LANCET.

SIRS,—In an annotation in THE LANCET of Feb. [illegible], p. [illegible], you remark that the Hackney and Plymouth boards of guardians have adopted similar method favouring the view that the seat of hyper resistance is in the capillaries rather than in the arterioles It must be remembered, however, that local arteriolar dilatations are continually occurring throughout the body and are amply sufficient, in cases of widespread arteriolar hypertonus, to cause considerable local augmentations of intra arteriolar pressure. It is scarcely necessary to say that in my explanation of prolonged high blood pressure I fully concur with Professor Allbutt's view—in which he has for some years stood alone—to the effect that elevation of blood pressure does not depend directly upon arterio-sclerosis No degeneration short of a widespread obliterative change in the arterioles so pronounced as to render a compensatory vaso dilatation impossible, is in my opinion likely to cause a permanent increase of resistance and I, at least, have never met with such a case.

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[1] Berliner Klinische Wochenschrift, Nov. 2nd, [illegible].

[2] Brit. Med. Jour., Jan. 17th, [illegible].

Dr William Russell and Dr H Oliphant Nicholson are emphatic in their statements that it is quite common to get low blood pressure with arterial hypertonus I believe that I am stating a mere physiological truism when I say that except in cases of decided cardiac inadequacy, a general hypertonus of the systemic arterioles necessarily leads to augmentation of the systemic arterial pressure, but Dr Nicholson at least does not appear to accept this proposition. He refers to cases of hypertonus accompanying 'severe abdominal pain, tympanites or any form of shock peritonitis or shock," in which the pressure is frequently low, in spite of "a general arteriole contraction," apparently inferring from the hypertonus of certain superficial arteries, such as the radials, the existence of a general systemic hypertonus of the arterioles I submit that such an assumption is not warranted. Hypertonus of the radial arteries might conceivably go along with hypotonus of the radial arterioles—though I admit the unlikelihood of this—and it is certainly consistent with a widespread relaxation of deep-seated arterioles Whenever, with radial hypertonus and a sound heart, the radial pressure is low we should suspect hypotonus of some large vascular area, and it is well known that in all cases of shock there is extreme relaxation of the splanchnic arterioles causing a rush of blood into the splanchnic veins and a fall of arterial pressure, a fact which sufficiently explains the low radial pressure in the cases just referred to The object of the hypertonus in areas other than the splanchnic in these cases is, presumably, to keep what little blood there is in the arteries from escaping too rapidly into the veins. Whether with the contraction of the superficial arteries frequently observed in tuberculous meningitis there is a similar relaxation of internal ve sels I cannot, of course, say, but I should myself be much more inclined to attribute the low pressure which Dr Nicholson has observed in these cases to such relaxation than to the only alternative—namely, a primary feebleness of the cardiac beat.

I have suggested that protracted augmentation of arterial pressure has for its object an augmented renal excretion and that to this end there takes place a concomitant augmentation of the intra renal arterioles How can one doubt, to take an instance, the urgent necessity in advanced "granular kidney" (in which possibly five sixths of the original secreting structure have been removed) of a vigorous renal circulation in order to stave off the on coming of fatal uræmia—in order "to parry the stoke of death " if I may be permitted Professor Allbutt's graphic figure, and what means so competent to secure this end as the one suggested? Does not the extreme hypertonus so frequently observed in uræmia tell, as plainly as anything can tell, of the brave fight which the vaso motor system is making against the forces of death? and is it not more rational to regard such hypertonus rather as a manifestation of the many sided *vis medicatrix* than as an act of suicide?—which it most certainly would be did the intra renal arterioles share in the hypertonus. Moreover, the increased flow of urine in all but the last stages of granular kidney testifies to the activity of the renal circulation in this affection.

Dr Nicholson contends that this interpretation is not of universal application and I can well believe that there are exceptions to it. I do not, however, think that puerperal eclampsia with hypertonus can be brought forward as one of them. It is true that, in spite of the hypertonus and increased blood pressure observed in this malady, "the secretion of urine is notably diminished, and as hypertonus and increased blood pressure become more pronounced the urine may be suppressed altogether", but this suppression does not prove that the intra renal arteries are not dilated—it results, I submit, from a grave perversion (as testified by the occ rence of albuminuria) in the functions of the kidneys, ow to the rush of toxins towards the renal tubules in their n effort to escape from the body

In conclusion, Sirs, I trust that I may be permitted to expr my deep appreciation of the eloquent and thought-stimul ing paper which has evoked this discussion. Though may not be successful in carrying his audience with him all points Professor Allbutt will, I doubt not be more th content if he succeeds in duly impressing upon the youn generation of physicians what are after all the m important words of his paper 'I cannot urge too stron the perils of neglecting these incipient increases of bl pressure and the importance of educating the finger in t early detection of them " He who misses the lessons to learnt from a clinical study of blood pressure is a p physician indeed, for he loses many a valuable opportun of helping his patients To the teachings of three men this department of clinical medicine—Sir William Broadbe Professor Allbutt, and Dr George Oliver—I owe a de which I cannot well exaggerate, and it is pleasant to ha an opportunity of recording the fact.

I am, Sirs, yours faithfully,

Wimpole-street March 8th, 1903. HARRY CAMPBELL.

AN EARLY SYMPTOM OF TYPHOID FEVE

To the Editors of THE LANCET

SIRS—I have noticed in the history of many cases typhoid fever the presence of an early symptom—viz, feeling of stiffness of the neck. In some cases it appea before any other symptom during the period of incubatio in others it appears coincidently with malaise and headach Its presence, as a rule is only elicited by direct inquiry importance having been attached to it In young childr it is frequently shown to be present by signs of pain wh the head is turned, as when being washed. While reside medical officer in the Children's Hospital in Liverpool I fou that the nurses observed this in many of the cases of ear enteric fever In several cases of enteric fever in adul this symptom has been the only one for three or four day sometimes combined with sore throat, before the onset other symptoms.—I am, Sirs yours faithfully,

BRUCE C KELLY, M B, C M Edin, M R C S Eng,
L R C P Lond.,
Formerly House Physician Edinburgh Royal Infirmary, and Senio
Resident Medical Officer Hospital for Children Liverpool
Wells Somerset

THE EFFECTS OF BORIC ACID AS AN INTERNAL MEDICINE

To the Editors of THE LANCET

SIRS,—Your annotation in THE LANCET of March 14t p 749, on the disturbing effects of boric acid on tl digestion of healthy persons and invalids when tak internally is one that I can entirely indorse. Speakin personally it is about the only thing I know of whic is capable of giving me indigestion at almost a moment notice. I have often recognised it in this way whe administered in conjunction with milk, butter, potte shrimps, and many other articles of diet For medicin purposes I have long discarded it for this reason i appreciable doses So far back as 1886 I have advocate and largely used in practice a substitute for boric ac which is free from this serious objection and possesses th properties claimed for boric acid whether taken internall as a medicine or used as a lotion for washing out the bladde As an article of commerce for preserving such foods as I hav instanced I believe it has similar advantages. In th chemical world it is known under the name of boracite an is thus described —

'Boracite a borate of magnesia with chloride of magnesium co taining when pure 62 5 per cent of boracic acid (anhydride) I crystallises in the cubic system often in hemihedral or tetrahedr forms and is remarkable for being pyro-electric—that is for exhibitin electrical polarity when exposed to a change of temperature Th mineral is further notable for its anomalous optical properties thus ray of light in passing through a crystal of boracite suffers doubl refraction contrary to the general rule that crystals belonging to th cubic system are not capable of thus affecting light The probabl explanation of this anomalous behaviour on the part of boracite i beyond the scope of this article. Boracite is usually found in associa tion with deposits of rock salt and gypsum The mineral occur crystallised at Lüneburg in Hanover and at Stassfurt nea Magdeburg the latter locality also yields a massive boracite calle maintains the fact of having tried *feeding* diabetics on sweetbreads, and of injecting liquor pancreaticus subcutaneously without success, but this treatment is not quite on all fours with the administration of the raw gland.

I am, Sirs, yours faithfully,

March 16th, 1903. RUSTICUS

THE
ORGANISATION OF THE PROFESSION

(FROM OUR SPECIAL COMMISSIONER.)

The East Glamorgan and Monmouthshire Colliery Surgeons Medico-Ethical Society —Rules of Medical Etiquette —Neglect of the Economical Questions —Establishment of a Medical Aid Committee and the Exploitation of Medical Officers.

SOME ten years have already elapsed, I was assured since a medico-ethical society was founded at Pontypridd Mr Evan Naunton Davies of Dinas and Mr Evan Jones of Aberdare were the originators and the society has now 40 members who practise in the Rhondda, Aberdare, and Merthyr districts. By far the greater number of practitioners have joined the organisation. Still there are some exceptions The full title of this organisation, as already mentioned, is the East Glamorgan and Monmouthshire Colliery Surgeons' Medico-Ethical Society[1] According to its rules its object is to uphold the interests and to promote the good fellowship of the members of the profession by adopting a code of etiquette deciding questions of custom and courtesy in practice and arranging misunderstandings The members must be registered practitioners and hold a colliery appointment In this rule we see the remains of old ideas. Formerly all organisation was specialised just to one particular interest, as, in this case, that of the colliery surgeons It is only experience that teaches that there is no such thing as an absolutely separate interest Every interest is linked with some neighbouring interest, which in its turn extends still further, and it is impossible to draw a line in this process of expansion For instance, in this case, what would be the position of a practitioner in one of the larger towns—Aberdare, or Pontypridd itself—who did not seek to attend colliers but contented himself with the workpeople and tradesmen of the town, would he be outside the movement altogether? If so he might act against the rules laid down. In Northumberland it was the other way about, it was the town practitioners who commenced to organise at Newcastle, the colliery surgeons subsequently followed their example and finally the two movements, which were distinct at first, amalgamated to form the Northumberland Medical Union. There is still some distance for the South Wales practitioners to travel before they reach this point. Again, there is no trace of an indemnity fund in their rules and the annual subscription is only 10*s* 6*d* This will not carry them far if they become involved in a serious struggle. Of course, special levies could be made but it is well to be at least partially prepared before anything occurs.

The Medico-Ethical Society is governed by a president a treasurer, two secretaries and a committee of five, but past presidents are *ex-officio* members of the committee. Every year the two members of the committee who have attended the fewest meetings are not eligible for re election and a president also is not re-elected if he has been two years in office Luckily there is no such rule in regard to the secretaries It may seem advisable and desirable not to allow a society to be always governed by the same persons, but, on the other hand, it is a matter of extreme difficulty to discover administrators and organisers who have at once the capacity the time, and the desire to serve. Consequently, the fewer rules of this sort the better In matters of practical administration an organisation should be left to do what is most expedient as the circumstances arise instead of being fastened down by a lot of petty rules that do not guarantee any important principle but may cause embarrassment, especially in moments of difficulty or emergency The committee has to arbitrate in disputes and to interpret the code of etiquette and this might involve some very complicated questions. It may meet as often as necessary and must meet at least once a quarter But this committee is only to judge in disputes voluntarily submitted and when the parties concerned have given a written promise to abide by the decision thus obtained. This is all well in its way but it obviously shuts out precisely the sort of case where the intervention of a representative professional organisation is most needed If the disputants are so well disciplined that they will give a written agreement to accept the verdict of the committee by far the greatest difficulties have already been overcome. Then there are rules about the discussions at the meetings, that the opening paper shall not take more than half an hour to read, and similar regulations which are all very good for a debating society but which are quite out of place when some crisis has to be dealt with. It is true that for such a circumstance special meetings may be convoked Nevertheless it is obvious that the framers of the rules did not quite realise the sort of work that such an organisation would have to do unless some other more practical body came forward to take its place

Looking over the rules and the circumstances it seems to me that this is a deontological society rather than a medical union. It should have been represented at the International Congress of Deontology held in Paris in 1900[2] where its ethical rules would have been highly appreciated. These form the second portion of their general statute book and are entitled a "Code of Medical Etiquette" The following is the text of the general principles adopted —

> *Article 1* —No member shall lower the dignity of the profession by the following or any similar practices —(*a*) Soliciting private practice, either by public advertisement in the newspapers by placards or by the public distribution of circulars cards or handbills (This is not to be interpreted as prohibiting a single announcement of a change of professional residence) (*b*) Deriving pecuniary profit from the sale of any secret remedy (*c*) Entering into compact with a druggist to prescribe gratuitously and at the same time receiving a share in the profits arising from the sale of the medicines prescribed. (*d*) Publishing or permitting the publication of cases and operations in non professional newspapers or journals. (*e*) Shielding unqualified persons in illegal practices
>
> *Article 2* —No member shall belong to or identify himself with, any professional sect or body whose distinctive name or title implies that its members base their practice on exclusive views of treatment. (This article is not to be so interpreted as to interfere with full liberty of opinion on scientific questions)

After this there follow rules as to meeting consultants and not keeping either party waiting more than ten minutes and then the text says that—

> Precedence in consultation shall be given to the physician or surgeon who is a recognised consulting practitioner or where this rule is inapplicable to the practitioner last called in. In cases where there is a considerable disparity of age the rules as to precedence should be applied with the greatest delicacy and consideration

Of course, there is a rule to the effect that differences of opinion shall not be divulged if this can possibly be avoided, but when such differences are absolutely irreconcilable then the matter should be frankly and impartially explained and the patient's friends left to decide whether they shall seek a third opinion or adopt any other course Then there is a rule which applies apparently to medical experts engaged in legal inquiries or to medical officers of health It says —

> Where it becomes the duty of a practitioner occupying an official position to see and report upon a case of illness or injury it is desirable that he should as a matter of courtesy communicate where practicable, with the practitioner in attendance so as to give him the option of being present The practitioner seeing the case officially shall scrupulously avoid interference with or remarks upon the treatment that has been adopted

On reading this the inquiry naturally suggests itself as to whether a medical officer of health would necessarily be a colliery surgeon, and, if not, how far would he follow the rules of a society to which he did not belong Of more general application to the members themselves are the rules affecting attendance on patients on behalf of another practitioner It is here stipulated that if a member of the society is to attend to the practice of a professional friend during absence or sickness he shall not charge either the patient or the absent practitioner unless some special arrangement has been made If no arrangement has been made and an emergency arises the practitioner, after providing for that emergency, must retire in favour of the ordinary medical attendant, but he is entitled to charge the patient for his services. If it be an obstetric emergency the practitioner shall cease attendance when the emergency is provided for or on the arrival of the proper attendant. If, however, the patient has been delivered, then the fee should be shared between the two attendants The two following rules are somewhat complex, so that I will not attempt to give an abbreviated version —

> A member called upon without previous arrangement to attend a patient during sickness or absence from home of the regular medical adviser shall intimate his wish to cease attendance as soon as the

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[1] THE LANCET March 14th 1903 p 761

[2] THE LANCET July 23th (p 275) and August 4th 1900 (p 342)

the disposal of their pauper children and you proceed to point out in a sympathetic spirit the advantages of the scattered homes system. With deep regret I have to point out that while the Plymouth board has adopted this system the Hackney board has not. It is true that it has not chosen the worst form of aggregation—the barrack room—but it has chosen the pauper village, with its enormous expense and its serious drawbacks In spite of the proved succe s of the method of segregation (or scattered homes) as practised by the boards of guardians of Camberwell and Mile End in London and in Bath, Bristol, and many other places in the country, they have adopted aggregation The children will still live as a class apart, seeing nobody but officials year after year, leading monotonous lives, making no outside friends—a good deal happier than they would be in an ordinary school, but much less happy than they would be in a scattered home where the children lead the life of ordinary children. The idea is so simple, so easy, that it is amazing that any board of guardians which has the chance to change its system should fail to see it. It has its eyes in the air and does not see what is at its feet These children have lost their own home or never had one worthy of the name, and the thing required is to find them something as like "home" and as unlike an institution as possible. Children in normal conditions do not require recreation halls, gymnasia, swimming-baths, and all the other costly apparatus of properly equipped institutions, because they are leading a natural life, the life which nature all over the world, among animals as among men, ordains What they want, and need, is something quite cheap and simple—love—and Poor law children are just like other children. Their little souls need what institutions cannot give, even though they have "teak staircases" and a "southern aspect."

There are thousands of good women in England who would find a satisfaction to their highest nature—an outlet to latent motherliness—in being the 'mother" in a "scattered home." But they would not care to be officers in an institution. A moment's reflection will show the enormous difference between the two positions and some of the consequences of that difference.

I am, Sirs, yours faithfully,
HUGH E HOARE,
Vice-Chairman State Children's Association
Old Broad street, E C March 10th 1903

THE LARGE INTESTINE AS AN INTERMITTENT SYPHON

To the Editors of THE LANCET

SIRS,—I am glad to have even the partial support of so distinguished an authority as Dr William Ewart I notice, however, that he quotes from the previous correspondence and not from the original pamphlet. I sent him a copy but no doubt it was submerged in the daily flood of American circulars. He is therefore, I presume, unaware that I proved by experiment that the presence of gas does not affect syphonage provided the combined length of the air spaces does not exceed the difference between the ascending and descending limbs of a syphon. If, for example, the descending limb is the longer by four inches syphonage will go on with an air space which is under, but not with one which is over, four inches It is therefore not essential to syphonage that "the transverse colon and its flexures should be filled with an exclusively fluid column.' I must confess I was unaware of Dr Ewart's paper upon the postural treatment of typhoid fever His method of emptying the overloaded cæcum by gravitation is one to be borne in mind, but it is probably only available when there is intestinal paresis. Syphonage is, of course, impossible with the trunk horizontal.

I was much gratified to see Dr H. B Donkin's letter and all the more so that having retired from the profession at a comparatively early age he is able to speak judicially But he is not quite correct in representing that I deny the existence of peristalsis in the large intestine in man I think it is very feeble and with the trunk erect quite ineffectual in the ascending colon, but it may be of service in the horizontal position. As I pointed out, the hydraulic construction of the ileo-cæco-colon has an important bearing upon the propulsion of the contents of the large intestine and renders peristalsis less necessary than in the small bowel.

I am, Sirs, yours faithfully,
March 16th 1903 R. W LEFTWICH, M D Aberd.

THE FOURTEENTH INTERNATIONAL CONGRESS OF MEDICINE, MADRID

To the Editors of THE LANCET

SIRS,—I recently wrote to the Royal Mail Steam Packet Company to ask if it was their intention to offer a reduction in the fares to Lisbon for members of the forthcoming International Medical Congress to be held at Madrid next month I have received the following reply in which they offer an abatement of 25 per cent. from the first class single or return fares to Lisbon To many medical men who wish to avoid the long, tedious, overland journey to Madrid this concession should be heartily welcome, as, of course, in this reduction is also included the price of the food during the sea journey to Lisbon

I am, Sirs, yours faithfully
March 17th 1903 W WOODLEY STOCKER.

[COPY]

SIR —With reference to your letter of the 4th instant I am to state that the company will be happy to allow members of the International Medical Congress 25 per cent. abatement from the first-class single or return fare Southampton to Lisbon. It is understood that you will take means to let the members of the Congress know and arrange so that we may know to whom to allow the abatement.

Yours &c.
(Signed) C E DAVIES
pro Secretary
Royal Mail Steam Packet Company
W Woodley Stocker Esq 287 Willesden lane, N W

CANCER "CURES"

To the Editors of THE LANCET

SIRS,—I beg to acknowledge your favour and have the right to hope that you will, in future, follow my example and at least acknowledge letters addressed to you My only answer to your editorial is that it contains many mis statements, that it is treading close to libel, and that you have not all the evidence *pro* or *con* the high frequency treatment, that its efficacy is not solely in the direction of the "temporary reduction of the size of a tumour," and that many cases of cancer have died of a recurrence of their disease even when healed by the valuable knife, and that shortly You have perhaps forgotten that I forwarded notes of a case of scirrhus uteri some months ago of which I had no acknowledgment even in your columns.

I am, Sirs, yours faithfully,
E CLOETE SMITH
Westbourne-street W March 13th 1903

ON THE PROBLEM OF GLYCOSURIA AND DIABETES A SUGGESTION

To the Editors of THE LANCET

SIRS,—The very interesting address published in THE LANCET of March 14th, p 714, with which Dr W Hale White opened the debate on Glycosuria and Diabetes at the Chelsea Clinical Society, makes it only increasingly *manifest* that in the "composite," as distinguished from the "alimentary," form of diabetes, the distinguishing features of which were so ably and fully described by Dr Pavy in his lectures published in THE LANCET, June *16th* (p 1706), 23rd (p 1787), and 30th (p 1863), the disease is still to be classed, unfortunately, as incurable, treatment, even when most rigidly carried out by the absolute exclusion of all carbohydrates from the diet and by the administration of codeia in properly regulated doses, failing to effect any reduction in the amount of sugar excreted.

It would be a happy issue to the debate if it led to a more searching and careful investigation into the cause of the disease According to Dr Hale White there appear to be good grounds for frequently associating disease of the pancreas with diabetes, for it is remarkable that so many as 25 per cent. of the fatal cases of diabetes occurring at Guy's Hospital during 14 years should have shown *naked-eye* disease of the pancreas at the necropsies. Such being the case, and from the analogy of the efficacy for instance, of the thyroid gland in the treatment of cretinism—a disease at one time regarded as incurable—is it unreasonable to suppose that the pancreas of the calf or some other animal, removed fresh, under strict supervision and aseptic methods, and prepared in a manner similar to that in which the thyroid gland is prepared for tabloids, might *possibly* prove useful in the treatment of diabetes? Dr Hale White

LIVERPOOL

(FROM OUR OWN CORRESPONDENT)

Liverpool Infectious Hospitals New Scheme involving the Expenditure of £130 000

Mr. S. W WHEATON, Local Government Board inspector held an inquiry at the municipal offices into the application of the corporation for powers to borrow £130 000 for the extension of a hospital at Fazakerley for infectious diseases other than small pox. In the year 1898 the corporation purchased at Fazakerley 113 acres of land at a total cost of 491 and in 1899 it acquired an additional five acres for 07 Already £79,647 had been expended on the estate, including the expense of works in the course of erection Pavilions already erected provided for 160 beds. The present sum of £130,000 was required to erect nine more pavilions, four isolation pavilions, administration block, nurses home, kitchen, laundry, discharge block, and porter s lodge, for which the estimate was £46,207 The drainage, &c, would cost £16,100 and heating, lighting and other items would cost £7500 The corporation asked for 30 years in which to repay the loan. Dr E. W Hope explained that the new buildings would provide accommodation for 300 patients suffering from all forms of infectious disease other than small pox, and it was hoped to find some accommodation for whooping cough and measles. Both the latter diseases were very fatal in Liverpool and the medical officer felt the urgent need for making provision for them, but it would be contingent upon the corporation retaining all the hospital accommodation which it now possessed, which totalled 925 beds including the accommodation for small pox patients. The conditions in Liverpool were quite exceptional owing to the vast number of immigrants passing through the city Although the corporation now felt the pinch of the need for more hospital accommodation it had a much larger number of beds at its disposal than one bed per 1000 of the population, the proportion which the Local Government Board recommended. Excluding the accommodation for small pox, there were 845 beds for ordinary forms of infectious disease to meet the requirements of a population of 710 000, and as a general rule all the beds were occupied. At the present time 200 beds were kept in reserve for any possible extension of small-pox. The corporation did not apprehend any extension but it had to take precautions Not only did the exceptional demand necessitate the provision for more hospital accommodation but the exceptional circumstances made it necessary to provide in the proposed new buildings a special form of isolation ward which was expected to be of great use in economising nursing space. Owing also to the lack of accommodation in the city hospitals, cases of typhoid fever had to be sent to the general hospitals The inspector afterwards visited the Fazakerley estate.

The Small-pox Epidemic Liverpool and Alien Immigration

The medical officer of health (Dr Hope) reported to the health committee that there were 310 small pox patients in the corporation infectious hospitals on March 12th as against 305 in the previous week. 88 cases had been reported during the week compared with 60 in the previous week and 105 on Feb. 20th. Six deaths had occurred as against seven in the previous week. The subject of alien immigration was referred to by Mr Shelmerdine, who elicited from Dr Hope that he had given considerable attention to the matter in view of the committee having wished him to give evidence before the Royal Commission. So far as Liverpool was concerned Dr Hope said that it did not appear that alien immigration had reached such a stage as in any way to endanger the health of the city Alien immigrants had some time ago settled down in considerable numbers in certain parts of London, Manchester, and Leeds, but when they came to Liverpool they found what was practically an open field for them. They set to work at different trades such as furniture-making, furniture-polishing glazing, &c., they made a good living, and kept their houses in good order Altogether, they compared favourably with other people of their class Of course, if instead of 6000 they had, as in London, 60 000 aliens, the whole aspect would be completely changed. Competition in their own ranks would arise and disastrous poverty would result, leading to undesirable conditions of living Taking the matter as it stood there was no evidence to show that Liverpool had suffered in any way as a result of alien immigration. His observations applied to the class as a whole, but, of course, there were undesirable characters amongst them as amongst other classes They endeavoured to comply with the sanitary regulations of the city and were rarely found in the police-court for breaches of the sanitary by laws.

Bequests to Charities

The late Mr Robert Ithel of Chester has bequeathed £100 each to the David Lewis Northern Hospital, the Royal Southern Hospital, the Consumption Hospital, and the Chester Infirmary, and £50 each to the Cancer and Skin Hospital and the Convalescent Home, Parkgate.

Liverpool School of Tropical Medicine

Sir Alfred Jones, K.C M G, the chairman of the School of Tropical Medicine, has received a letter from Prince Auguste d'Arenberg the president of the Suez Canal Company, stating that the company is anxious to assist in the humane work that the Liverpool School is carrying on in West Africa and has resolved to subscribe £50 towards the expenses of the school A cheque for that amount was forwarded at the same time

Death of Dr Alexander Barron

The news of the death of Dr Alexander Barron, which occurred at Buenos Ayres on March 4th, was received in Liverpool with much regret by a large circle of friends. The late Dr Barron was a distinguished student of the Liverpool School of Medicine In 1878 and 1879 he won successively the junior and senior Lyon Jones scholarships. He also obtained the Torr gold medals in anatomy and physiology Having graduated as Bachelor of Medicine with honours at the University of London in 1881 he was appointed demonstrator of anatomy at University College, Liverpool, and pathologist to the Royal Infirmary He was subsequently appointed professor of pathology and in that capacity he gave important evidence at the Maybrick trial in 1889 He attended the inquest and arrived at the conclusion that Mr Maybrick had died from acute inflammation of the stomach due to an irritant poison After resigning his appointment at University College he started in practice in Rodney street where he was highly successful Latterly his health broke down owing to attacks of ague which he had contracted in Africa and feeling that he needed bracing he determined to take a sea voyage and proceeded to the Argentine on board the *Highland Chief* leaving Liverpool about six weeks ago He had scarcely reached port when he died. He was a man of great intellectual attainments and a charming conversationalist He had travelled much and had a fund of interesting information He was about 50 years of age.

March 17th.

WALES AND WESTERN COUNTIES NOTES

(FROM OUR OWN CORRESPONDENTS.)

Water supply of Glamorganshire

AT the conference upon water supplies held by the Sanitary Institute in the autumn of 1901 a most instructive discussion was initiated by Dr Alfred Greenwood, the medical officer of health of Blackburn, upon the desirability for reports on the water supply of each county Such a report has just been issued to the Glamorgan county council by the medical officer of health of the county, Dr William Williams. Included in its pages are maps showing existing and prospective waterworks, gathering grounds and pumping stations, with their relation to the South Wales coalfield, the physical configuration, and the rivers of Glamorganshire and the adjacent counties. The report deals in detail with the population of the county and its increase in various parts, the physical features of the county, the rainfall and watersheds, the sources of the water supplies, the local supplies, and the results of the analysis of the public supplies This last has been obtained from the records of the Cardiff and County Public Health Laboratory where there has been undertaken during the past four years a systematic quarterly examination of the public water supplies within the administrative county

Somerset Poor law Authorities

At a conference of the members of Poor law unions and rural district councils of Somerset held on March 7th a resolution was adopted expressing the opinion that probationer nurses who had received one year s training in a minor training school should be designated by the term 'qualified regular adviser is able to take charge of the case and shall be entitled to charge the patient for his services

When a member is consulted by a patient whom he has previously attended as the officiating friend of another practitioner he may propose a consultation but shall decline to take charge of the case unless the patient signifies his fixed determination to change his medical attendant

Nor must a member attend another practitioner's patient unless it be a case of emergency He must decline to do so when sent for, except in consultation or after the regular medical attendant has been formally notified that his services are no longer desired. If, however, a patient calls at the surgery it is not necessary to inquire if he is under the care of any other practitioner, but should the fact become known then ' courtesy may require that the regular medical attendant be informed of the consultation and its results." Finally, there is a rule to the effect that members shall not charge for attending on a practitioner or his family or the near relatives of a deceased practitioner where the cost would naturally fall on the practitioner or his representatives

Such are the rules and principles of the East Glamorgan and Monmouthshire Colliery Surgeons' Medico-Ethical Society and it will be seen that it is ethical rather than economical considerations that prevail. Nor is this surprising considering that this organisation was founded before the present movement in favour of medical unions had spread in the country But now these rules no longer suffice. The questions to be dealt with have assumed a more concrete form, and this not only in a general but in a specific manner, and in the very district in which the society in question is situated. Thus in the smaller of the two Rhondda valleys there is a pit called the Watchtown colliery, where some 2000 miners are employed Formerly these men paid a poundage of 3*d.* to their medical officer, as is the general custom, and everything went on quite satisfactorily The cheque was sent from the colliery directly to the medical officer and there was no intermediary between him and his patients, except the pay clerk who deducted the 3*d* in the pound from the miners' wages for the medical attendant. But about a year ago the medical officer died and then the miners thought that they would take the matter into their own hands, appoint their own medical officer, pay him a fixed salary, buy their own drugs, and manage everything themselves In a word, it was a lay committee of workmen the members of which had made up their minds to exploit medical men, to employ them on a wages system, and to strive to make some profit out of their medical officer's work. To overcome the preliminary difficulty they offered a large salary, more than £400 a year, to a medical assistant They expressed themselves ready to pay for a qualified assistant and also supplied a horse and carriage This they thought they could do and that there would still remain a surplus out of the 3*d* in the pound deducted from the wages earned by some 2000 miners. But if there are 2000 miners they must represent with their wives and children a population of from 8000 to 10,000 persons and therefore must require four or five medical attendants and when these have been properly paid there will not be much remaining in the way of profits out of the 3*d* in the pound In any case it is not for miners to trade on the services which medical men may be able to render and this was an arrangement which the Medico-Ethical Society should have fought against As a matter of fact it did appoint a deputation to wait on the directors of the colliery, but the latter naturally replied that they could not interfere with the men's wages. The men, of course had the right to do what they chose with their own money And this they did. The miners advertised in the local papers for a medical officer They received in reply many offers which they showed to the medical assistant whose services they were anxious to secure. It was easy for them to argue that he would do no good by refusing the liberal offer which they made to him when there were so many others ready to take the place. All this is precisely what might have been anticipated and what medical unions have to prevent. But the local ethical society was not armed for such a struggle The fact that its members appealed to the directors of the colliery showed how little they understood the situation. It was the sympathy of the men themselves and of the public that they needed The medical practitioners desire not to be exploited by the miners yet they appeal to the colliery owners who themselves are exploiting those very miners This was not the way to make their position clear and so the case was lost The system that had worked so well was broken down and now the medical service is managed by a lay committee which employs and exploits medical practitioners on the wages system. This has been going on now for close upon a year and the only hope is that it may not prove a profitable to the miners as was anticipated. But when thi mild acquiescence in defeat is compared with the energeti and triumphant action of the medical unions of collier surgeons in the north of England it must be confessed tha Wales is behind the times Indeed, speaking to one o the officials of the East Glamorgan and Monmouthshir Colliery Surgeons Medico Ethical Society he confessed tha as a society they had not much to do They were usefu mainly for social purposes, there was not much t fight about. This may be so for the moment and the fac that they have lost control over the method of medica practice at Watchtown may not be considered a very seriou matter, but it should be obvious that this is only a beginning The example will be followed. Others will also want t alter the present system, to form committees to emplo medical men, and to sweat some profit out of their professional labours. This matter must not be allowed t rest as it now stands and such organisation as exists must b revised and recast in a stronger mould for the distinc purpose of taking in hand these economic questions

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NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT)

Proposed Absorption of the Calcutta Plague Department into the Health Department —The Plague Epidemic in India — The Salted Fish Theory of Leprosy

IT is proposed that the plague department in Calcutta a a separate establishment should cease to exist at the end o the current plague season—about the end of June The object appears to be to save expense It is thought because disinfection is the only measure taken to endeavour to control the spread of the disease that the health department of the municipality can do this as effectually, but the advocates for this change disregard the work of the plague officers in detecting and registering where cases occur The preliminary work of inquiry is the troublesome part—it is easy enough to disinfect a house when the case has been discovered The imperfect registration of disease and of ordinary deaths by the health department in Calcutta is not a happy augury that plague cases and deaths will be investigated with anything like the present thoroughness and the authorities will therefore not possess the same accurate estimate of the amount of plague existing in the city The plague administration of Calcutta has been gradually evolved during the past four years and if nothing much is done that is the Government policy and not the fault of the department. For accuracy of records the plague staff of Calcutta is probably far superior to any other in India.

The plague epidemic throughout India goes on steadily increasing The deaths last week numbered 25 882, as against 25 870 for the previous seven days and 12 695 for the corresponding week last year Bombay city returned 716 deaths, Calcutta, 171, Karachi, 25, and Poona about 600 The Bombay Presidency reported 10,835 deaths, the Madras Presidency, 604, Bengal Presidency, 2941, the United Provinces, 2995, the Punjab, 3581, the Central Provinces, 1203, the Mysore State, 526, the Hyderabad State, 1640, Central India, 435, and Kashmir, 1717 The increase is general, but Poona and some other places seem to suffer out of all proportion to the number of the population. During the past fortnight the death rate in Poona has been about 500 per 1000 per annum In Calcutta the rate has never reached 100 while even in Bombay it has not exceeded 150 in any of the outbreaks.

The salted fish theory of the spread of leprosy has not met with much support from the medical profession in Calcutta. At the lecture recently given by Mr Hutchinson nearly every speaker opposed it. The license which is permitted to lepers to mix freely with the population, to handle other men s food and to dwell with their families under very insanitary conditions indicates the slight degree of contagion which can be attached to the disease and to be explained its spread is therefore sought by means of food. The evidence often advanced is so inconclusive that neither salt fish nor any other article of food is believed to account for its dissemination. India, moreover, affords even less circumstantial evidence than do many other places.

Feb 20th

year 1902 there have been 22,475 attendances at the dispensary, showing an increase of 4290 over last year [illegible] patients attended for the first time, and of these 1062 were admitted to the wards for special treatment, showing an increase of indoor patients of 94 The managers, in making this statement, appeal for greater pecuniary assistance to enable them to overtake the work

March 16th.

IRELAND

(FROM OUR OWN CORRESPONDENTS.)

Consumption in Belfast

AT a weekly meeting of the public health committee of Belfast held on March 5th a letter was received from the Local Government Board inquiring what steps had been taken towards carrying out the Board's suggestions for preventing the spread of pulmonary tuberculosis in the city These suggestions were contained in a circular dated September, 1901, and included among other things the establishment of municipal sanatoriums for the treatment of consumptive patients It was stated by the medical superintendent officer of health (Dr H. Whitaker) that a large amount of literature on the question had been circulated, that three female sanitary inspectors had in their visits to the houses of the working classes given advice on the question, and that arrangements had been made to have all cases of death from consumption notified to the committee by the registrars of the public burial grounds That Belfast enjoys a most unenviable notoriety for the prevalence in it of consumption is evident from the fact that in Dr Whitaker s report for the last month it is recorded that 256 out of a total of 661 deaths were due to "phthisis and diseases of the respiratory organs." It was decided to inform the Local Government Board that the health committee was endeavouring to deal with this difficult problem, but owing to the question of taxation the majority of the committee felt that the time for the erection of sanatoriums had not come yet.

Rainfall in February in Belfast

In the month of February rain fell on 26 days to the extent of 3 02 inches, the average for the last 28 years being 2 75 inches. The year 1903 so far has been extremely wet, the total amount being 8 35 inches, which is much above the average (6 16 inches)

Irish Medical Association.

At a largely attended meeting of Poor law medical officers of Tyrone, held in the White Hart Hotel, Omagh on March 7th, it was decided to form a County Tyrone Branch of the Irish Medical Association Dr E O Thompson, M.P., was appointed president and Dr J Duncan was elected secretary The members agreed to apply for no dispensary appointment under a salary of £200 per annum and for no workhouse hospital appointment under £120 a year and to insist on a revision of a scale of consultation fees, the minimum fee being £2 2*s* It was also agreed that the fee for a locum tenent for a dispensary medical officer should be £4 4*s* a week, for a workhouse medical officer £2 2s. a week, and for both offices combined £5 10*s* a week. Dr Thompson spoke of the reasonable programme of the Irish Medical Association which demanded a pension for the medical officer, a holiday of four weeks suitable remuneration when acting as locum tenent, and proper remuneration for the positions of dispensary and workhouse medical officers. The County Tyrone Branch has determined to adhere to this programme and to agitate for a pension scheme, payment of substitutes, a holiday of four weeks, and proper remuneration for health officers

A Dispensary Medical Officer s Grievance

At a meeting of the Stranorlar board of guardians on March 9th Dr S. A. McCann medical officer of the Cloghan district, wrote a letter to the board drawing attention to the abuse of red lines. He said that he had no fault to find with the poor of his district but he had always a lot of trouble and trickery from the class of people who were able to pay a medical man a reasonable fee but would not as, they said, he got enough from the rates. It was decided to write to the persons complained of

Belfast District Asylum.

It has been decided (in view of the lamentable disaster at Colney Hatch Asylum) to ask the chief officer of the Belfast fire brigade to go through the asylum and to point out what is required to protect the place from fire. The asylum is under the control of the Belfast city council.

Medical Officers as Witnesses

At the weekly meeting of the Londonderry board of guardians on March 7th a letter was received from the Local Government Board of importance to all boards of guardians. The Londonderry guardians objected to pay a substitute for a medical officer when the latter was summoned as a witness in a civil case, holding that, as he received a fee and expenses, he should pay his own substitute. They decided that in such cases if it was necessary to provide a substitute, they would do so but the amount would be deducted from the salary of the medical officer for whom he acted, and then passed a resolution to the effect that in every case in which a medical officer received a fee for attendance at a civil or criminal court he should provide a substitute, if necessary, at his own expense. The Local Government Board stated that it had considered this resolution, and pointed out that the guardians were not empowered to make any deduction under Article 24 of the dispensary rules from the salaries of their dispensary medical officers "unless with the Local Government Board s approval, had and obtained." The fact of a dispensary medical officer being entitled to a fee for his attendance at court as a witness on behalf of the board of guardians or the district council would not warrant the Local Government Board in authorising a deduction from his salary to recoup the guardians the expense incurred by them in providing a medical practitioner to discharge the duties of the medical officer on that occasion The Board also stated that it was not prepared to consent to a deduction being made from a medical officer s salary in respect of his necessary absence from duty as a witness on subpœna for the Crown in a criminal case.

The Ulster Medical Society

The sixth general meeting was held in the Medical Institute, Belfast, on March 5th, the President, Dr John Campbell, being in the chair Dr C E Shaw showed a patient for diagnosis who had Proptosis of the Eyeballs due probably to a Retro-ocular Tumour Dr J R Davison showed a patient with a Cancerous Ulcer of the Breast who was under treatment with the Roentgen rays. Dr Shaw read notes on Some Recent Advances in Ocular Therapeutics Dr R W Leslie read notes on the Use of Cacodylate of Sodium in Phthisis and gave details of cases treated in this way Dr W D Donnan read a paper on Two Cases of Acute Intussusception in Children, both of which were operated on by Dr T S Kirk at the Belfast Hospital for Sick Children. The one in which surgical measures were adopted early resulted in recovery Dr Joseph Martin read short notes on a case of Pneumothorax following Pneumonia. Dr Davison gave an account of a case of Plastic Bronchitis and its Successful Treatment by the Injection of Diphtheritic Anti toxin Specimens of the casts were shown

March 17th

PARIS

(FROM OUR OWN CORRESPONDENT)

Infant Life Insurance

M BUDIN, to whom the medical profession owes sundry excellent studies upon the hygiene and feeding of infancy and infants, has been struck by the excessively high infant mortality in certain departments of the north of France. On March 3rd he described before the Academy of Medicine the results of some inquiries which he had made and his utter astonishment when he found that in certain departments in the north there was a regular premium on infant mortality His statement referred to certain Belgian insurance companies which for a very small sum insure children in infancy or even before birth In case of the child's death the father draws the insurance money, nominally for burial expenses, and as among the class of persons who take out these insurances funerals can generally be obtained gratuitously the insurance money is clear gain. A baby can be insured in this manner in several different companies. Moreover, a third person can insure a baby without the knowledge of its parents, and M. Budin cited the case of a nurse who was thus enabled "to lose" one after the other seven children out of eight who had been confided to her probationer" and not by the term "qualified nurse," as suggested by the departmental committee of the Local Government Board It was considered that if the latter designation is used nurses who had received a three years' training would be unduly prejudiced At the same meeting a resolution was adopted to the effect that powers should be given to district councils to acquire land compulsorily for small sewage outfall works.

Bristol General Hospital

The report of the managers of the Bristol General Hospital for the year 1902 states that 2290 in patients were treated during the year, compared with 2110 in 1901 The expenditure was £12,469 and the income was £10,628 The financial position is thus no better than that of the larger and much older institution, the Bristol Royal Infirmary, which has during the past few years accumulated a debt of nearly £10,000 Fortunately, Bristol possesses many philanthropic citizens who may be trusted to come to the relief of the managers of these excellent institutions.

Bristol Royal Hospital for Children and Women

The thirty seventh annual meeting of the subscribers to this institution was held on March 14th The medical report stated that 685 children and 64 women had been admitted during 1902 as in-patients, compared with 565 children and 43 women during 1901. 3213 children and 1899 women were treated as out patients during the year The financial statement showed that the ordinary income was £3972 and that the expenditure amounted to £4758. An appeal was made for funds to enable the committee to erect a new out patients' department at a cost of £8000 The report makes a sympathetic allusion to the death "of the much respected registrar, Mr R. H. Chilton, who died after a short illness from diphtheria contracted in the discharge of his professional duties in the hospital "

Queen Victoria Jubilee Convalescent Home, Clifton.

The third annual report of this institution, which has just been issued, states that 1390 patients were admitted during 1902, against 1017 in 1901. The average daily number of patients was 65 and the average stay of each was 17 days

March 17th

SCOTLAND

(FROM OUR OWN CORRESPONDENTS.)

Diseased Meat Prosecution

AT the Edinburgh sheriff court last week a farmer from North Berwick was charged with being the owner of a cow exposed for sale which was diseased and unfit for food The cow had been seized in a sale yard as it was very much emaciated and coughed occasionally Half of the udder was affected The cow's milk was afterwards examined and found to be tuberculous. The carcass was found to be tuberculous in every part, all the organs being greatly affected. For the owner of the cow it was stated that after the udder was noticed to be affected the milk had not been used The sheriff found the owner guilty and said that there was a concurrence on the part of the scientific witnesses that a cow affected with a cough would give rise to suspicion in the mind of any person that the animal was suffering from tuberculosis Taking that fact into consideration, along with the cow's emaciated condition, he held that the animal was not such as any person accustomed to cows would ever believe was fit for food. A fine of £10 was inflicted, including expenses.

Vaccination in Scotland

It has been discovered that Scotland has a vaccination grievance. A conference of representatives of various medical authorities was held last week in the Royal College of Physicians, Edinburgh, to consider the conditions under which vaccination is practised in Scotland The meeting was attended by representatives from the medical faculties of the Scottish universities, of the Edinburgh Royal Colleges, of the Glasgow Faculty of Physicians and Surgeons, of the Incorporated Society of Medical Officers of Health for Scotland, and of the recognised teachers of vaccination. After prolonged deliberation the following motions were adopted (1) That it is desirable that the medical profession in Scotland should enjoy the same facilities in regard to an authorised supply of vaccine as are enjoyed by the profession in England, and (2) that an institution for the preparatio of calf lymph should be established in Scotland. Sir T. R Fraser, Professor J Glaister, Mr J Maxwell Ross, Dr J B Buist, and Dr Francis Cadell were appointed members of committee to prepare a memorial embodying the views o the conference for submission to the Secretary for Scotl and to arrange for an influential deputation in support o the memorial. The first motion will meet with genera approval, and surprise may be expressed that the professio in Scotland has only now discovered that it was denie facilities enjoyed by its English brethren. The secon motion is one regarding which it may safely be assume that the Treasury will have something to say

Edinburgh Police Report

The chief constable of Edinburgh has just issued his annua report which contains some matters which must interes the members of the medical profession The number o murders was five, an unprecedented number for recen years Juvenile crime in the city receives considerabl attention in the report. The chief constable holds tha juvenile depravity is regulated to a very great extent b the home influence on the child. During the year th number of juveniles convicted at the court has decreased but the number cautioned by the chief constable ha increased nearly threefold. While admitting the forc of various contentions which might be advanced t qualify the aspect of juvenile delinquency and crime th fact remains that there confronts us a vast and increasin volume of juvenile delinquency and how to cope with it successfully threatens to become one of the greatest problem of the day Such is the chief constable's opinion and it ha often suggested itself to me that members of the medica profession who are brought closely into contact with th children in the poorer parts of the city might have practica suggestions to make that would be of service in the consideration of this very serious problem. Universal education such as the board schools give, does not appear to be th panacea which it was hoped by many it would prove to be.

Extension of the Western Infirmary, Glasgow

A meeting of Fairfield Shipyard employés was hel on March 7th to consider how they might best assist i raising funds for the proposed new wing The matter cam before them in the form of a recommendation by th accident fund committee, which was to the effect that th employés should contribute as follows—namely, 9*d* by thos in the first class, 6*d* by those in the second class, and 3*d* by those in the third class, the deduction to be spread ove three payments. Ex Bailie Dickson, chairman of the Wester Infirmary board, and Mr Johnston, honorary treasurer, bein among those invited to the meeting, explained the urgenc of the situation in respect to more accommodation bein required There were actually 350 patients on the book waiting for admission, and with all this demand in bed they were required to admit accident cases at a moment' notice, thus keeping the wards constantly overcrowded The men showed great sympathy with the movement an the recommendation was adopted unanimously The highe officials of the Fairfield Company have also agreed to contribute towards the same object and Mr Strachan, th secretary of the company, has intimated the intention o the directors to contribute a sum of £500 It is to be hope that other large public works the employés of which are s much interested in the welfare of the Western Infirmary wil see that it is their duty to render pecuniary assistance at thi time.

Glasgow Lock Hospital

The qualified contributors and yearly subscribers to thi hospital held their annual meeting on March 6th, Lor Provost Primrose presiding The annual report showed tha 266 patients had been admitted during the year—169 for th first time, 60 for the second, 22 for the third, six for th fourth, five for the fifth and one for the nineteenth time. The financial statement showed an income of £1014 14*s* 9*d*, but the expenditure, including an unusual outlay in structura alterations of £167 6*s* 4*d*, had exceeded this by £3 4*s* 5*d*. The Lord Provost spoke of the beneficent work carried on b the directorate and expressed the hope that the good tha had resulted in the past would continue.

Glasgow Ophthalmic Institution.

This institution was first founded in 1870 but since 1891 has been under the management of the Royal Infirmary The annual report, just published, shows that during the

Obituary.

ENRICO BOTTINI

Senator Enrico Bottini, sometime professor of ave surgery in the University of Pavia, died on the g of March 11th in his beautiful villa "Il Riposo" at emo on the Ligurian Riviera. Born at Stradella in ont on Sept 7th, 1837, he proceeded to the University nn and there, after a brilliant course of study in arts edicine, graduated with high honours in surgery in Five years thereafter he gained, over the heads of dable competitors, the post of obstetrician and on-in chief in the Ospedale Maggiore at Novara lost no time in showing himself to be one of st of his profession whether at the bedside or at perating table. Indeed, he had barely been a year e chair when he published a memoir on the use rbolic acid in surgery and taxidermy for the arrest rmentation and putrid decomposition By the Senator ate of Rome and many other distinguished Italian ons he is held to have come nearest, among many pre rs to anticipating Lord Lister in antiseptic surgery, they also admit that among themselves no one sooner Bottini recognised the morbigenous elements in parasites as more promptly and intelligently alive to the first ations of bacteriological science Promoted in 1877 he chair of surgery in the University of Pavia, he e special studies in galvano-cautery and readers of LANCET[1] all over the world still remember his masterly r on the splendid results obtained by that means, par rly in angioma of the face. At the great International gress of the Medical Sciences held in 1890 at Berlin he a paper on his operative methods which was considered me of the best which the congress evoked and the stics of his successful operations in abdominal surgery, he removal of the vagina, and in the extirpation of the ux did much to enhance the credit of the Italian healing in the eyes of the profession. He was an excellent ator, whether by tongue or pen—a gift which in- ed his fellow townsmen of Stradella to make him their uty in the Italian Parliament on the death of their old entative, the ex Premier Agostino Depretis This was 887 a critical period in his country's political life, and the surprise of his colleagues Bottini accepted the man e, resigning his professorial chair for a short time. In 1, however, when he was made Senator of the Kingdom, gain gave his whole mind to his proper work, con uing to perform it with all his old energy and success the first faint symptoms of the malady that carried off counselled relaxation, if not abandonment of daily routine. He retired to "Il Riposo," the sump us and finely situated villa he had constructed for elf on the Ligurian seaboard, whence he would rn to Pavia on stated occasions to deliver a lecture in school. But this was only a method of gradually ngaging himself from professorial or professional work d last summer as recorded in THE LANCET[2] at the e, the cerebral congestion which had long troubled n resulted in hæmorrhage which partially but only mporarily, deprived him of speech and motor power e made a good recovery, however, thanks to the skill d affectionate care of his colleagues, especially his d fellow student Dr Giuseppe Ameglio A considerable nd of "lettered ease" seemed in store for him and e had got through the trying winter with a measure of alth denied to many when, on the morning of the 11th e felt "not so well." Still he was able to enjoy his vourite literature and he had just heard the last chapter of he Duke of the Abruzzi's Log of the *Stellare Polare* read to m when a violent apoplectic seizure supervened, depriving m of articulation though not of intelligence. Dr Ameglio as promptly in attendance, but it was evident that this atest seizure was to be the last. Consciousness gradually faded and at 4 30 in the afternoon he passed away He was buried in his native Stradella with every mark of respect and sorrow in the presence of a large concourse of mourners, ofessional and lay

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[1] THE LANCET Sept 20th 1890 p 613

[2] THE LANCET Sept. 13th 1902 p 760

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND — Diplomas in Public Health were granted jointly with the Royal College of Physicians of London to the following gentlemen —

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The Quarantine Station at Marseilles

I have upon a former occasion mentioned in my letters the defective state of the lazaretto at Frioul, Marseilles.[1] Promises had been made that these defects should be remedied, but so far these promises have not been fulfilled. Only recently a lamentable affair has occurred which will concentrate attention on the matter A British vessel, the *Oroya*, which had on board amongst other passengers certain medical men returning from the Egyptian Medical Congress, was detained at Frioul by the health authorities of Marseilles because after leaving Naples she had on board a poor Indian who was accustomed to go barefoot This poor man suffered from painful and swollen inguinal glands and the suspicion of plague justified every precaution being taken No bacilli pestis could be found, however, and the man is at present perfectly well The unfortunate passengers were all detained in the lazaretto and among them was the son of an eminent professor in the University of Lyons This young man had been confined to his berth for some days suffering from typhoid fever He was, however, detained in company with the rest of the passengers and was placed in quarantine. There are at Frioul no proper supply of drinking water, no means of warming the lazaretto, and no staff capable of giving any nursing assistance. The unhappy patient therefore had to lie in a corner of the room shivering with cold. His father in vain implored the authorities to suffer his son to go free, but nothing was done for four days, when at 11 o'clock at night an order arrived for the patient to be allowed to depart. The military authorities provided nurses who carried the patient to the train by which he travelled to Lyons, for Frioul does not possess even a stretcher Despite every care the patient died from internal hæmorrhage. His unhappy father is naturally of opinion that the case shows the absolute necessity for such reforms as will prevent the recurrence of an event which is a disgrace to France.

A New Anæsthetic

At the meeting of the Academy of Medicine held on March 17th M Courtade gave an account of a new local anæsthetic. It is para amidobenzoic ether and has been named *anesthésine* It is a derivative of orthoform and is but slightly soluble in water, but freely so in glycerine and in fatty bodies. It is not poisonous, which gives it a great advantage over cocaine, while its action is much less transitory than that of that drug M Courtade has used the drug especially in cases of patients suffering from tuberculous or syphilitic ulceration of the pharynx which rendered swallowing very painful or even impossible. After an application of *anesthésine* in powder they were able to swallow without pain

March 17th

EGYPT

(From our own Correspondent)

Cairo Medical Congress

In reference to Plague Dr Gotschlich (Alexandria), while mentioning certain rare cases which have occurred in Alexandria during the last four years, reported some instances of sudden death in the street in people not previously known to be ill, reminding one of similar cases reported in the Middle Ages On the other hand, there were several very mild cases with such slight swelling of glands that diagnosis could only be made bacteriologically Among unusual sites for the bubo were the popliteal space, the elbow, and the retro-peritoneal glands in the iliac fossa. One woman died from plague two days after giving birth to a healthy child who did not contract the disease. Three patients suffering from pneumonic plague recovered at the Greek Hospital, but in all the three cases virulent bacilli were found for several weeks in the sputa, though the patients were walking about and indignantly protested at being still detained in the hospital. Other patients had bloody sputa for only one day, which then became white and innocent looking like that in ordinary bronchitis, though still teeming with the plague bacilli. Dr Gotschlich recommends in cases of doubtful diagnosis the method of specific agglutination by dried anti plague serum as prepared at the Institut Pasteur In Egypt plague epidemics can be divided into two distinct groups, the summer and winter variety, but in Egypt plague only exists as an epidemic between April and October, the maximum number of cases being attained in May or June. With reference to the rat theory of infection Dr Gotschlich has examined 6500 dead rats to see when their breeding season occurs. He finds that the maximum number of rats with young is in May and June, and that only 1 per cent. of them are pregnant between October and February The cases which occur in winter are probably not caused by rats but the infection is spread directly from man to man by the pneumonic variety, and as a proof of this he quoted 11 cases as having occurred in one house in Tantah.—Dr Valassopoulo (Alexandria) gave statistics of 54 cases of plague treated in the Greek Hospital during 1901–02. 11 patients died, giving a mortality of 20 3 per cent., while of 35 of the cases treated by anti plague serum from Paris death occurred in only 17 1 per cent. He believes that these results could be improved if the patients in future were injected before the third day of the disease.

Dr Engel (Cairo) read a paper on Leprosy in Egypt He pointed out that though there is as yet no sufficient evidence from modern Egyptologists that leprosy existed in the time of the ancient Egyptians, there can be no doubt that the disease was present in Egypt some years before the Christian era. Macrizy later reported that Ibn Abdelmalek in A.D 707 decreed that lepers should be segregated in an asylum which he had built in Cairo But this hospital was not of long duration, for Ibn Touloun, some 200 years later, built a leper hospital because none existed then Coming down to modern times, Pruner in 1847 wrote that, unlike other Oriental countries, lepers in Egypt were allowed to mix freely with the people, and this is still the custom in this country It is indeed a wonder that the official number of lepers should never have been reported during the last 20 years as being higher than 2204. As regards the occupations of Egyptian lepers the following have been noted teachers, sheikhs, and sellers of vegetables, sweetmeats, fish, cigarettes, water and milk. With reference to the variety, 147 cases out of 848 were of the nodular kind, 220 were anæsthetic, and the remainder were mixed cases, so far as these figures go it looks as if the anæsthetic form prevails chiefly in Egypt. There is no evidence that any European has ever contracted leprosy here though there are many cases of Greeks who have arrived with the disease from the Greek islands.—Dr F M. Sandwith (Cairo) showed two photographs of an Egyptian leper and pointed out that the great improvement which had taken place after subcutaneous injections of chaulmoogra oil extended over a period of five years

Cairo, March 9th.

University of London —Faculty of Medicine.—A meeting of the Faculty of Medicine will be held at the University buildings, South Kensington, on Friday, March 27th at five o'clock. The faculty will proceed to the election of two representatives upon the senate. At the first senatorial election under the new constitution of the University in 1901 the faculty elected as its representatives Dr Bradford Dr Fowler and Dr Perry In accordance with the scheme of rotation laid down in the statutes the two first-named of these representatives now vacate their office and are re eligible. At the present and at all future elections the appointments will be for a period of four years The other business of the meeting includes the presentation of a report from the Dean of the faculty upon the progress of the scheme for the concentration of the preliminary and intermediate medical studies, and the consideration of a motion having for its object the coördination of the action of the various boards of study in the Faculty of Medicine

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[1] The Lancet, August 17th 1901 p 493

Obituary.

ENRICO BOTTINI

THE Senator Enrico Bottini, sometime professor of erative surgery in the University of Pavia, died on the ening of March 11th in his beautiful villa "Il Riposo" at n Remo on the Ligurian Riviera. Born at Stradella in edmont on Sept 7th, 1837, he proceeded to the University Turin and there, after a brilliant course of study in arts d medicine, graduated with high honours in surgery in 60. Five years thereafter he gained, over the heads of rmidable competitors, the post of obstetrician and rgeon in chief in the Ospedale Maggiore at Novara d lost no time in showing himself to be one of e first of his profession whether at the bedside or at e operating table. Indeed, he had barely been a year the chair when he published a memoir on the use carbolic acid in surgery and taxidermy for the arrest fermentation and putrid decomposition By the Senator urante of Rome and many other distinguished Italian irgeons he is held to have come nearest, among many pre ursors to anticipating Lord Lister in antiseptic surgery, hile they also admit that among themselves no one sooner ian Bottini recognised the *morbigenous elements in parasites* : was more promptly and intelligently alive to the first idications of bacteriological science Promoted in 1877 the chair of surgery in the University of Pavia, he iade special studies in galvano-cautery and readers of HE LANCET[1] all over the world still remember his masterly aper on the splendid results obtained by that means, par icularly in angioma of the face. At the great International ongress of the Medical Sciences held in 1890 at Berlin he ead a paper on his operative methods which was considered s one of the best which the congress evoked and the tatistics of his successful operations in abdominal surgery, n the removal of the vagina, and in the extirpation of the arynx did much to enhance the credit of the Italian healing rt in the eyes of the profession. He was an excellent xpositor, whether by tongue or pen—a gift which in luced his fellow townsmen of Stradella to make him their Deputy in the Italian Parliament on the death of their old epresentative, the ex Premier Agostino Depretis This was in 1887 a critical period in his country s political life, and o the surprise of his colleagues Bottini accepted the mandate, resigning his professorial chair for a short time. In 1891, however, when he was made Senator of the Kingdom, he again gave his whole mind to his proper work continuing to perform it with all his old energy and success till the first faint symptoms of the malady that carried him off counselled relaxation if not abandonment of his daily routine. He retired to "Il Riposo, the sumptuous and finely situated villa he had constructed for himself on the Ligurian seaboard whence he would return to Pavia on stated occasions to deliver a lecture in the school. But this was only a method of gradually disengaging himself from professorial or professional work and last summer as recorded in THE LANCET[2] at the time, the cerebral congestion which had long troubled him resulted in hæmorrhage which partially but only temporarily, deprived him of speech and motor power He made a good recovery however, thanks to the skill and affectionate care of his colleagues especially his old fellow student Dr Giuseppe Ameglio A considerable period of lettered ease ' seemed in store for him and he had got through the trying winter with a measure of health denied to many when, on the morning of the 11th, he felt ' not so well." Still he was able to enjoy his favourite literature and he had just heard the last chapter of the Duke of the Abruzzi s Log of the *Stellare Polare* read to him when a violent apoplectic seizure supervened, depriving him of articulation though not of intelligence. Dr Ameglio was promptly in attendance, but it was evident that this latest seizure was to be the last. Consciousness gradually faded and at 4 30 in the afternoon he passed away He was buried in his native Stradella with every mark of respect and sorrow in the presence of a large concourse of mourners, professional and lay

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[1] THE LANCET Sept 20th 1890 p 613.
[2] THE LANCET Sept 13th, 1902 p 760

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Health of Bath Rural District—Mr C Harper, the medical officer of health of Bath rural district, in his annual report for 1902 which has just been issued, states that the estimated population of the district is 27,764 The deaths during the year numbered 324 equal to a rate of 11 6 per 1000, which is the lowest recorded for a number of years 684 births were registered, corresponding to a rate of 24 63 per 1000, being a slightly higher rate than that of 1901 215 cases were admitted during 1902 to the Infectious Diseases Hospital.

Underground Bakehouses—A conference was held at the Home Office on March 13th between the Incorporated Society of Medical Officers of Health the National Association of Master Bakers, and the Association of Operative Bakers Mr W Dawkins Cramp, H M deputy chief inspector of factories, presided, and there was also present Dr T M. Legge, medical inspector of factories The Incorporated Society of Medical Officers of Health was represented by Dr J Spottiswoode Cameron (president), Dr F J Allan, Mr Herbert Jones, Dr Arthur Newsholme, Dr Louis C Parkes, and Dr Joseph Priestley The object of the conference was to discuss points of detail contained in a memorandum which had been issued by the Society of Medical Officers of Health for the guidance of those medical officers of health who would be called upon to advise their authorities in connexion with Section 101 of the Factory and Workshop Act, 1901, which deals with the continuance of underground bakehouses. At the close of the conference the master bakers suggested that the Home Office or the Local Government Board should address memoranda to district councils urging them to take early steps to inspect underground bakehouses to intimate to the tenants whether or not certificates would be granted, and in the event of refusal to give the reasons for such refusal

Plumbers and the Public Health—Dr J R Kaye, medical officer to the West Riding County Council, at a meeting of plumbers and others held recently at the Bradford Technical College under the auspices of the Bradford District Council for the National Registration of Plumbers, delivered a lecture entitled "Plumbing in Relation to Public Health." Mr Malcolm Paterson, C E, presided in the unavoidable absence of the late mayor, Councillor W C Lupton Dr Kaye traced the evolution of plumbing from its earliest beginnings, saying that the great change which had taken place should on reflection give people some idea of the great extent to which the plumber now contributed to the comfort and enjoyment of life The field of sanitary knowledge was constantly and rapidly widening and the plumber must keep abreast of the times. He said that improvement in the trade could not be complete until legislation made it illegal for other than a duly certified plumber to practise. Referring to the injurious influence of defective plumbing on health he observed that neither gases nor germs could pass through a properly constructed and properly laid water trap on a properly ventilated system Dr Kaye classified the measures needed for maintaining the standard of plumbing at the level of improving sanitation under the three heads of registration, education, and practical experience, and dealt at length with each topic

The Prudential Assurance Company—The directors of the Prudential Assurance Company, in presenting last month their fifty fourth annual report, show an increase of business in every direction with a correspondingly strong financial position. The number of policies issued during the year was 69,662, assuring the sum of £6 680,050 and producing a net annual premium income of £364 068 The premiums received during the year in the ordinary branch were £3,651 458, being an increase of £161,503 over the year 1901 The claims of the year amounted to £1 296,693. The premiums received during the year in the industrial branch were £5 690 907, being an increase of £161,446 The assets of the company in both branches as shown in the balance sheet are £47 155 201, being an increase of £3 863 175 over those of 1901 The Prudential Assurance Company's continued prosperity is attributed to the thrift of many thousands of persons, a large proportion of whom are in poor circumstances and find their incomes barely sufficient to live upon No class in the country is so cognisant of the struggles of the poor as the general practitioner and many of our readers can testify that the economy which piles up the resources of the Prudential Assurance Company has often to be displayed in the face of real adversity Self denial, whether exercised in the investment of pennies or pounds, is equally laudable, and the medical man knows that in a household where thrift and foresight are to be found the care of the sick is more likely to be attended with successful results.

Donations and Bequests—Under the will of Miss E Carnegy of Craigs, Forfarshire, the Edinburgh Royal Infirmary, the Montrose Infirmary, and the Edinburgh Livingstone Memorial Medical Mission are bequeathed £1000 each , the Institution for the Relief of Incurables at their own Homes and the Montrose Destitute Sick Society receive £500 each , and £100 are bequeathed to the Convalescent Home at Gilmerton.—Mr W K. Wait of Clifton, Bristol, has by his will bequeathed £100 to the Bristol Royal Infirmary —Mr J Pickup has under his will left £3000 to the Blackburn Infirmary —By the will of Mr J G Murdoch of London the London Temperance Hospital receives £250 —Under the will of Dr T J Colman of Bristol £1000 are bequeathed to the Bristol Benevolent Institution and the Bristol Royal Infirmary, the Bristol General Hospital, and Muller's Orphanage receive £100 each —Under the will of Mr Mortimer Harris of Brixton, £2000 are bequeathed to King Edward's Hospital Fund, £1000 to the Brompton Hospital for Consumption, and £1000 to the Children s Hospital in Great Ormond street.—Mr George Vacher of Surbiton has under his will bequeathed £100 to the Westminster Hospital, £100 to the Westminster Ophthalmic Hospital, and £50 to the Western Dispensary, Rochester row

Royal London Ophthalmic Hospital—The annual general meeting of the governors of this institution was held recently Mr H P Sturgis presiding The chairman said that in the past year the attendances had considerably increased and 18 beds which were opened through the liberality of King Edward's Hospital Fund were at once occupied. During the present year they had been enabled to open another 30 beds, also through the liberality of King Edward s Hospital Fund, and the number of available beds at the present time was 118 Turning to the question of finance, he pointed out that the deficit for this year was £5400, against £5100 in the previous year This deficit was chiefly due to the loan obtained in 1901 from the Charity Commissioners in order to keep the hospital going at that time One serious item in the expenses was the rates, which had increased to nearly £1000 a year In common with a great many other managers of hospitals they felt that hospitals should be relieved from paying rates and were taking steps to get this rectified The total expenditure last year amounted to nearly £12,000 and in the current year it would be rather more on account of the extra beds which had been opened They required £6000 more from donations and subscriptions in order to make both ends meet and they were anxious to get special donations towards a fund for paying off the loan from the Charity Commissioners and also towards a fund of about £50,000 to guarantee their rent of £1200 a year They had so far received £1200 towards the latter fund

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS

The Royal Commission on Arsenical Poisoning

The following statement appears in the Estimates with regard to the progress of the inquiry by the Royal Commission on Arsenical Poisoning—viz The Commission were appointed on Feb 4th 1901 and after holding 18 public sittings and examining 51 witnesses issued a first report which was presented to Parliament in July 1901 Since the issue of this first report the Commission have held a number of additional public sittings and have examined other 27 witnesses They have also received reports from their assistant commissioner and have instituted chemical inquiries as to the presence of arsenic in articles of food and drink other than beer as to arsenic in malting food and as to other matters referred to them The Commission expect to complete taking evidence early in 1903 and it is anticipated that their scientific inquiries will soon afterwards be completed In these circumstances the Commission hope to be able to conclude their proceedings and to present their final report before the end of the financial year 1903-04 In the Estimates the financial provision made is: For salaries £480 for travelling expenses £100 for shorthand writing £200 for incidental expenses £80 and for scientific investigations £400.

HOUSE OF COMMONS

WEDNESDAY MARCH 11TH

Pay of the Royal Army Medical Corps in India

Dr FARQUHARSON asked the Secretary of State for India whether *the rates of pay of officers of the Royal Army Medical Corps* in India sanctioned by the Government of India in accordance with the Royal Warrant of March 28th 1902, were now being received by those officers, and if not when the new rates would come into force.—Lord GEORGE HAMILTON replied: The increased rates of pay *of lieutenants* and captains of the Royal Army Medical Corps serving in India take effect from Nov 24th last.

THURSDAY MARCH 12TH.

Superannuation for Poor-law Officers in Scotland.

On the motion of Mr MAXWELL a Bill was introduced and formally read a first time to provide for superannuation allowances to Poor law officers in Scotland.

Death Certification

Mr WEIR asked the Lord Advocate in view of the opinions expressed in regard to death certificates in the Report of the Cremation Committee recently issued, would the Secretary for Scotland consider the expediency of introducing legislation at an early date relative to death certificates in Scotland especially having regard to the fact that the last published returns showed that out of 6620 deaths in the Highland crofting counties in one year no less than 1479 were uncertified.—The LORD ADVOCATE replied The Secretary for Scotland cannot at present undertake to introduce legislation on this subject.

MONDAY MARCH 16TH

Local Authorities and the Treatment of Consumption

Mr CAMERON CORBETT asked the Lord Advocate if local authorities in Scotland were empowered to make provision for the treatment of consumption as an infectious disease —The LORD ADVOCATE replied Having in view the general scope of the provisions as to infectious diseases contained in the Notification Act and the Public Health Act the employment of public funds by the local authority in the way suggested by the honourable Member would raise a legal question affecting the ratepayers on which as I have no authority to determine it I must respectfully decline to give an opinion.

The Examination of Imported Milk

Sir EDWARD STRACHEY asked the Chancellor of the Exchequer whether he would state what was the amount of preservative and what kinds of preservatives were found in the samples of fresh and sterilised milk imported from abroad and examined at the Government laboratories during 1902.—Mr RITCHIE replied The samples of fresh and sterilised milk in question with the exception of those taken from frozen milk in which preservatives are not employed were all examined for boric preservatives and for formalin but in no case was either preservative detected.

TUESDAY MARCH 17TH.

No Death Certification Bill this Session

Sir WALTER FOSTER asked the President of the Local Government Board whether his attention had been directed to the recent report of a departmental committee on the regulations to be made under the Cremation Act 1902 and to the views expressed by the committee as to the defects of the present system of death certification and whether he would introduce a Bill during the present session to carry out the recommendations of the Select Committee of 1893 on Death Certification.—Mr LONG replied I am aware of the report of the departmental committee referred to by the hon. Member The recommendations of the Select Committee on Death Certification have been under my consideration but I am afraid that I do not see any prospect of my being able to introduce a Bill on the subject during the present session

Alum in Baking Powder

Mr PRICE asked the Home Secretary whether his attention had been drawn to a case tried at Norwich Shirehall on Saturday March 7th, in which a small general shopkeeper was fined £20 for selling baking powder containing 43 63 per cent of alum and whether in view of the statements of the magistrates he could see his way to remitting a part of this penalty —Mr AKERS DOUGLAS replied I understand that the heavy penalty was imposed in the first instance for the purpose of putting a stop to the sale on an extensive scale of a baking powder which the magistrates were advised was highly injurious to health It appears that later the court saw reason to think that in this particular case a smaller penalty would be sufficient and accordingly fixed it at £2 12s including costs

Trinity College, Dublin and Degrees for Women

Mr BRYCE asked the Chief Secretary to the Lord Lieutenant of Ireland whether the governing board of Trinity College Dublin had recently applied to His Majesty's Government for authority by means of a King's letter to confer degrees upon women if so whether that request had been refused and if so what were the grounds of that refusal.—Mr WYNDHAM replied The request mentioned has been made. It has not been refused but some technical difficulties have arisen on the construction of the College statutes which have caused delay I have every hope however that the matter will soon be satisfactorily arranged.

BOOKS, ETC, RECEIVED

ALCAN FÉLIX 108 Boulevard Saint-Germain Paris.

Les Obsessions et la Psychasthenie. II. Par le Dr F Raymond Professeur de Clinique des Maladies du Système Nerveux Médecin de la Salpetrière et le Dr Pierre Janet, Professeur de Psychologie au Collège de France, Directeur de Laboratoire de Psychologie à la Salpêtrière. Price 14 fr

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A Brief History of the Hughli District By Lieutenant-Colon D G Crawford M.B Indian Medical Service, Civil Surgeo Hughli Published by authority Price Rs 1 4 or 1s 10d

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HOLT HENRY AND COMPANY New York

Physical Chemistry for Physicians and Biologists. By Dr Ernst Cohen Professor of General and Inorganic Chemistry in the University of Utrecht. Authorised translation from the German by Martin H Fischer M D Instructor in Physiology in the University of California. Price not stated.

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LEWIS H. K 136 Gower street W C

Practical Handbook of the Pathology of the Skin An Introduction to the Histology *Pathology* and *Bacteriology of the Skin with* Special Reference to Technique By J M H Macleod M.A M.D M R.C P Assistant in the Dermatological Department Charing-cross Hospital Physician to the Skin Department *Victoria Hospital for Children* Price 15s net

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The Municipal Year book of the United Kingdom for 1903 Edited by Robert Donald editor of the *Municipal Journal* and the *London Manual* Price 3s 6d

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Recherches Anthropometriques sur la Croissance des Diverses Parties du Corps Par le Docteur Paul Godin Medecin Major de 1re Classe Médecin-Chef de l Hôpital (Salles Militaires) de la Fère. Préface par M. le Dr L Manouvrier Professeur à l Ecole d Anthropologie de Paris Price not stated

La Journee du Tuberculeux. Par M le Dr Coste de Lagrave Medecin du Sanatorium de Gorbio Price not stated.

ROONEY AND OTTEN PRINTING Co New York

Transactions of the Twenty fourth Annual Meeting of the American Laryngological *Association* held at Boston Mass. May 26th 27th and 28th 1902. Price not stated.

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SAUNDERS W B AND Co Philadelphia and London

Atlas and Epitome of Diseases of the Mouth Pharynx and Nose By Dr L. Grünwald of Munich Second edition revised and enlarged Edited, with additions by James E Newcomb M D Instructor in Laryngology Cornell University Medical College. Price 13s. net.

Atlas and Epitome of Human Histology and Microscopic Anatomy By Doctor Johannes Sobotta of the University of Würzburg Bavaria. Edited with extensive additions by G Carl Huber, M.D of the University of Michigan. Price 18s net.

SCIENTIFIC PRESS LIMITED 28 and 29 Southampton street Strand W C

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SPOTTISWOODE AND Co Limited 54 Gracechurch street E C

The Medical Register 1903. Printed and published under the Direction of the General Council of Medical Education and Registration of the United Kingdom. Price 6s

Stuber A. (C Kabitzsch) Würzburg
Die Physikalisch-diätetische Therapie in der ärztlichen Praxis. Von Dr med Bernhard Presch, Arzt in Hannover Lieferung V Subscriptions—Preis Mk. 2.

University Press Cambridge (C J Clay and Sons and H K. Lewis, London)
Biometrika A Journal for the Statistical Study of Biological Problems Edited in consultation with Francis Galton by W F R Weldon Karl Pearson and C B Davenport Vol ii Part ii February 1903 Price 10*s* net (Issued March 5th 1903.)

Ward, Lock and Co Limited Warwick House, Salisbury-square E C
Connie Burt. By Guy Boothby Price 5*s*

Wright John and Co Bristol (Simpkin Marshall, Hamilton Kent and Co Limited London)
The Medical Annual A Year book of Treatment and Practitioner s Index Twenty first year Price 7*s* 6*d* net
First Aid to the Injured and Sick An Advanced Ambulance Handbook. By F J Warwick B A. M B Cantab M R C S, L S A and A. C Tunstall, M D F R C S Edin Third and revised edition Price 2*s* 6*d*

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to The Lancet *Office directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week, for publication in the next number*

Berry, Frederick C B A M D B Ch Dub has been re-appointed Medical Officer of Health of Burnham Somerset

Bulleid Arthur L R C P L R C S Ed L F P S Glasg has been re-appointed Medical Officer of Health for Midsomer Norton

Burdwood J W L F P S Glasg L S A has been re-appointed Medical Officer of Health to the Bourne Urban District Council

Cook H F L R C P Lond M R C S has been appointed Medical Officer to the Destitute and Aborigines within the township of Redhill South Australia and within a radius of twelve miles therefrom

Douglas Francis John M B B S Melb of Port Victor South Australia has been appointed a Public Vaccinator

Farrar Reginald A M D Oxon D P H Cantab has been appointed a Medical Inspector to the Local Government Board

Fox Robert Algernon M B M S Edin Senior Medical Officer at the Coast Hospital has been appointed Visiting Medical Officer to the Rookwood and Newington Asylums for the Infirm, New South Wales Australia.

Graham, Edward Alfred M.B Melb has been appointed Visiting Surgeon to the Gaol at Deniliquin New South Wales Australia.

Jelly G Aubrey F R C S Ed. M R C S, has been appointed Honorary Consulting Ophthalmic Surgeon to the Bury Infirmary

Kempe C M M R C S L S A. has been re-appointed Medical Officer of Health to the Shoreham Urban District Council

Lapage C P M.B Ch.B Vict. has been appointed Junior Resident Medical Officer to the Manchester Children's Hospital Pendlebury

Leicester, J C Holdich M D B S F R C S Captain I M S has been appointed to act as Resident Surgeon to the Eden Hospital for Women Calcutta

Mackinnon Charles M B C.M Glasg , has been appointed Medical Officer for the Southern District by the Cirencester Board of Guardians

Maitland H L M B Ch M. Syd , has been appointed Honorary Surgeon to the Sydney Hospital.

Morgan Thomas Whitworth Sewell M R C S L S A. Lond has been appointed Medical Officer for the Camerton District by the Clutton Board of Guardians

Morse, Edward L R.C P L R C S Edin. has been appointed Medical Officer of Health for Great Torrington (Devon)

Murray John M B C M Glasg has been appointed Medical Officer of Health for Llandrindod Urban District Council

Newsome Herbert M B B S Durh has been appointed District Medical Officer for Pill (Somerset) by the Long Ashton Board of Guardians

Palmer, A M L R C P Edin. M R C S has been re-appointed Medical Officer of Health to the Whittington Urban District Council.

Stamford R B F R C S Edin L R C P Lond , M R C S has been appointed Honorary Medical Officer to the Loughborough and District Hospital and Dispensary

Sympson E Mansel, M A., M.D B C Cantab M R C S., has been elected Consulting Surgeon to the Lincoln General Dispensary

Thomas J Telfer M R C S L R C P Lond has been re appointed Medical Officer of Health to the Camborne (Cornwall) Urban District Council

Watkins H. E, M R C S L R C P Lond has been appointed Certifying Surgeon under the Factory Act for the Newton le-Willows District of the County of Lancaster

Willis J G L.R C P L R C S Edin L.F P S Glasg has been appointed Medical Officer of Health for the Rural District of Auckland Yorkshire

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

Addenbrooke s Hospital Cambridge —Assistant House Surgeon for six months Salary at rate of £30 per annum with board lodging and washing

Aldershot Urban District Council.—Medical Officer of Health. Salary £300 per annum.

Birmingham and Midland Free Hospital for Sick Children —Resident Medical Officer also Resident Surgical Officer Salary in each case £60 per annum with board washing and attendance.

Bristol General Hospital.—Surgeon or Physician also Assistant Honorary Anæsthetist

Ebbw Vale Workmen s Doctors Fund —Surgeon Salary £500 per annum net

Evelina Hospital for Sick Children Southwark S.E —Medical Radiographer Honorarium £25 per annum

Hospital for Consumption and Diseases of the Chest Brompton —Resident House Physicians for six months Honorarium of £25.

Manchester Northern Hospital for Women and Children Park place Cheetham Hill road —House Surgeon Salary £80 per annum with apartments and board

Manchester Owens College —Junior Demonstrator in Physiology Salary £100 rising to £150 per annum

Metropolitan Hospital Kingsland road N E — Anæsthetist. Honorarium 25 guineas per annum

National Hospital for the Paralysed and Epileptic Queen square Bloomsbury —Junior House Physician Salary £50 with board and apartments

North Eastern Hospital for Children Hackney road, N E —Resident Medical Officer Salary £120 per annum, with board residence and washing Also Casualty Officer Salary at rate of £100 per annum with lunch

North Riding Infirmary Middlesborough-on Tees —Assistant House Surgeon unmarried

Oxford Warneford Asylum —Assistant Medical Officer Salary £100 with board &c

Paddington Infirmary —Clinical Assistant and Second Assistant to the Medical Superintendent unmarried for six months Honorarium of £36 with board lodging and washing

Rotherham Hospital and Dispensary —Assistant House Surgeon Salary £80 per annum

Royal Eye Hospital Southwark S E —House Surgeon for six months renewable Salary at rate of 50 guineas per annum with board and residence

St Mark s Hospital for Fistula and other Diseases of the Rectum City road London E C —House Surgeon Salary £00 per annum with board lodging and washing

Samaritan Free Hospital for Women Marylebone-road N W —Clinical Assistants

Sussex County Hospital —House Physician unmarried Salary £80 per annum with board and residence

Tiverton Devonshire Infirmary and Dispensary —House Surgeon Salary £80 and all found

University of Durham College of Medicine, Newcastle-upon Tyne.—Lecturer on Ophthalmology

Victoria Hospital for Children Tite-street Chelsea S W —House Physician for six months Honorarium of £25 with board and lodging

Western Dispensary Rochester row Westminster S W —Medical Officer

West Ham Hospital, Stratford E – Junior House Surgeon Salary £75 per annum with board residence &c.

Wolverhampton Eye Infirmary —House Surgeon Salary £70 per annum with rooms board and washing

Births, Marriages, and Deaths.

BIRTHS

Edge —On the 18th inst at 54, Darlington street Wolverhampton, the wife of Frederick Edge M.D F R C S B Sc. M.R C P of a son

Herbert —On March 14th at Croxteth road Sefton park Liverpool, the wife of Major H. Herbert I M S of a daughter

Sharples —On March 11th at Greenhithe Kent the wife of M W Sharples M B Aberd of a daughter

MARRIAGES

Gowans—Angus —On March 12th at West Coates parish church, Edinburgh Thomas Gowans M.B Ch.B Edin , to Mary Berta, daughter of Robert Angus

Plummer—Beverley Bird —On March 16th at Batheaston Church Somerset by the Rev A. M Downes vicar Edgar Curnow Plummer, M.R C S Eng L.R C P Lond elder son of the late George Plummer M A Lond of Thame to Constance Beverley, daughter of Captain and Mrs Beverley Bird, of Clifton and formerly of Norton Hall Somerset.

DEATH.

Barron —On March 4th at Buenos Ayres Alexander Barron M.B., formerly Professor of Pathology University College Liverpool.

N.B —A fee of 5s is charged for the insertion of Notices of Births, Marriages and Deaths

Notes, Short Comments, and Answers to Correspondents.

THE DEATH OF MISS ELLEN MARY SHARP M.B LOND

To the Editors of THE LANCET

SIRS —By merest chance I a layman have come across THE LANCET of March 7th containing (at p 699) a notice of the circumstances attending my daughter's death at the Victoria Hospital Hull and as you endorse the view of the jury that his [my] attitude was reprehensible" I am sure you will kindly allow me to make some categorical corrections and explanations in regard thereto.

Let me state to begin with that Dr J C Molson is in no way concerned in the charges I preferred and which had reference entirely to occurrences before that gentleman appeared on the scene Explicitly I say that he did not tell me that my daughter had been wrongfully treated and my charges contained no such complaint against the medical management of the case for not being a medical man I am not competent to criticise medical methods I perceive Sirs that you have been rather misled by what the coroner considered" to the contrary there having been no evidence in support of his statement, emanating entirely from his own imagination that Dr Molson must have told Mr Sharp that his daughter had been wrongfully treated" I am very glad to have this opportunity of publicly relieving Dr Molson of an unwarrantable aspersion upon his professional character What I did complain of was indifference and neglect and of an absence of solicitude on the part of the honorary staff in regard to their paid colleague's serious illness in its early stages As you remark those statements were categorically contradicted but I fail to see that they were disproved

Becoming uneasy from the reports—unsatisfactory because vague—that reached us in the extreme south of England we, after having to begin with felt that the illness of our daughter a strong and very healthy young woman could not possibly reach a dangerous stage surrounded as we assumed her to be with the united and kindly skill of the honorary medical staff—and I am not ignorant in these matters—I suddenly felt myself impelled to send down my own medical attendant to Hull. Knowing the responsibility I was placing on him and feeling that the case had become a dangerous one I did no more than my duty in giving him, as against all eventualities a letter investing him with my entire confidence But as you point out it was already too late as also was too late" the constant and special nursing attendance that had not been ordered at first and as I now ascertain was as regards night nurse only ordered when my younger daughter (whom the hospital authorities had asked for to relieve us of the responsibility") requested it on her arrival saying that it could be at my expense I did not attend the adjourned inquest for valid reasons with which there is no need to trouble you Dr Molson did not attend for the very good reason that the coroner did not subpœna him and as far as I was concerned he has no evidence to offer The coroner not only charged me with slandering the hospital, he suggested that I should be prosecuted therefor I have been hopefully awaiting the initiation of proceedings for in a court of law facts come out.

Not attempting Sirs, to make you or your columns into a court of appeal I have refrained from saying much that I might have said but which you might have objected to The point at issue is not between any medical man and the hospital authorities but between them and me. In conclusion it may not perhaps be out of place for me to say that having had three uncles four first cousins and two sisters in addition to my late daughter in the profession my sympathies are naturally with it and thanking you for the courtesy of your space I am Sirs yours faithfully

March 16th 1903 HENRY SHARP

A SMOKE-WASHING APPARATUS

WE have had an opportunity of witnessing a trial of a smoke-washing apparatus which has been placed on the roof of Romano's Restaurant in the Strand London A similar apparatus is being fixed in the basement of the Imperial Restaurant in Regent street, but owing to building operations its application has been temporarily suspended at that place This is to be regretted, as it is stated that the apparatus does its best work when attached to the lower portion of a chimney as the fan contained in the apparatus so regulates the draught that chimneys are not required The inventor is Professor Giovanni Mugna of Forli Italy who claims for his patent that it deprives the smoke of all those qualities which are objectionable whether from the point of view of health or of cleanliness It consists of a metal cylinder at the top of which are openings for the ingress and egress of smoke A vertical shaft runs through the centre of this cylinder carrying on its upper portion a centrifugal fan and near its lower end a whirler" or paddle. Smoke is drawn from the chimney into the cylinder by means of the fan and the whirler mixes it with water contained in the bottom of the cylinder After being washed the smoke now almost colourless, escapes from the upper part of the apparatus. This vaporous residue we have not had an opportunity of examining chemically but the inventor states that it contains only a faint trace of carbonic acid The following little experiment was made before us Pieces of wet blotting paper were held for a few seconds over a chimney leading from a fire where bones and other refuse were being burnt. As might be expected, the paper was quickly covered with soot. The smoke-washing apparatus was then connected with the chimney and clean wet blotting paper was applied over the washed smoke outlet On removing the paper only three or four smuts were to be seen The experiment was repeated several times with similar results it is fair to state that even the few smuts may have been blown from chimneys in the immediate vicinity Without any great inconvenience it was quite possible to hold the head over the smoke outlet when only a faint odour resembling burning wood could be perceived On the residue at the bottom of the cylinder being drawn off it was seen to be a thick fluid of ink like blackness giving off a strong odour of smoke The apparatus is worked by a small electric motor of about one horse-power In a building where some sort of motive power is already in use no special motor is required and an electric motor can always be used where a continuous current is supplied. The machine itself only requires to be empted once or twice a day We understand that the apparatus is already in use in Italy The London address of the patentee is 8 Denmark street Charing Cross road London W C We have said enough to show that the apparatus is one that deserves careful trial. If it should prove that it is capable of doing a fair proportion of what is claimed for it by its inventor it ought to effect an appreciable difference in the atmosphere of any towns where it may be used.

A WARNING

To the Editors of THE LANCET

SIRS —Would you kindly allow me a portion of your valuable space to warn members of the medical profession against a man calling himself Mr Frank Cresswell He came to see me about 9 30 P M on March 9th He informed me he was a son of the late Mr F J Cresswell M.R C S L.R C P who died in 1877 He further informed me that he knew nobody to whom he could apply for any reference as he was alone in the world He did however after some pressing give me the address of a Dr Hugh Mackintosh living in Onslow gardens but who he informed me was abroad. I said that I would write to Dr Mackintosh and that if Mr Cresswell would come to see me on Monday the 16th I would let him know Dr Mackintosh's answer On calling at the address given me by Mr Cresswell as that of Dr Mackintosh I found that he did live there but that he was away I therefore wrote to him and received the following reply, which I have his permission to publish —

> Hotel Rose Wiesbaden 12th March 1903
>
> DEAR SIR,—In reply to your letter received this morning respecting Frank Cresswell I know nothing of him or his late father and only hope he may not make use of my name to anyone as a reference. Thanking you for your letter
>
> I am yours faithfully
>
> HUGH MACKINTOSH
>
> of 12 Onslow gardens S W

Needless to say Mr Cresswell has not kept his appointment with me for to-day I am, Sirs yours faithfully

Onslow-crescent S W , March 16th 1903 H. P CHOLMELEY

LETTERETTES

LETTERETTES consist of pieces of paper so shaped that they can be readily folded as a letter when side flaps turn over and play the part of an envelope. They are furnished in tablets" of 50 forms in a blotting paper cover and are extremely handy and reasonable in price. The name that has been given to this newest development of convenience in stationery is a revolting one to all who have a feeling for the development of the English language but it is vain to expect the proprietors of manufactured goods to respect etymology Letterettes are supplied by Messrs. John Walker and Co Limited of Warwick lane London E C , who also keep leather cases to hold the tablets

THE UNCROWNED KING OF THE APPENDICITIS PILL."

SHORTLY before last Christmas an inquest was held by Mr Schröder upon the body of a chambermaid at a hotel in the Tottenham Court-road with the result that a verdict was brought in by the jury of death through an illegal operation Prior to the reception of the deceased at Middlesex Hospital she had been attended by an unqualified person named Caleb Whitefoord living in Upper Marylebone-street Mr Schultess Young represented Whitefoord a detective inspector very properly watched the case for the police authorities, and the verdict, which followed upon the clearest medical evidence added that there was no evidence to show by whom the crime had been committed Shortly after this episode a paragraph appeared in certain papers detailing a fracas that had arisen outside a west-end physician's consulting rooms." The west-end physician was also a man named Whitefoord whose address as given in the *Echo* was Upper Marylebone-lane Great Portland street. Dr Whitefoord's complaint was that while he was attending to a female patient a man proceeded to make atrocious insinuations" which caused a crowd to assemble It is probable that the persons were identical and that the west-end physician" is the same unqualified person who was concerned in the inquiry into the death of the chambermaid We mention this episode only to show how careless some lay papers are in their attribution of medical titles to all sorts of people Our attention about this time was pointedly drawn to Dr" Whitefoord as we received letters from a Mr G Magin signing himself 'Secretary" and writing from 31 Upper Marylebone-street requesting information concerning our advertisement rates and inclosing quack literature of more than usual idiotcy and impudence extolling the Pills of Gold of Dr Whitefoord the Uncrowned King of the Appendicitis Pill Mr Schultess Young may be interested to know that in one of the leaflets a testimonial from him is included which runs as follows —

> 'Testimonial from Schultess Young Esq Barrister at-law
> 2 Essex Court Temple, E C
>
> To Dr Whitefoord,
>
> 'If you trade in these pills you have a great future before you

Whitefoord s activity has recently taken the form of writing to members of the Royal Family A day or two ago a correspondent forwarded to us a copy of the *St Pancras Chronicle* of March 7th which under the heading 'Royal Correspondence contains letters from Whitefoord Magin, and Viscount Crichton of some interest to those who care to make a study of the methods of unblushing charlatanism The letter placed first in this Royal Correspondence' is from C E Whitefoord per Geo Magin Sec who writes on March 4th to Her Royal Highness the Princess of Wales in terms that are as ridiculous as fulsome He asks that an old soldier may be paraded before their Royal Highnesses the Prince and Princess of Wales and their children because he had previously been paraded before the Duchess of Kent Queen Victoria and the King No answer seems to have been received The other letters are all dated in February On Feb 16th the old soldier, through G Magin Secretary thanks Lord Crichton for referring his claim for deferred pay to the adjutant of the regiment G Magin also submits for Lord Crichton s consideration some information from Dr Whitefoord and we think some pills which that person has for sale At any rate, Lord Crichton writes on Feb 26th to Dear Dr Whitefoord and says many thanks for the pills On Feb 28th G Magin secretary writes to His Royal Highness the Prince of Wales and repeats his silly request that the old soldier may be paraded before His Royal Highness and Prince Edward of York this letter being followed by an announcement that Lord Crichton has permitted Dr Whitefoord to use his name in connexion with his latest speciality the Crichton perfume We advise Lord Crichton not in his good nature to let persons like Dr Whitefoord and his secretary have a chance of quoting his name in support of any of their actions or wares There is no medical man named Whitefoord on the Medical Register now A practitioner named Caleb Charles Whitefoord was erased from the Register on Nov 25th 1891 in consequence of his having been convicted at the Old Bailey upon a charge of procuring abortion He was sentenced to five years penal servitude (The Lancet Nov 28th 1891 p 1241) and the evidence that the person who is addressing per G Magin the Prince and Princess of Wales and their equerry in-ordinary is this same man appears to us very strong In the Post Office Directory 31 Upper Marylebone-street Great Portland street (there is no such place as Upper Marylebone-lane) is stated to be inhabited by Caleb Charles Whitefoord accoucheur The names are very unusual ones Dr Whitefoord s description in the Post Office Directory is luridly significant while newspaper reports show that he carries on unqualified medical practice We recommend this person to the notice of the police Whether he is or is not the person who was convicted he is carrying on the business of a quack with insolence that ought to be restrained and the Princess of Wales ought to be protected from communications from him

OFFICIAL NOMENCLATURE.

To the Editors of The Lancet

Sirs —I was astonished to find to-day that in signing a death certificate I was not allowed to use the words uræmic poisoning as a cause of death On referring to the official nomenclature I find that the word uræmia or any variation thereof is not to be found in either index It is however to be found on p 33 as describing a special form of eclampsia. But this would not have done in my case which was one of uræmic coma The word coma" is also I find wanting in the index I suppose I am getting old fashioned but I cannot but think that uræmia and coma are each terms possessing scientific definiteness I am Sirs yours faithfully

Stamford street S E March 5th. H W Kesteven

*** The terms uræmic poisoning and 'coma are regarded as symptoms only either of them being possibly due to one of several causes It is obviously desirable in framing certificates of death for *State purposes that definite diseases rather than mere symptoms or* groups of symptoms should be mentioned and it is for this reason we believe that the names referred to have been omitted from the Official Nomenclature of the Royal College of Physicians of London —Ed L.

INFECTIVITY OF THE MILK OF TUBERCULOUS COWS

Mr J McLauchlan Young F R C V S lecturer on veterinary hygiene in the University of Aberdeen has published in pamphlet form the results of an investigation of the milk of tuberculous cows The inquiry was conducted under the joint auspices of the Agricultural Department of the University and of the Highland and Agricultural Society For various reasons it was found expedient to examine cows that were about to be slaughtered Many such animals were tested and a certain proportion of them reacted to th tuberculin test but only a few of these happened to be givin milk When a cow reacted to the test and yielded milk of appearance a sample of it was immediately submitted to Profess D J Hamilton for bacteriological examination From various caus the number of conclusive cases was reduced to 18 particulars o which are given in tabular form Among these there were fo cases of tuberculous mammitis while the remaining 14 cows ha no tubercle of the udder but showed the disease principally the lungs bronchial glands and mesenteric glands and to a l extent in the pleura mediastinal glands liver, diaphragm peritoneum pharyngeal glands and spleen The milk of all 18 cows wa centrifugalised and the deposit was inoculated into guinea pigs Th results were (1) that the milk drawn from the cows suffering tuberculosis of parts other than the mammary gland possessed n virulence and did not reproduce the disease in guinea pigs and (2) that the milk drawn from cows suffering from tuberculosis of th mammary gland in all cases reproduced the disease in guinea pigs

◆

M O.H —We are unable to say what decision would be given on th point in a court of law but it seems to us that as the medical m became aware of the cases in the pursuance of his duties as parish medical officer he is entitled to a fee of 1s

Cornubiensis —So far as we know there is no book upon the subject but our correspondent will find a scale laid down according to rent in Whitaker s Almanack

Locum —If our correspondent agreed to take the post for three guinea a week we fail to see that he has any ground for complaint

L S D —There is no mention in the Act of any salary to be paid to members of the Board

Erratum —With reference to the footnote to the preliminary note by Dr Castellani on the Etiology of Sleeping Sickness published in The Lancet of March 14th p 723 we are asked to announce that the paper which was not read before the Royal Society, was sent to us for publication by request *of the author*

Medical Diary for the ensuing Week.

OPERATIONS

METROPOLITAN HOSPITALS

MONDAY (23rd) —London (2 P M) St Bartholomew s (1 30 P M) St Thomas's (3 30 P.M) St George s (2 P M) St Mary s (2.30 P M) Middlesex (1 30 P M) Westminster (2 P M) Chelsea (2 P M) Samaritan (Gynæcological by Physicians 2 P.M) Soho-square (2 P M) Royal Orthopædic (2 P M) City Orthopædic (4 P M) Gt Northern Central (2 30 P M) West London (2 30 P M) London Throat (9 30 A M) Royal Free (2 P M) Guy s (1 30 P M)

TUESDAY (24th) —London (2 P.M) St Bartholomew s (1.30 P M), St Thomas s (3 30 P M) Guy s (1 30 P M) Middlesex (1 30 P M) Westminster (2 P M) West London (2 30 P M) University College (2 P M) St. George s (1 P M) St Mary's (1 P M) St. Mark's (2.30 P M) Cancer (2 P M) Metropolitan (2.30 P M) London Throat (9 30 A.M), Royal Ear (3 P M) Samaritan (9 30 A M and 2.30 P M) Throat Golden square (9 30 A M) Soho-square (2 P M)

WEDNESDAY (25th) —St Bartholomew's (1.30 P.M) University College (2 P M) Royal Free (2 P M) Middlesex (1 30 P M) Charing Cross (3 P.M) St Thomas s (2 P M), London (2 P M) King's College (2 P M), St. George s (Ophthalmic 1 P M) St Mary's (2 P.M) National Orthopædic (10 A.M) St Peter's (2 P M), Samaritan (9 30 A M and 2.30 P M) Gt Ormond-street (9 30 A M) Gt Northern Central (2 30 P M), Westminster (2 P M) Metropolitan (2.30 P M) London Throat (9 30 A M) Cancer (2 P M) Throat Golden square (9.30 A M) Guy s (1 30 P M)

THURSDAY (26th) —St Bartholomew s (1 30 P M) St Thomas s (3.30 P M) University College (2 P M) Charing Cross (3 P M) St George s (1 P M), *London* (2 P M) King s College (2 P M) Middlesex (1 30 P M) St Mary s (2 30 P M), Soho-square (2 P M) North West London (2 P.M) Chelsea (2 P.M) Gt Northern Central (Gynæcological 2 30 P M) Metropolitan (2 30 P.M) London Throat (9 30 A.M) St. Mark s (2 P M) Samaritan (9 30 A M and 2.30 P.M) Throat. Golden square (9 30 A.M) Gu s (1 30 P M)

FRIDAY (27th) —London (2 P M) St Bartholomew s (1 30 P M) St Thomas s (3 30 P M) Guy's (1.30 P M) Middlesex (1.30 P M) Charing Cross (3 P M) St George s (1 P M) King s College (2 P M) St. Mary s (2 P M) Ophthalmic (10 A M) Cancer (2 P M) Chelsea (2 P M) Gt Northern Central (2 30 P M) West London (2.30 P M) London Throat (9.30 A M) Samaritan (9 30 A M and 2.30 P M) Throat Golden square (9 30 A M) City Orthopædic (2.30 P.M) Soho-square (2 P M)

SATURDAY (28th) —Royal Free (9 A.M) London (2 P M) Middlesex (1 30 P M) St Thomas s (2 P M) University College (9 15 A.M) Charing Cross (2 P M) St George s (1 P M) St Mary s (10 P.M) Throat Golden square (9 30 A.M) Guy s (1.30 P.M)

At the Royal Eye Hospital (2 P M) the Royal London Ophthalmic (10 A.M), the Royal Westminster Ophthalmic (1 30 P M) and the Central London Ophthalmic Hospitals operations are performed daily

SOCIETIES

MONDAY (23rd) —Medical Society of London (11, Chandos street Cavendish square, W) —8 P.M Council Meeting 8.30 P.M. Clinical Cases —The President: Extensive Rodent Ulcer treated by X Rays —Dr W Ewart: Symmetrical Fatty Swellings in an Adult Woman—perhaps a variety of Dercum s Disease (Adiposis Dolorosa) —Dr P Weber: (1) Child with Multiple Congenital Deformities (2) The Case of Infantile Form of Articular Rheumatism shown on April 14th 1902.—Dr C Chapman: Multiple Cardiac Murmurs.—

Dr F J Poynton: Chronic Rheumatic Arthritis in a Child: Recovery —Dr S E Dore: Two Cases of Lupus treated by the Finsen Light —Dr G Stewart (for Dr J A. Ormerod) (1) Functional Tremor (2) Syringomyelia. – Dr H A. Caley Arthropathy of Hip and Ankle.

Society of Arts (John street Adelphi W C) —8 P M. Prof J A. Fleming: Hertzian Wave Telegraphy in Theory and Practice. (Cantor Lecture.)

TUESDAY (24th) —Royal Medical and Chirurgical Society (20, Hanover-square, W).—8.30 P.M. Papers:—Mr C W Ensor and Dr J O W Barratt: Paroxysmal Hæmoglobinuria of Traumatic Origin.—Dr A. H. Robinson and Dr A. Whitfield A Further Report on the Remarkable Series of Cases of Molluscum Fibrosum in Children communicated to the Society by Dr John Murray in 1873

WEDNESDAY (25th) —Society of Arts (John street Adelphi W C) —8 P M. Mr A. Kitson: Oil Light by Incandescence

Dermatological Society of Great Britain and Ireland (20, Hanover-square, W) —5 P.M. Meeting

Hunterian Society (London Institution, Finsbury-circus, E C) —8.30 P.M. Pathological Evening

FRIDAY (27th) —British Electro-Therapeutic Society —8.30 P.M. Papers —Dr D Baynes: Cataphoresis —Dr G B Batten: A System of X Ray and Electro-Therapeutics worked from the Alternating Main.—Dr J A. Codd The Electric Series Bath

Clinical Society of London (20 Hanover-square W) —8.30 P.M. Papers —Dr H. A. Lediard A Case of Acromegaly – Mr H Marsh: An Affection of the Knee-joint apparently depending on Malaria.—Dr A. Duncan A Case of Bilharzia.—Mr G H Makins Two Cases illustrating the Employment of Invagination and Stitching over Gangrenous Patches of Intestine in Strangulated Hernia.

LECTURES ADDRESSES DEMONSTRATIONS &c

MONDAY (23rd) —Medical Graduates College and Polyclinic (22, Chenies-street W C) —4 P.M. Dr G Little Clinique (Skin.) 5.15 P.M Dr F J McCann Cancer of the Uterus

Post-Graduate College (West London Hospital, Hammersmith road W) —5 P.M Mr L Williams: Diagnosis of Pain in the Teeth

TUESDAY (24th) —Royal College of Physicians of London (Pall Mall East) —5 P.M. Dr A. S P Grünbaum: Theories of Immunity and their Clinical Application. (Goulstonian Lecture.)

Medical Graduates College and Polyclinic (22, Chenies street W C.) —4 P.M Dr T Williams Clinique. (Medical) 5 15 P M. Dr P Manson The Diagnosis of Malaria in England

Post-Graduate College (West London Hospital, Hammersmith road W) —5 P M Dr S Taylor The Medical Anatomy of the Stomach

WEDNESDAY (25th) —Medical Graduates College and Polyclinic (22 Chenies-street, W C) —4 P M Mr J Berry Clinique. (Surgical) 5 15 P M Dr T G Brodie The Pathology of Asthma.

Post-Graduate College (West London Hospital, Hammersmith road, W) —5 P.M Dr S Taylor The Medical Anatomy of the Belly

THURSDAY (26th) —Royal College of Physicians of London (Pall Mall East) —5 P.M. Dr T R Glynn On Infective Endocarditis mainly in its Clinical Aspects. (Lumleian Lecture)

Medical Graduates' College and Polyclinic (22, Chenies-street W C) —4 P.M Mr J Hutchinson jun.: Clinique. (Surgical.) 5.15 P M. Mr J J Clarke Deformities due to Nervous Affections

Post-Graduate College (West London Hospital Hammersmith road W) —5 P M. Mr S Edwards: Urinary Cases of Interest

The Hospital for Sick Children (Gt. Ormond-street W C) —4 P.M. Dr Garrod Demonstration of Selected Cases

FRIDAY (27th) —Medical Graduates College and Polyclinic (22, Chenies-street W C) —4 P M Mr W Dodd Clinique. (Throat) 5 15 P.M. Mr T P Legg: Injuries of the Head and Neck III

Post Graduate College (West London Hospital, Hammersmith road, W) —5 P.M. Dr Abraham: Cases of Skin Disease

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We cannot prescribe or recommend practitioners

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Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager*

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MANAGER'S NOTICES.

THE INDEX TO THE LANCET

THE Index to Vol. II. of 1902, which was completed with the issue of Dec 27th, and the Title-page to the Volume, were given in THE LANCET of Jan 3rd.

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VOLUMES for the second half of the year 1902 are now ready Bound in cloth, gilt lettered, price 18*s*, carriage extra.

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METEOROLOGICAL READINGS

(Taken daily at 8.30 a m by Steward's Instruments)

THE LANCET Office March 19th 1903

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Mar 13	29·92	S.W	..	95	59	41	44	46	Hazy
14	29·69	E.	..	63	56	43	43	45	Foggy
15	29 80	S	..	87	62	42	43	47	Cloudy
16	29 64	W	..	90	53	40	42	45	Cloudy
17	29·82	S W	0·02	70	62	41	44	46	Cloudy
18	29 62	N W	0·15	89	53	44	42	45	Overcast
19	30·07	WSW	..	69	53	45	48	50	Cloudy

During the week marked copies of the following newspapers have been received *Engineer Surrey Comet Daily Telegraph, Reading Mercury Westminster Hospital Gazette Aberdeen Free Press (Weekly) Literary Digest (New York) Scientific American Sheffield Daily Independent Westminster Gazette, Aldershot News Army and Navy Gazette Echo Daily Mail, Yorkshire Post Dublin Express Hertfordshire Mercury Sanitary Record, Daily Graphic Oxford Chronicle, Liverpool Courier Plymouth Mercury City Press Electrical Engineer Birmingham Daily Post &c*

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The Goulstonian Lectures

ON

THEORIES OF IMMUNITY AND THEIR CLINICAL APPLICATION

Delivered before the Royal College of Physicians of London on March 17th, 19th, and 24th, 1903,

BY A. S F GRUNBAUM, M.D CANTAB, F R.C P LOND, &C,

DIRECTOR OF THE CANCER RESEARCH IN UNIVERSITY COLLEGE AND THE ROYAL INFIRMARY LIVERPOOL ASSISTANT PHYSICIAN TO THE LIVERPOOL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST ASSISTANT LECTURER AT THE LIVERPOOL SCHOOL OF TROPICAL MEDICINE, ETC.

LECTURE II.[1]

Delivered on March 19th.

MR. PRESIDENT AND GENTLEMEN,—Having considered in a brief general way the broad outline of Ehrlich's theory of immunity it behoves us to review some of the phenomena more in detail before proceeding to their practical clinical and pathological applications

It is well to recall the fundamental fact on which depends the production of all these bodies or substances which we are about to study It seems to be a universal physiological reaction of the healthy organism to produce substances more or less specifically antagonistic to alien cells or cell products. Although it is a familiar fact that tolerance can be established towards some crystallisable poisons, yet the "antidote" (if any) thus formed is not of the same nature as when an organised cell product is the poison. Yet it must not be thought that the distinction either lies between colloid and crystalloid or that the poison or antidote is necessarily of proteid nature. Antidotes have been obtained for crystallised proteids while attempts to produce them for starch or similar products as well as for gelatin have failed. But in the case of gelatin, at any rate, a species of antidote in the form of a gelatin-dissolving enzyme is produced. We have also seen that the antidote is the cast-off link by which the poison would otherwise attach itself to the cell. If this link does not exist the poison cannot act on the cell and there is no need for an antidote

Here may appropriately be introduced a new symbolic method (slightly modified) devised by Professor H. G Ernst of Harvard University[2] which helps to simplify the conception of Ehrlich's theory

H	represents the	cytophile haptophorous atom-group in the molecule.
H		complementophile
T		toxophorous
N		nutrient
L		lysin
X	"	the remainder of the molecule.

Then to represent the interaction of toxins and antitoxins the following may be used :—

$$\begin{array}{lccccc}
\text{Toxin molecule contains} & \mathrm{H} & + & \mathrm{T} & + & \mathrm{X} \\
 & | & & & & \\
\text{Antitoxin} & \mathrm{H} & + & \mathrm{X} & &
\end{array}$$

The two H groups are bound together therefore the T group in the toxin cannot be bound to anything else and the substance exists as a harmless material in the blood stream.

The production of the antitoxin by the injection of the toxin or toxoid may be represented as follows —

$$\begin{array}{ll}
\text{Tissue cell molecule contains} & \mathrm{H}+\mathrm{N}+\mathrm{X} \\
\text{Toxin} & \mathrm{H}+\mathrm{T}+\mathrm{X}\ (\text{or toxoid} = \mathrm{H}+\mathrm{X})
\end{array}$$

The H groups bind the two together but the H group of the tissue-cell molecule is necessary for the metabolism of the cell it must be reproduced if the cell is to live being so reproduced the reproduction occurs in excess and then the H groups are thrown off and exist free in the blood stream as

$\mathrm{H}+\mathrm{X}$, which is the antitoxin

The group T is not necessary for this purpose, hence the formation of antitoxin from toxoid

Bordet's work on hæmolysis and Ehrlich's later work showed that two substances were necessary for other reactions and necessitated the supposition of the existence of two haptophorous atom groups. In accordance with this idea the reaction in hæmolysis may be shown thus —

It requires (1) the cell to be destroyed (2) the mediator and (3) the complement

$$\begin{array}{lccccccc}
\text{The cell molecule contains} & \mathrm{H} & + & \mathrm{N} & + & \mathrm{X} & & \\
 & | & & & & & & \\
\text{The mediator} & \mathrm{H} & + & H & + & \mathrm{X} & & \\
 & & & | & & & & \\
\text{The complement} & & & H & + & \mathrm{L} & + & \mathrm{X}
\end{array}$$

The complement is bound to the immune body by the *H* group the two to the blood-cell by the H group in the mediator and then the L group in the complement may act.

In the case of the complementoid, in which the L (functional) group is absent union takes place with the mediator but no lysis can occur

The production of the mediator requires (1) blood-cells injected, (2) the body-cell in which the injection is made, and (3) the complement

The reaction is shown thus —

$$\begin{array}{lccccccccc}
\text{The blood-cell molecule contains} & \mathrm{H} & + & \mathrm{N} & + & \mathrm{X} & & & & \\
 & | & & & & & & & & \\
\text{The body-cell} & \mathrm{H} & + & H & + & \mathrm{X} & + & \mathrm{X} & & \\
 & & & | & & & & & & \\
\text{The complement} & & & H & + & \mathrm{L} & + & \mathrm{X} & &
\end{array}$$

The two *H* and H groups in the tissue cell are used up but must be reproduced being reproduced this occurs in excess they are thrown off and exist free in the blood stream as

$\mathrm{H}+H+\mathrm{X}$, which is the mediator

So with bacteriolysis the formulæ are the same, except in this instance the cell to be acted upon is the bacterial cell and not the blood-cell.

$$\begin{array}{lccccccc}
\text{The bacterial cell molecule contains} & \mathrm{H} & + & \mathrm{T} & + & \mathrm{X} & & \\
 & | & & & & & & \\
\text{The mediator} & \mathrm{H} & + & H & + & \mathrm{X} & & \\
 & & & | & & & & \\
\text{The complement} & & & H & + & \mathrm{L} & + & \mathrm{X}
\end{array}$$

As before the *H* groups in the complement and the mediator combine, and then these two are joined to the bacterial cell molecule by the H groups and thus the L group in the complement may exert its destructive action upon the bacterium.

The production of the bacteriolytic power requires (1) the bacterial cell to be injected (2) the tissue cell from which the mediator is to be produced and (3) the complement existing in the fresh blood stream. The reaction is as follows —

$$\begin{array}{lccccccc}
\text{The bacterial cell molecule contains} & \mathrm{H} & + & \mathrm{T} & + & \mathrm{X} & & \\
 & | & & & & & & \\
\text{The tissue cell} & \mathrm{H} & + & H & + & \mathrm{N} & + & \mathrm{X} \\
 & & & | & & & & \\
\text{The complement} & & & H & + & \mathrm{L} & + & \mathrm{X}
\end{array}$$

The H atom groups in the tissue cell molecule being taken up are reproduced, cast off and exist free in the blood stream as $\mathrm{H}+H+\mathrm{X}$, the mediator

Cytolytic action may also be shown :—

$$\begin{array}{lccccccc}
\text{The cell molecule to be acted upon contains} & \mathrm{H} & + & \mathrm{N} & + & \mathrm{X} & & \\
 & | & & & & & & \\
\text{The mediator molecule contains} & \mathrm{H} & + & H & + & \mathrm{X} & & \\
 & & & | & & & & \\
\text{The complement molecule} & & & H & + & \mathrm{L} & + & \mathrm{X}
\end{array}$$

The H and *H* groups are joined together and the L group of the complement may then act

The production of the cytolytic property is secured thus —

$$\begin{array}{lccccccc}
\text{The foreign-cell molecule injected contains} & \mathrm{H} & + & \mathrm{N} & + & \mathrm{X} & & \\
 & | & & & & & & \\
\text{The tissue-cell molecule, the body in which injection is made contains} & \mathrm{H} & + & H & + & \mathrm{N} & + & \mathrm{X} \\
 & & & | & & & & \\
\text{The complement molecule contains} & & & H & + & \mathrm{L} & + & \mathrm{X}
\end{array}$$

The H and *H* groups in the tissue cells are reproduced in excess and exist free as $\mathrm{H}+H+\mathrm{X}$, the mediator in cytolysis.

Precipitin reactions may also be shown —

$$\begin{array}{lccccccc}
\text{The blood globulin molecule contains} & \mathrm{H} & + & \mathrm{X} & + & \mathrm{X} & & \\
 & | & & & & & & \\
\text{The immune body} & \mathrm{H} & + & H & + & \mathrm{X} & & \\
 & & & | & & & & \\
\text{The complement} & & & H & + & \mathrm{L} & + & \mathrm{X}
\end{array}$$

The H and *H* groups being bound together the L atom-group may act in this instance producing the precipitate, and therefore L may be more clearly represented as P

The production of the precipitin power occurs as in all the others —

$$\begin{array}{lccccccc}
\text{Blood injected, the molecule contains} & \mathrm{H} & + & \mathrm{N} & + & \mathrm{X} & & \\
 & | & & & & & & \\
\text{The body cell (in which the injection is made) molecule contains} & \mathrm{H} & + & H & + & \mathrm{N} & + & \mathrm{X} \\
 & & & | & & & & \\
\text{The complement} & & & H & + & \mathrm{P} & + & \mathrm{X}
\end{array}$$

The H and *H* groups are reproduced in excess as before and exist free as $\mathrm{H}+H+\mathrm{X}$, the mediator necessary for this reaction.

Anti-complement reaction is shown —

$$\begin{array}{ll}
\text{The complement molecule contains} & H+\mathrm{L}+\mathrm{X} \\
\text{The anti-complement molecule} & H+\mathrm{X}
\end{array}$$

The two *H* groups combine and the complement is rendered harmless by this conjunction.

The production of the anti-complement is shown thus —

$$\begin{array}{ll}
\text{The injected serum (containing complement) molecule contains} & H+\mathrm{N}+\mathrm{X} \\
\text{The receiving blood molecule contains} & H+(H+H+H+H+\&\text{c.})+\mathrm{N}+\mathrm{X}
\end{array}$$

The two *H* atom groups combine the one in the receiving blood is renewed in excess, is thrown off and exists free as

$H+\mathrm{X}$ the anti-complement.

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[1] Lecture I was published in THE LANCET of March 21st, p. 775.

[2] Transactions of the American Academy of Arts and Sciences

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The molecule must also be supposed at all times to contain in the letter X all the other atom groups not needed for the expression of the special reaction under consideration

ANTITOXINS

In the case of the toxins the poison is a cell product and the antitoxin merely the antidote to this cell product. But as regards the mode of formation of this antidote there is difference of opinion. Metchnikoff thought, and still thinks, that it may be merely modified toxin, in spite of the facts that one unit of toxin may lead to the production of about 100,000 units of antitoxin, that its production may be increased by pilocarpine injections, and that immunised animals may by repeated venesections have a quantity equal to the whole volume of their blood withdrawn and yet at the end supply a serum of nearly the same antitoxic power as at first. Moreover, antitoxin exists normally in demonstrable quantity in the blood of some men and animals—corroborative evidence of Ehrlich's views. It must also be clearly recognised that it is not necessarily one kind of cell which may form antitoxin, although the effects of the toxin may be most evident on one species of cell. Thus the tetanus toxin fixes on the cells most susceptible to it—viz., of the central nervous system. We know this to be so clinically, but it can also be shown in the manner of a chemical experiment. On mixing tetanus toxin with an emulsion of brain substance and then injecting it, it is found to have lost its toxic power If the mixed toxin and emulsion be centrifugalised the supernatant fluid has no more toxic power It is no mere mechanical precipitation, since boiled brain substance has no neutralising effect. In animals but slightly susceptible to tetanus the fixing and neutralising power of the brain substance is correspondingly small. The proof value of these experiments is not affected by the fact that the same result can be obtained with lecithin, cholesterin, &c It is of interest to inquire whether the sensitiveness to tetanus toxin can be yet further localised I have begun experiments to test whether there is any difference in the neutralising power of "motor area" and other cells, but these experiments are still in the initial stage It has been affirmed recently that the cerebral substance of an animal immunised against tetanus has but little, if any, more antitoxic power than that of normal animals and that the blood always has more than the brain. If this be correct it may be due to an inherent peculiarity of the cells of the central nervous system in setting free the superfluous receptors more rapidly than do other cells. Perhaps the most striking evidence to show the local cellular formation of antitoxin is obtained by rapidly immunising one eye of a rabbit to abrin instillations The cornea of that eye only will then be found capable of neutralising abrin.

Some animals are very susceptible to tetanus toxin in whatever manner introduced, whether subcutaneously or intra cerebrally, whilst others are affected only when the poison is introduced intra cerebrally In the latter case it is found that the toxin is deposited and fixed in other tissues of the body If the toxin is retained by only one kind and that a vital kind of cell, like the nerve cell of the central nervous system as in mice and guinea pigs, obviously immunisation with toxins is impossible and, as a matter of fact, it can only be done with toxoids Yet, on the whole, it must be admitted that while no experiments inconsistent with the theory have been brought forward the total evidence for the formation of antitoxin by the cell most sensitive to the toxin is not yet complete.

According to hypothesis the formation of antitoxin will depend only on there being suitable receptors for the haptophore molecule of the poison since the saturation of the receptor will stimulate the cell to the production of others whether a toxophore group be present or no, provided that it does not irreparably damage the cell It then merely stimulates to increased normal action If there are no suitable receptors natural immunity exists The poison cannot attack the cell and consequently does not stimulate to the production of antitoxin Of this nature is the immunity of the tortoise to tetanus and of the pigeon to hydrophobia. The poison remains in the circulation for some time, but the animal does not become ill nor does it form any antitoxin. On the other hand, the poison may disappear from the circulation and be merely deposited, without uniting with the cells, in the tissues of the body Thus scorpions may be injected with tetanus toxin It disappears from the circulation and may be shown to be present in the liver cells months later There is yet a third possibility The receptors may be suitable but the cells remain unaffected by the toxophore group This is said to be the case with the alligator Although unaffected by tetanus toxin which rapidly disappears from the blood, it forms a considerable quantity of antitoxin According to Metchnikoff it is the large mononuclear leucocytes—the only form of leucocyte in the alligator—which produce the antitoxin and he supports this view by experiments showing that the poisons can be found fixed in the macrophages while the surrounding fluid is free There can be no doubt, in view of these observations and of others concerning changes in the marrow during infection, that the leucocytes play a considerable but not exclusive part in the formation of antitoxin, but this is quite another matter to the destructive phagocytosis of bacteria.

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The more simple cases of hæmolysis have received a physical explanation. Sapotoxin has a powerful hæmolytic action—0 001 cubic centimetre of a 2 per cent. solution will lake one cubic centimetre of a 5 per cent. solution of human blood in normal NaCl in a few minutes. I find that solanin has a similar effect and with both substances the quantity required varies much with different kinds of blood. Apparently this is due to a combination of sapotoxin with the cholesterin and lecithin of the blood corpuscle When added in the test tube to sapotoxin, cholesterin is able to neutralise its laking power (Stewart) The part which may be played by lecithin is seen in the action of cobra venom Certain xanthocytes (the difficulty in hæmolysis apparently runs almost parallel with the difficulty of obtaining crystalline hæmoglobin from them) are not hæmolysed by cobra venom alone, but they are on the addition of a small quantity of lecithin, which then apparently acts as a complement. The corpuscle thus contains within itself the necessary element for its own destruction, not only in the lecithin, but, as we shall see, in another thermolabile complement

Since these experiments have brought to light several new facts they are worth considering more in detail It had been known for some years that while weak solutions of cobra venom would hæmolyse xanthocytes strong solutions might not. Ehrlich and Kyes attribute this result to the presence of an endo-complement the existence of which they demonstrated in the following manner. Xanthocytes and a strong solution of cobra venom were mixed and then separated by centrifugalisation. On adding normal NaCl solution to the xanthocytes no hæmolysis occurred until a suitable complement was subsequently added. The avidity of the excess of amboceptors in the cobra venom had withdrawn all the complement from the xanthocytes. The proof can be varied by making a solution of the complement from washed corpuscles in water and adding this to xanthocytes—e.g., of the ox—not hæmolysable by cobra venom alone; they are then dissolved. Since the action can be destroyed by heating to 56° C. the substance is a complement in a genuine sense.

As the authors point out, these results are inimical to Bordet's theory which supposes that the amboceptor enables the complement to enter (and to destroy) the cell, since we have the complement in this instance already in the cell, which it is unable to destroy unaided. They found further, in a systematic examination of Calmette's statement that fresh serum sometimes had an anti hæmolytic action and that certain sera acted better when heated first to 62° C., that quite a number of sera had activating powers for assisting the hæmolysis of certain xanthocytes by cobra venom, when heated even to 100° C., which powers might be greater or less than they had been in the serum unheated or heated to 56° C. Moreover, they showed by treating serum with from 8 to 10 volumes of alcohol that the activating substance remained in solution while the inhibitory substance went down with the precipitate. The solubility in alcohol and ether identified the substance as being probably either cholesterin, lecithin, fat, or fatty acids. Experiment showed that lecithin even in very minute quantity possessed activating power for cobra venom. It even enables hæmolysis to take place at 0° C. In all probability therefore, the venom amboceptor contains at least *two complementophile* groups either of which is dominant—viz., can produce hæmolysis by itself—but they are no doubt more powerful when acting together. The authors further point out that the cobra venom cannot act as a sensitiser towards lecithin in Bordet's sense. If this were so the more cobra venom the less lecithin should be required, whereas the reverse is actually the case; the excess of cobra venom deviates the lecithin from its complementary action.

The chemical position of the various bodies which we have been considering is not without interest. By using Hofmeister's method of fractionally salting out the various proteids from immune serum Pick showed that no antitoxins, lysins, or agglutinins were contained in the fibrins, the globulin, or the albumin; they appeared in either the euglobulins or the pseudo-globulin. The distribution was rather remarkable. In the horse alone were any immune bodies in the pseudo-globulin; these were diphtheria antitoxin and typhoid agglutinin. In the goat they were all (viz., diphtheria and tetanus antitoxin, cholera and typhoid agglutinin, and cholera lysin) in the euglobulin. Cholera agglutinin was in euglobulin in the horse and typhoid agglutinin in the euglobulin in the rabbit and guinea pig also. The goat was the only animal tested for all bodies.

The difference between diphtheria antitoxin in the goat and horse was sufficiently marked to enable them to be separated, when mixed, by fractional precipitation. With such a marked difference in chemical constitution it is not remarkable that the physiological and therapeutical antitoxins obtained from various species of animals should exhibit marked differences.

CYTOTOXINS.

The experiments on xanthocytes naturally led to their extension to many forms of cells and to the study of various other cytolysins, principally by Metchnikoff and his school. Thus toxins for spermatozoa, ciliated epithelium, leucocytes, kidney tissue, &c., were made. Comparatively little is known about them as yet but with more extended knowledge they are likely to play a considerable part in our conceptions of the etiology of non infectious disease. Thus Delezenne produced acute yellow atrophy by an anti hepatic serum. The results appear not to be strictly specific; thus in most cases hæmolysins are produced at the same time.

The production of anti-cytotoxins is also of importance and may have a therapeutic future. Metchnikoff was able to produce an anti spermatoxin in a rabbit from which the testes had been removed. A practical interest attaches to an experiment of this description. For example, in the treatment of myxœdema with thyroid gland we can hardly suppose that the few grains of gland taken per diem really replace the normal activity. At the same time we know that a large dose may produce toxic effects. Consequently a part of the beneficial therapeutic action seems to be due to the production of an antitoxin to the toxin contained in the thyroid. Normally the antitoxin would be elaborated by the gland itself, but it may be, and is, vicariously prepared in the absence of the thyroid by other cells.

By a converse reasoning the indifferent results obtained with pancreatic extract in diabetes and, as a rule, with suprarenal extract in Addison's disease are explained. The function of pancreas (and suprarenal) is not to neutralise but to elaborate. The symptoms in diabetes point rather to perverted metabolism than to production of toxin. The exhibition of pancreatic extract will neither replace this activity nor stimulate other cells to vicarious performance of such function. This object would rather be attained, if at all, by the injection of an anti pancreatic serum. There is the more hope since we know that in man the injection of a hæmolytic serum stimulates and leads subsequently to an increased formation of xanthocytes.

Organo-therapy should not be lightly undertaken and must be rationally employed. The tentative administration of organs corresponding to those diseased has led to many disappointments, but it must be tried and it is not so dangerous as to make the experiment undesirable until theory and knowledge are more developed. Fortunately, just as vaccination began with small pox and antitoxin treatment with diphtheria, so organo-therapy began with myxœdema—each with the most successful result and most appropriate disease from the start.

It behoves us now to pay some attention to Metchnikoff's theory as modified by him to the present state of knowledge. It is based on the phenomena following the injection of cells into the peritoneal cavity of the guinea pig. After a temporary destruction of the leucocytes already present, during which period the injected cells remain unaltered, there follows an immigration of phagocytes (macrophages) which take up the alien cells. Having done this they wander back into various organs—e.g., the liver—meanwhile dissolving the ingested cells by means of the hypothetical cytolytic ferment termed by Metchnikoff "cytase." From the spleen and lymphatic glands he obtained an extract possessing hæmolytic properties destroyed by heating at 56° C. He considers this due to the cytase liberated by maceration from the macrophages. If bacteria are used in the experiment instead of alien cells it is chiefly the polymorphonuclear leucocytes (microphages) which act as just described. For this reason the respective digestive ferments were termed by Metchnikoff macrocytase and microcytase respectively. On repeating, in the ordinary way of immunisation, the injection of xanthocytes the digestive action takes place already in the peritoneal cavity instead of on the journey back to the spleen or elsewhere and hæmolysis occurs. This Metchnikoff attributes to the formation in the meantime of a special immune body (*fixateur*) which sensitises the xanthocyte for the action of the cytase (*complement*). The cytase is not free in the blood but is secreted by the leucocytes since no hæmolysis occurs on subcutaneous injection of xanthocytes.

The following experiments support this view in an even more striking fashion. By the injection of spermatozoa an anti spermatoxin is formed which dissolves the spermatozoa of the species of animal used *in vitro*, although the spermatozoa in the testes remain uninjured. But if these spermatozoa are put into the serum of a normal animal loss of motility occurs at once. Consequently they were sensitised, so that if the cytase were free we must make the unlikely supposition that it could not penetrate the vessel walls. Yet they are dissolved on intra peritoneal, although not on subcutaneous, injection; consequently the cytase was not circulating free in the blood.

In the case of bactericidal sera the microcytase is the efficient ferment. The difference was ingeniously demonstrated by Gengou who obtained exudates consisting of macrophages and microphages respectively and showed that their products behaved differently. The former had hæmolytic but not bactericidal properties; the latter possessed bactericidal but no hæmolytic power. The same observer also showed that unclotted immune blood had hardly any bactericidal action. I am myself attempting to decide this

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Since these experiments have brought to light several new facts they are worth considering more in detail It had been known for some years that while weak solutions of cobra venom would hæmolyse xanthocytes strong solutions might not. Ehrlich and Kyes attribute this result to the presence of an endo-complement the existence of which they demonstrated in the following manner. Xanthocytes and a strong solution of cobra venom were mixed and then separated by centrifugalisation. On adding normal NaCl solution to the xanthocytes no hæmolysis occurred until a suitable complement was subsequently added. The avidity of the excess of amboceptors in the cobra venom had withdrawn all the complement from the xanthocytes. The proof can be varied by making a solution of the complement from washed corpuscles in water and adding this to xanthocytes—e.g., of the ox—not hæmolysable by cobra venom alone; they are then dissolved. Since the action can be destroyed by heating to 56° C. the substance is a complement in a genuine sense.

As the authors point out, these results are inimical to Bordet's theory which supposes that the amboceptor enables the complement to enter (and to destroy) the cell, since we have the complement in this instance already in the cell, which it is unable to destroy unaided. They found further, in a systematic examination of Calmette's statement that fresh serum sometimes had an anti-hæmolytic action and that certain sera acted better when heated first to 62° C., that quite a number of sera had activating powers for assisting the hæmolysis of certain xanthocytes by cobra venom, when heated even to 100° C., which powers might be greater or less than they had been in the serum unheated or heated to 56° C. Moreover, they showed by treating serum with from 8 to 10 volumes of alcohol that the activating substance remained in solution while the inhibitory substance went down with the precipitate. The solubility in alcohol and ether identified the substance as being probably either cholesterin, lecithin, fat, or fatty acids. Experiment showed that lecithin even in very minute quantity possessed activating power for cobra venom. It even enables hæmolysis to take place at 0° C. In all probability, therefore, the venom amboceptor contains at least two complementophile groups either of which is dominant—viz., can produce hæmolysis by itself—but they are no doubt more powerful when acting together. The authors further point out that the cobra venom cannot act as a sensitiser towards lecithin in Bordet's sense. If this were so the more cobra venom the less lecithin should be required, whereas the reverse is actually the case; the excess of cobra venom deviates the lecithin from its complementary action.

The chemical position of the various bodies which we have been considering is not without interest. By using Hofmeister's method of fractionally salting out the various proteids from immune serum, Pick showed that no antitoxins, lysins, or agglutinins were contained in the fibrin; the globulin or the albumin they appeared in either the euglobulins or the pseudo-globulin. The distribution was rather remarkable. In the horse alone were any immune bodies in the pseudo-globulin; these were diphtheria antitoxin and typhoid agglutinin. In the goat they were all (viz. diphtheria and tetanus antitoxin, cholera and typhoid agglutinin, and cholera lysin) in the euglobulin. Cholera agglutinin was in euglobulin in the horse and typhoid agglutinin in the euglobulin in the rabbit and guinea-pig also. The goat was the only animal tested for all bodies.

The difference between diphtheria antitoxin in the goat and horse was sufficiently marked to enable them to be separated, when mixed, by fractional precipitation. With such a marked difference in chemical constitution it is not remarkable that the physiological and therapeutical antitoxins obtained from various species of animals should exhibit marked differences.

CYTOTOXINS.

The experiments on xanthocytes naturally led to their extension to many forms of cells and to the study of various other cytolysins, principally by Metchnikoff and his school. Thus toxins for spermatozoa, ciliated epithelium, leucocytes, kidney tissue, &c., were made. Comparatively little is known about them as yet, but with more extended knowledge they are likely to play a considerable part in our conceptions of the etiology of non-infectious disease. Thus Delezenne produced acute yellow atrophy by an anti-hepatic serum. The results appear not to be strictly specific; thus in most cases hæmolysins are produced at the same time.

The production of anti-cytotoxins is also of importance and may have a therapeutic future. Metchnikoff was able to produce an anti-spermatoxin in a rabbit from which the testes had been removed. A practical interest attaches to an experiment of this description. For example, in the treatment of myxœdema with thyroid gland we can hardly suppose that the few grains of gland taken per diem really replace the normal activity. At the same time we know that a large dose may produce toxic effects. Consequently a part of the beneficial therapeutic action seems to be due to the production of an antitoxin to the toxin contained in the thyroid. Normally the antitoxin would be elaborated by the gland itself, but it may be, and is, vicariously prepared in the absence of the thyroid by other cells.

By a converse reasoning the indifferent results obtained with pancreatic extract in diabetes and, as a rule, with suprarenal extract in Addison's disease are explained. The function of pancreas (and suprarenal) is not to neutralise but to elaborate. The symptoms in diabetes point rather to perverted metabolism than to production of toxin. The exhibition of pancreatic extract will neither replace this activity nor stimulate other cells to vicarious performance of such function. This object would rather be attained, if at all, by the injection of an anti-pancreatic serum. There is the more hope since we know that in man the injection of a hæmolytic serum stimulates and leads subsequently to an increased formation of xanthocytes.

Organo-therapy should not be lightly undertaken and must be rationally employed. The tentative administration of organs corresponding to those diseased has led to many disappointments, but it must be tried and it is not so dangerous as to make the experiment undesirable until theory and knowledge are more developed. Fortunately, just as vaccination began with small-pox and antitoxin treatment with diphtheria, so organo-therapy began with myxœdema—each with the most successful result and most appropriate disease from the start.

It behoves us now to pay some attention to Metchnikoff's theory as modified by him to the present state of knowledge. It is based on the phenomena following the injection of cells into the peritoneal cavity of the guinea-pig. After a temporary destruction of the leucocytes already present, during which period the injected cells remain unaltered, there follows an immigration of phagocytes (macrophages) which take up the alien cells. Having done this they wander back into various organs—e.g., the liver—meanwhile dissolving the ingested cells by means of the hypothetical cytolytic ferment termed by Metchnikoff "cytase." From the spleen and lymphatic glands he obtained an extract possessing hæmolytic properties destroyed by heating at 56° C. He considers this due to the cytase liberated by maceration from the macrophages. If bacteria are used in the experiment instead of alien cells it is chiefly the polymorphonuclear leucocytes (microphages) which act as just described. For this reason the respective digestive ferments were termed by Metchnikoff macrocytase and microcytase respectively. On repeating, in the ordinary way of immunisation the injection of xanthocytes the digestive action takes place already in the peritoneal cavity instead of on the journey back to the spleen or elsewhere and hæmolysis occurs. This Metchnikoff attributes to the formation in the meantime of a special immune body (*fixateur*) which sensitises the xanthocyte for the action of the cytase (*complement*). The cytase is not free in the blood but is secreted by the leucocytes since no hæmolysis occurs on subcutaneous injection of xanthocytes.

The following experiments support this view in an even more striking fashion. By the injection of spermatozoa an anti-spermatoxin is formed which dissolves the spermatozoa of the species of animal used *in vitro*, although the spermatozoa in the testes remain uninjured. But if these spermatozoa are put into the serum of a normal animal loss of motility occurs at once. Consequently they were sensitised, so that if the cytase were free we must make the unlikely supposition that it could not penetrate the vessel walls. Yet they are dissolved on intra-peritoneal, although not on subcutaneous, injection; consequently the cytase was not circulating free in the blood.

In the case of bactericidal sera the microcytase is the efficient ferment. The difference was ingeniously demonstrated by Gengou, who obtained exudates consisting of macrophages and microphages respectively and showed that their products behaved differently. The former had hæmolytic but not bactericidal properties; the latter possessed bactericidal but no hæmolytic power. The same observer also showed that unclotted immune blood had hardly any bactericidal action. I am myself attempting to decide this question in the case of antitoxic sera by direct transfusion of blood from the immunised to the unimmunised animal and comparing it with the injection of serum.

The bactericidal action being hypothetically due to two ferments—one special and one general—Metchnikoff supposes, in order to explain the production of immune sera, that the repeated injection of the bacteria leads to an over production of the specific ferment, which is then secreted. There is no over production of the general ferment. The special ferment sensitises the bacteria for the action of the general ferment. Thus Metchnikoff, in opposition to Buchner, admits the existence of at least two alexins or complements. But in general he believes that the leucocytes deal with the destruction of bacteria by themselves In a similar manner Metchnikoff explains the origin of the antitoxins Neither theory explains all the phenomena without strain, yet on the whole there is a gratifying uniformity of idea underlying each.

No doubt in varying circumstances the conditions are different. At one time there will be more immune body or complement locked up in the leucocyte , at another moment the excess may be in the blood stream. Very likely there is a perpetual ebb and flow Without a hypothesis of this kind some of the phenomena are difficult to explain on any theory, and to my mind the weakest point in Ehrlich's theory is the strained explanation of the action of toxin in highly immunised animals When they succumb it is supposed that the avidity of the toxin is greater for the animal cell than for the antitoxin , when they do not the reverse must hold good. Since the absence of receptors also implies immunity it seems a curious incompetence on the part of nature that she could not shape the receptors in such fashion as to be suitable for food only but unsuitable for toxins and bacteria.

"Everybody recognises," says Professor W H. Welch in his Huxley lecture, "abnormal metabolism as an essential condition in infections. The very point needing explanation is how the bacteria derange metabolism." He then puts forward an explanatory hypothesis, an extension of Ehrlich's theory, to which we must here refer We are early taught that action and reaction are equal and opposite. It would not, therefore, be surprising if when the cell manufactures antidotes to the bacterium the bacterium were also to elaborate antidotes to the cell—viz , its specific toxin. This theory is very seductive and it affords considerable assistance in the explanation of relapses and re-infections It explains also the diminution in virulence resultant on growth on artificial media where there is less struggle for existence and the increase in virulence on passage of the micro organism through an animal. It may be urged that this is merely a survival of the fittest under artificial circumstances There is some force in the argument, because a virulent toxin producing bacillus will continue to produce toxin much longer after removal from adverse conditions than would seem to be the case with animal cells. It is a family characteristic much more deeply ingrained than in animal cells We therefore look forward with interest to the experimental verification of Professor Welch's theory

THE COMPARATIVE VALUE OF THE MOUTH, THE RECTUM, THE URINE, THE AXILLA, AND THE GROIN FOR THE OBSERVATION OF THE TEMPERATURE,

ESPECIALLY IN REGARD TO TUBERCULOSIS AND TO THE EFFECTS OF EXERCISE AND OTHER CONDITIONS.

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OUR objects have been (1) to investigate the exact relationship of the readings of the thermometer, according as it is placed in one or other of the situations enumerated above, and (2) to ascertain the effects on the temperature of exercise in health, in tuberculosis, and in some other diseases. These observations have extended over the last three years and have been mostly conducted in the Norfolk and Norwich Hospital and in the Mundesley Sanatorium While the larger number of the patients were suffering from some form of tuberculosis observations have also been made on patients suffering from other maladies and on healthy persons Specially selected half minute thermometers were used, which had been previously certified at Kew It should also be stated that we have adopted the Fahrenheit scale

ORAL TEMPERATURES.

The time commonly allowed for the thermometer to lie in the mouth is in most circumstances too short to obtain the correct reading If the thermometer is replaced a further rise will be found to have occurred and as long a time as 30 minutes may in certain conditions be required if the maximum oral temperature is desired. Our practice has been to remove the thermometer and to note the level of the mercury from every two to five minutes, the lips being kept closed all the time. Without shaking the mercury down the instrument is reintroduced until no further rise happens. Or without removing the thermometer the column of mercury may be watched while the instrument is held between the patient's closed lips. In different circumstances we have found that from 30 seconds to 30 minutes are taken by the thermometer in the mouth to reach the maximum. The half minute thermometer correctly registers within the time specified the temperature of the medium in which it is placed but a much longer time may be taken to warm up the chamber of the mouth to its full heat from the time the lips have been closed Having satisfied ourselves that the apparent discrepancies in regard to oral temperatures did not depend upon anything more than the different lengths of time required in varying conditions fully to warm the chamber of the mouth, we attempted to ascertain what these conditions were. We are led to the conclusion that in the following circumstances the interior of the mouth becomes especially cooled and that after their operation time must be allowed for its warming if the correct temperature of the body is to be gauged (1) the breathing of cool air with parted lips , (2) exercise entailing more rapid respiration, whether of warm or cold air , and (3) the contact of cold with the outside of the cheeks.

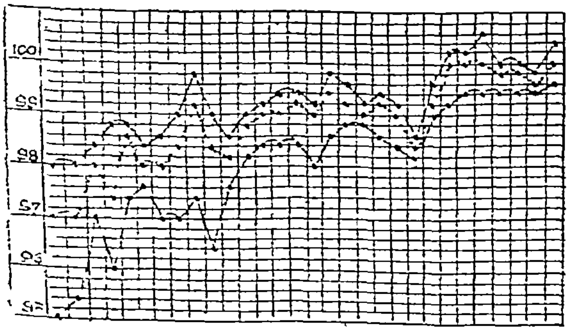
The breathing of cool air with parted lips —It the air respired is cold and the lips have not been intentionally kept closed as long as 30 minutes may be required fully to warm the chamber of the mouth and the thermometer may have to remain *in situ* for this time before its maximum is reached. In the case, for instance, of a patient lying out of doors in winter we have found the mercury slowly continuing to rise until the thermometer had been held between the constantly closed lips for half an hour In a comfortably warmed room, such as a ward or a consulting room, we found that the average time required to obtain the maximum oral temperature was ten minutes, supposing the patient not to have kept the lips constantly closed before, when, of course, a shorter time would suffice. In many cases 15 minutes were required, while in some the thermometer reached its full height in five minutes, but if only the usual two or three minutes are allowed it will be almost invariably found that the reintroduction of the instrument is followed by a further rise of the mercury If the patient has been at rest and in a warm atmosphere and has kept the mouth for at least five minutes rigidly closed one minute may exceptionally suffice for the registration of the correct temperature, as illustrated by the following observation The mouth was kept closed for five minutes and a thermometer was then introduced for one minute and was found to record 98° F , this was ascertained to be the correct temperature. Next the mouth was kept open for five minutes and the thermometer now placed under the tongue for one minute only reached 96 8° Sometimes we have found, also, that when the temperature is subnormal a shorter time is required by the thermometer in the mouth But in every day work it will be found that the mouth should be kept continuously closed for ten minutes in order that the correct temperature may be obtained and supposing the patient to be a habitual mouth breather, or if the mouth has been repeatedly opened, as in coughing or talking, then the average time is 15 minutes during which the thermometer should be held in the closed mouth

Exercise entailing more rapid respiration, whether of warm or cold air —Again exercise usually tends to cool the mouth and after any exertion a longer time must be allowed for the observation of the oral temperature. During exercise the mouth is usually open and the respired air is passing to and fro more rapidly, moreover in addition to these two factors there may be loss of heat by radiation from the open mouth. We shall dwell later on the effects of exercise on the temperature and will only state here that it introduces a special fallacy in regard to oral thermometry. The rise in temperature produced by exercise as demonstrated by rectal observation only persists for about half an hour. It takes about the same length of time for the mouth to recover from the specially cooling effects of exercise upon it. So by the time that the closed mouth has gradually warmed itself after the loss of heat consequent on the rapid passage to and fro of air through parted lips and on radiation, the body heat has generally commenced to lessen.

The contact of cold with the outside of the cheeks.—The mouth may also be cooled by the contact of cold directly with the cheeks. This is illustrated by the following experiments conducted by one of us (S. G. C.) The oral temperature was first taken and was found to register 98·4° F. A rubber bag filled with ice was then applied to the left cheek and at the end of three minutes the temperature of that side of the mouth was found to have fallen to 97·8°, at the end of ten minutes to 95°, and at the end of 15 minutes to 94°. On the opposite side of the mouth the temperature remained 98·4°, while it dropped 4·4° on the side to which the cold was applied. The ice-bag was then removed and the temperature of the left side of the mouth was observed at frequent intervals. During the first 15 minutes it rose from 94° to 97·6° and at the expiration of one hour it had reached 98·2°. The same bag was then filled with water as hot as could be borne and was held against the left cheek again. At the end of three minutes the temperature rose to 99·4°, after ten minutes to 100·4°, and after 15 minutes to 100·6°. On the opposite side of the mouth the temperature only moved from 98·4° to 98·6°. The application of heat was then discontinued and the temperature was recorded at frequent intervals. During the first five minutes it fell from 100·6° to 99°, after 20 minutes the thermometer registered 98·2° again. It will be seen, then, that the effect produced by cold was greater than was that produced by heat, but the difference between the temperature of the ice bag and that of the mouth was much greater, of course, than the difference between the temperature of the hot water and that of the mouth. The practical point is that the contact of cold against the cheek introduces a fallacy in regard to the oral temperature unless very special care is taken to allow enough time for the effect of the cold to be counteracted. Another simple experiment illustrates the same fact. The oral temperature having been observed two individuals took exercise in cold air and their mouths then showed a fall of temperature. The same exercise was afterwards taken with the whole face enveloped in a mask of wool with holes for nose, mouth and eyes, and the subsequent oral temperature registered one degree higher than in the former experiment—that is the mask had to some extent counteracted the depressing effect of cold air on the oral temperature.

Chart 1 demonstrates the amount of error which may be encountered unless the full time is allowed for the thermometer in the mouth. The difference between the readings for five minutes and for 15 minutes might alter considerably the complexion of a case of pulmonary tuberculosis.

CHART 1



Oral temperature readings of one patient taken at the end of five ten and fifteen minutes. The top line shows the thermometer held in the mouth for fifteen minutes the middle dotted line indicates ten minutes and the lowest line five minutes

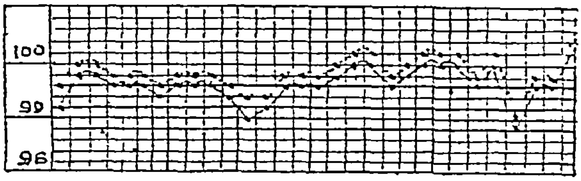
Dr W S Lazarus-Barlow[1] found that after drinking hot beef tea the oral temperature rose to 100° F, and that at the end of 40 minutes it was still 0·4° higher than before the beef tea was taken. He also examined the effect of inhaling cold air. The oral temperature having been ascertained to be 97·6°, air at a temperature of 30° was breathed with open mouth for 45 seconds, the oral temperature had then fallen to 96·8° and seven minutes elapsed before it again reached 97·6°. Finding, too, that reading aloud for one minute reduced the oral temperature 0·3°, Dr Lazarus-Barlow concluded that before taking the temperature the mouth should have been kept closed for ten minutes. We have found that local diseases may raise disproportionately the oral temperature, in several cases of tonsillitis and in one of sarcoma of the tonsil the temperature of the mouth exceeded that of the rectum by half a degree or more.

The effect on the oral temperature of substances which influence the capillary circulation in the mouth must also be briefly referred to. A fall of 0·5° in the oral temperature resulted from holding a carefully warmed solution of adrenalin chloride in the mouth for a minute. Half an ounce of alcohol held there for the same time caused a rise of 0·5°. Amongst several drugs which raised the oral temperature, presumably by dilating the capillaries, we found menthol one of the most active. The sucking of a menthol lozenge for half a minute caused a rise of 1·6°. The effect of smoking is usually to cause a very slight elevation in the oral temperature, but if it is accompanied by very frequent opening of the lips a fall may occasionally be noticed.

RECTAL TEMPERATURE.

The maximum is reached in from one to five minutes when the thermometer is inserted in the rectum. To be sure of obtaining the correct reading a good rule is to allow five minutes, more than this we have never found necessary.

CHART 2

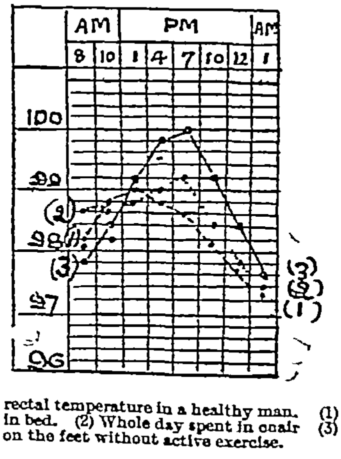


Shows three and five minutes' readings of rectal temperature in one patient.

We shall show later that the rectal temperature of rest and that taken immediately after any movement are totally different. Where precision, therefore, is desirable this point should be noted.

Chart 3 illustrates the diurnal variations of the rectal temperature in health according as the day is spent wholly in bed, sitting at a desk, or constantly on the feet but without active exercise.

CHART 3.



Illustrating rectal temperature in a healthy man. (1) Whole day spent in bed. (2) Whole day spent in chair (3) Whole day spent on the feet without active exercise.

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[1] THE LANCET Oct. 26th 1895 p 1034

URINE TEMPERATURE.

To obtain the maximum elevation of the mercury from two to five ounces of urine must be voided over the bulb of the thermometer, which must be held close to the penis so as to prevent cooling of the stream by its traversing too much air Using the rectal temperature as our control and allowing for the difference which normally obtains between the temperatures observed in the rectum and in the urine, we find that the careful passage of five ounces of urine over the thermometer gives the correct reading in the majority of cases, but about once in every 20 observations we have met with a curious discrepancy between the rectal and urine temperatures which we are unable to explain. We have tried to use urine received into a vessel previously warmed to about the temperature of the body for the measurement of the temperature, but have always failed thus to get a correct reading

AXILLARY AND INGUINAL TEMPERATURES.

The time required to obtain the maximum readings in these situations varies widely Out of some hundreds of observations we have obtained no further rise of the thermometer after the expiration of ten minutes in some half dozen instances In the remainder the maximum has been reached usually in from 15 to 50 minutes, but it has been repeatedly noted with children that a gradual rise has continued to occur until after the thermometer has been over one hour *in situ*

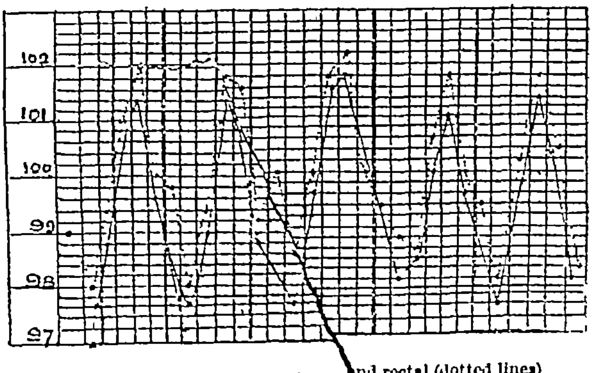
A COMPARISON OF THERMOMETRIC READINGS OBTAINED IN DIFFERENT SITUATIONS.

Some 2000 observations have been made for the purpose of estimating the relationship of the temperature of the various sites used for clinical purposes. The rectal temperature is taken as the standard and those obtained in the mouth, the urine, the axilla, and the groin are contrasted with it.

Oral and rectal temperatures —We have already stated that exercise, though it raises the general body heat, tends to cool the mouth and we shall again have occasion to dwell on this point. In the following observations on the comparative readings of the thermometer placed in the mouth and in the rectum it must be understood that the disturbing influence of exercise has not been permitted to occur and that sufficient time was allowed for obtaining the maximum oral temperature, the length of time depending on circumstances already set forth. We would say that the rectal temperature is on an average 0 4° higher than that of the mouth The disparity between the oral and rectal temperatures, according to our observations, is less than that generally held to exist, but we maintain that if care is taken to exclude all sources of fallacy the oral temperature will be found to correspond closely with the rectal temperature Moreover, this correspondence is a fairly exact one, for in our numerous observations of comparison the limits of variation between the rectal and oral temperatures are 0 8° and 0 0° We would, however, repeat that the correspondence depends on care being taken to obtain the true maximum oral temperature and to exclude observations where the influence of exercise may have obtained.

Chart 4 shows that the correspondence between the oral

CHART 4



Showing clo… ondence o… and rectal (dotted lines) temper… peri… confined to bed

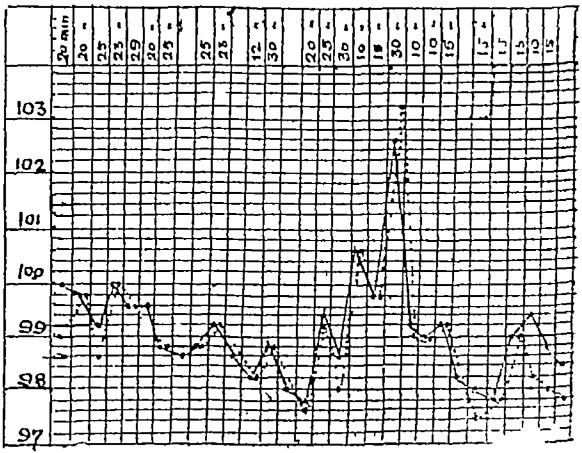
and rec… have
stated, … the

temperature in the mouth is taken In this case 70 observations of comparison were taken with an average difference of 0 1° between the oral and rectal temperatures

The urine and the rectum —150 observations of comparison have been made of temperatures of the urine and rectum and the average excess of the rectal temperature over that of the urine is 0 2°, the temperature of the urine showing the same excess over the oral temperature At the same time we consider the urine untrustworthy for the observation of temperature, for in about ten instances there has been noted a complete want of correspondence, and for some mysterious reason the thermometer carefully placed in the stream of urine has given a reading of a degree or more below that of the rectal instrument. It is to be understood that 0 2° represents the average excess of the rectal temperature over that of the urine under conditions of rest If exercise has been recently taken there is a greater divergence, though, as we shall presently see, to a lesser degree than between the rectal and oral temperatures of exercise

The groin, the axilla, and the rectum.—Out of 200 observations the mean variations of readings taken in these situations were as follows The rectal temperature was 0 6° higher than that of the groin and 0 9° higher than that of the axilla. These averages are given for what they are worth, but we admit that much depends on the observer having the patience to coax the thermometer up to its maximum by allowing it to remain in the axilla or the groin sufficiently long—for perhaps an hour or more The agreement is more close when the temperature is raised than when it is depressed. Chart 5 shows how close the correspondence may be

CHART 5



Showing close correspondence of inguinal and rectal (dotted lines) temperatures of a child confined to bed with diphtheria The length of time which is required to obtain the inguinal reading is given

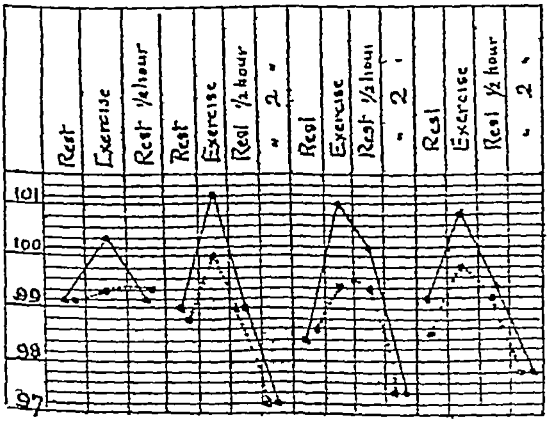
THE EFFECT OF EXERCISE ON TEMPERATURE.

The sanatorium treatment of consumptives, implying as it does the detailed study of every symptom presented by the patient, has familiarised us with the rise of the thermometer noted to occur in them after exercise In most sanatoriums a point is made of taking the patient's temperature on his return from walking and considerable importance is attached to it. On this record certain directions in the way of treatment are based, but often we venture to think with an erroneous conception as to the nature of this exercise reaction

Exercise reaction in health —During the last two years we have made almost daily observations on the temperature of ourselves and others in various conditions and we feel warranted in making the statement that the effect of exercise on the temperature of a healthy man has been generally under estimated. A very slight amount of movement only is required to produce an appreciable rise of the mercury while with more exertion we have noted a rise of as much as three and a half degrees It will simplify the description of our observations on the exercise reaction in health if we say at once that in the precise study of temperature three conditions should be recognised 1. Absolute rest, that is, the relaxation of all the large muscles whether in lying down or sitting and for a period of one hour. In this condition the temperature is actually depressed. 2. Standing without taking active exercise, which tends to raise the temperature slightly. 3. Active exercise which distinctly raises the temperature.

The fluctuations of temperature consequent on exercise and repose can only be reliably observed in the rectum. We have already stated that while exercise is being taken the mouth tends to be more opened and the breathing to be quickened, to say nothing of the possible cooling of the mouth by radiation and conduction. Depending on the parts played by these factors the oral temperature may be unaffected, it may be raised, or it may be depressed. In warm weather, when the mouth is not cooled by the conduction of cold through the cheeks, the oral temperature can usually be slightly raised by exercise taken with the mouth forcibly closed and less constantly it is raised in warm weather without this forced closing of the lips. On the whole our observations show that in cold air exercise usually produces no rise of the oral temperature and may be accompanied by an actual depression, while when the air is warm a slight rise is usually manifested especially if the exercise has not accelerated the breathing markedly, but in no case does the oral temperature of exercise bear the correspondence that obtains during rest to that of the rectum. The cases, however in which some rise does occur in the mouth together with the fact that the temperature of the urine always shows a rise after exercise, demonstrate that the raised rectal temperature of exercise is not due to any local disturbance peculiar to the lower bowel. In mild weather a moderately hard bicycle ride of half an hour was taken which caused slight perspiration. The rest temperature before starting was found to be—rectal 98.8°, urine, 98.5°, and mouth, 98.3°. At the end of the ride the temperatures were—rectal 100.4°, urine, 100°, and mouth after holding the thermometer for 10 minutes 98.4°. Replacement however, of the thermometer in the mouth was followed by a further rise, which continued little by little until at the expiration of 30 minutes, the oral temperature stood at 99°. Half an hour, therefore, was taken by the oral chamber to recover from the depressing effects on its temperature of the exercise and by this time the general elevation was subsiding, for the rectal temperature had dropped to 99.5°. Chart 6 from a case of tuberculosis, shows the different effects of exercise on the oral and rectal readings.

CHART 6



Oral (dotted lines) and rectal temperatures of patient with tuberculosis showing approximation under condition of rest and divergence of the two readings after exercise.

The effect on the temperature of the slightest effort—that involved by changing the lying down position to standing up—has been investigated in eight healthy persons on whom repeated observations have been made. In six of this number a very slight rise constantly occurred, the nature of which may be described by giving a single typical instance. On first awaking in the morning the oral temperature was 97.8° and the rectal 98.2°, after lying still for a quarter of an hour these readings were found to be unchanged. The subject of the experiment then stood out of bed, but did not walk, and at five minutes intervals the rectal temperature was found to be 98.4°, 98.6°, and 98.8°, for the next 15 minutes it was stationary, but at the end of that time, or half an hour after first getting up, it had risen to 99°.

Meanwhile the oral temperature rose from 97.8° to 97.9° in the first 15 minutes. This experiment was repeated in the latter part of the day with the same result, and the converse was also tried. While standing still the rectal temperature was 98°, half an hour's complete repose in bed lowered it to 97.4°.

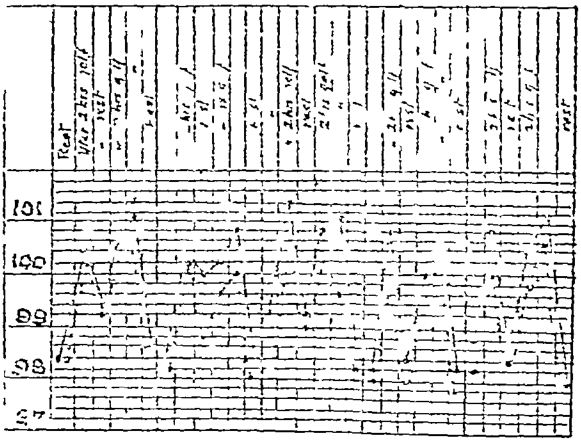
From these observations it would appear that the temperature is distinctly susceptible even in health to very slight degrees of muscular effort. The change from the horizontal position assumed in bed to that of standing may involve a rise of 0.8° and the converse may cause a fall of 0.6°. The average rectal rise on standing for 15 minutes in six healthy men was 0.3°. But it must be understood that the elevation of temperature due to the slightest forms of exertion are only manifest if the individual has previously rested completely and has thus secured the depressed temperature of repose.

Passing now to the consideration of the effects of more active exercise on the temperature in health our observations show that a distinct rise constantly occurs the degree depending on the severity and duration of the effort and on the individual peculiarities. As we have records of some hundreds of observations bearing on this subject we will summarise them by giving examples which are fairly typical of our total results.

In health walking at an ordinary pace for a quarter of an hour produces a rise of about half a degree in the rectal temperature. Thus the rectal temperature after a period of an hour's rest was 99.1°, a quarter of an hour's moderate walk was then taken and the rectal temperature rose to 99.6°. After resting again the temperature took 25 minutes to resume its former level of 99.1°. The oral temperature was 98.5° before starting and after the walk it was again found to be 98.5° 15 minutes being required by the thermometer in the mouth to reach this point.

A round of golf representing about two hours' walk caused an average rise of 2.1° in the rectum and 1.7 in the urine, a second followed by a third round, even though taken without an interval of any rest, only caused a further average rise of 0.5°. From this and from other records it will be seen that the exercise reaction commences abruptly but that the continuance of exercise causes a more gradual further rise of temperature (see Chart 7).

CHART 7



Rectal temperature and that of urine (dotted line) showing effect of a round of golf followed by rest and of a second and third round without intervening rest

The effect of a game of tennis on the rectal temperature has been observed in a large number of individuals. After playing for an hour a rise of from one to three degrees has been constantly noted.

We have also tried bicycling and have taken the rectal temperature at stated intervals during a moderate ride. Before starting, for instance, the rectal temperature was 99°, after five minutes it rose to 99.4° after another

URINE TEMPERATURE.

To obtain the maximum elevation of the mercury from two to five ounces of urine must be voided over the bulb of the thermometer, which must be held close to the penis so as to prevent cooling of the stream by its traversing too much air. Using the rectal temperature as our control and allowing for the difference which normally obtains between the temperatures observed in the rectum and in the urine, we find that the careful passage of five ounces of urine over the thermometer gives the correct reading in the majority of cases, but about once in every 20 observations we have met with a curious discrepancy between the rectal and urine temperatures which we are unable to explain. We have tried to use urine received into a vessel previously warmed to about the temperature of the body for the measurement of the temperature, but have always failed thus to get a correct reading.

AXILLARY AND INGUINAL TEMPERATURES.

The time required to obtain the maximum readings in these situations varies widely. Out of some hundreds of observations we have obtained no further rise of the thermometer after the expiration of ten minutes in some half-dozen instances. In the remainder the maximum has been reached usually in from 15 to 50 minutes, but it has been repeatedly noted with children that a gradual rise has continued to occur until after the thermometer has been over one hour *in situ*.

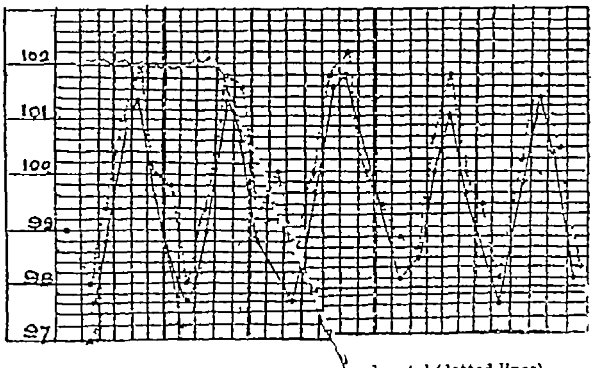
A COMPARISON OF THERMOMETRIC READINGS OBTAINED IN DIFFERENT SITUATIONS.

Some 2000 observations have been made for the purpose of estimating the relationship of the temperature of the various sites used for clinical purposes. The rectal temperature is taken as the standard and those obtained in the mouth, the urine, the axilla, and the groin are contrasted with it.

Oral and rectal temperatures.—We have already stated that exercise, though it raises the general body heat, tends to cool the mouth and we shall again have occasion to dwell on this point. In the following observations on the comparative readings of the thermometer placed in the mouth and in the rectum it must be understood that the disturbing influence of exercise has not been permitted to occur and that sufficient time was allowed for obtaining the maximum oral temperature, the length of time depending on circumstances already set forth. We would say that the rectal temperature is on an average 0·4° higher than that of the mouth. The disparity between the oral and rectal temperatures, according to our observations, is less than that generally held to exist, but we maintain that if care is taken to exclude all sources of fallacy the oral temperature will be found to correspond closely with the rectal temperature. Moreover, this correspondence is a fairly exact one for in our numerous observations of comparison the limits of variation between the rectal and oral temperatures are 0·8° and 0·0°. We would, however, repeat that the correspondence depends on care being taken to obtain the true maximum oral temperature and to exclude observations where the influence of exercise may have obtained.

Chart 4 shows that the correspondence between the oral

CHART 4



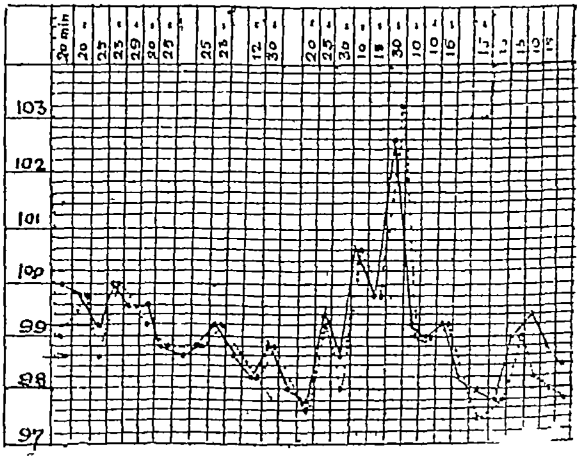
Showing close correspondence of oral and rectal (dotted lines) temperatures in a case of tuberculous peritonitis confined to bed.

and rectal readings may be even more close than we have stated, largely depending on the patience with which the temperature in the mouth is taken. In this case 70 observations of comparison were taken with an average difference of 0·1° between the oral and rectal temperatures.

The urine and the rectum.—150 observations of comparison have been made of temperatures of the urine and rectum and the average excess of the rectal temperature over that of the urine is 0·2°, the temperature of the urine showing the same excess over the oral temperature. At the same time we consider the urine untrustworthy for the observation of temperature, for in about ten instances there has been noted a complete want of correspondence, and for some mysterious reason the thermometer carefully placed in the stream of urine has given a reading of a degree or more below that of the rectal instrument. It is to be understood that 0·2° represents the average excess of the rectal temperature over that of the urine under conditions of rest. If exercise has been recently taken there is a greater divergence, though, as we shall presently see, to a lesser degree than between the rectal and oral temperatures of exercise.

The groin, the axilla, and the rectum.—Out of 200 observations the mean variations of readings taken in these situations were as follows. The rectal temperature was 0·6° higher than that of the groin and 0·9° higher than that of the axilla. These averages are given for what they are worth, but we admit that much depends on the observer having the patience to coax the thermometer up to its maximum by allowing it to remain in the axilla or the groin sufficiently long—for perhaps an hour or more. The agreement is more close when the temperature is raised than when it is depressed. Chart 5 shows how close the correspondence may be.

CHART 5



Showing close correspondence of inguinal and rectal (dotted lines) temperatures of a child confined to bed with diphtheria. The length of time which is required to obtain the inguinal reading is given.

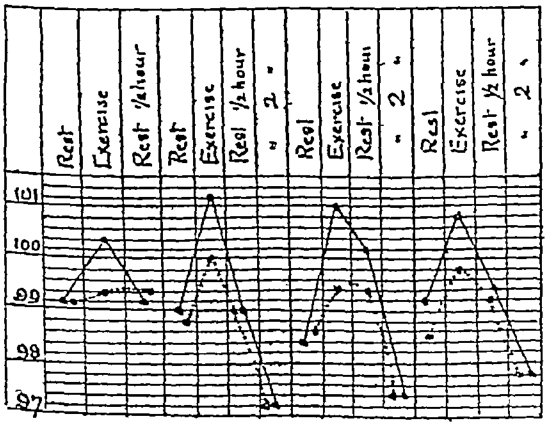
THE EFFECT OF EXERCISE ON TEMPERATURE.

The sanatorium treatment of consumptives, implying as it does the detailed study of every symptom presented by the patient, has familiarised us with the rise of the thermometer noted to occur in them after exercise. In most sanatoriums a point is made of taking the patient's temperature on his return from walking and considerable importance is attached to it. On this record certain directions in the way of treatment are based, but often we venture to think with an erroneous conception as to the nature of this exercise reaction.

Exercise reaction in health.—During the last two years we have made almost daily observations on the temperature of ourselves and others in various conditions and we feel warranted in making the statement that the effect of exercise on the temperature of a healthy man has been generally under estimated. A very slight amount of movement only is required to produce an appreciable rise of the mercury, while with more exertion we have noted a rise of as much as three and a half degrees. It will simplify the description of our observations on the exercise reaction in health if we say at once that in the precise study of temperature three conditions should be recognised. 1. Absolute rest, that is, the relaxation of all the large muscles whether in lying down or sitting and for a period of one hour In this condition the temperature is actually depressed 2. Standing without taking active exercise, which tends to raise the temperature slightly 3. Active exercise which distinctly raises the temperature

The fluctuations of temperature consequent on exercise and repose can only be reliably observed in the rectum. We have already stated that while exercise is being taken the mouth tends to be more opened and the breathing to be quickened, to say nothing of the possible cooling of the mouth by radiation and conduction Depending on the parts played by these factors the oral temperature may be unaffected, it may be raised, or it may be depressed In warm weather, when the mouth is not cooled by the conduction of cold through the cheeks, the oral temperature can usually be slightly raised by exercise taken with the mouth forcibly closed and less constantly it is raised in warm weather without this forced closing of the lips On the whole our observations show that in cold air exercise usually produces no rise of the oral temperature and may be accompanied by an actual depression, while when the air is warm a slight rise is usually manifested especially if the exercise has not accelerated the breathing markedly, but in no case does the oral temperature of exercise bear the correspondence that obtains during rest to that of the rectum The cases, however, in which some rise does occur in the mouth, together with the fact that the temperature of the urine always shows a rise after exercise, demonstrate that the raised rectal temperature of exercise is not due to any local disturbance peculiar to the lower bowel. In mild weather a moderately hard bicycle ride of half an hour was taken which caused slight perspiration. The rest temperature before starting was found to be—rectal, 98 8°, urine, 98 5°, and mouth, 98 3° At the end of the ride the temperatures were—rectal, 100 4°, urine 100°, and mouth after holding the thermometer for 10 minutes 98 4° Replacement, however, of the thermometer in the mouth was followed by a further rise, which continued little by little until at the expiration of 30 minutes, the oral temperature stood at 99° Half an hour, therefore, was taken by the oral chamber to recover from the depressing effects on its temperature of the exercise and by this time the general elevation was subsiding, for the rectal temperature had dropped to 99 5° Chart 6 from a case of tuberculosis, shows the different effects of exercise on the oral and rectal readings

CHART 6



Oral (dotted lines) and rectal temperatures of patient with tuberculosis showing approximation under condition of rest and divergence of the two readings after exercise

The effect on the temperature of the slightest effort—that involved by changing the lying down position to standing up—has been investigated in eight healthy persons on whom repeated observations have been made In six of this number a very slight rise constantly occurred the nature of which may be described by giving a single typical instance. On first awaking in the morning the oral temperature was 97 8° and the rectal 98 2°, after lying still for a quarter of an hour these readings were found to be unchanged. The subject of the experiment then stood out of bed, but did not walk, and at five minutes' intervals the rectal temperature was found to be 98 4°, 98 6°, and 98 8°, for the next 15 minutes it was stationary, but at the end of that time, or half an hour after first getting up, it had risen to 99°

Meanwhile the oral temperature rose from 97 8° to 97 9° in the first 15 minutes This experiment was repeated in the latter part of the day with the same result, and the converse was also tried While standing still the rectal temperature was 98°, half an hour's complete repose in bed lowered it to 97 4°

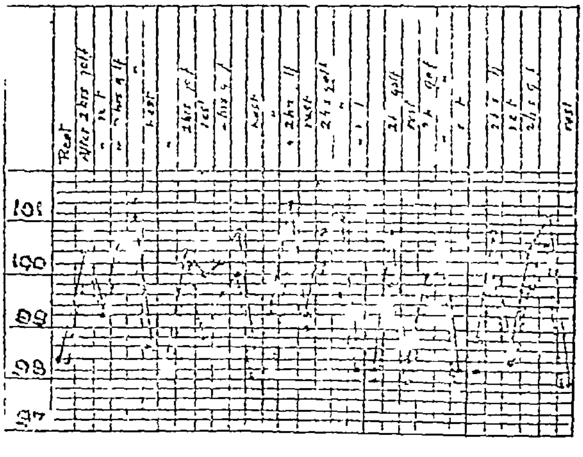
From these observations it would appear that the temperature is distinctly susceptible even in health to very slight degrees of muscular effort. The change from the horizontal position assumed in bed to that of standing may involve a rise of 0 8° and the converse may cause a fall of 0 6° The average rectal rise on standing for 15 minutes in six healthy men was 0 3° But it must be understood that the elevation of temperature due to the slightest forms of exertion are only manifest if the individual has previously rested completely and has thus secured the depressed temperature of repose

Passing now to the consideration of the effects of more active exercise on the temperature in health our observations show that a distinct rise constantly occurs, the degree depending on the severity and duration of the effort and on the individual peculiarities As we have records of some hundreds of observations bearing on this subject we will summarise them by giving examples which are fairly typical of our total results.

In health walking at an ordinary pace for a quarter of an hour produces a rise of about half a degree in the rectal temperature Thus the rectal temperature after a period of an hour's rest was 99 1°, a quarter of an hour's moderate walk was then taken and the rectal temperature rose to 99 6° After resting again the temperature took 25 minutes to resume its former level of 99 1° The oral temperature was 98 5° before starting and after the walk it was again found to be 98 5°, 15 minutes being required by the thermometer in the mouth to reach this point.

A round of golf representing about two hours' walk caused an average rise of 2 1° in the rectum and 1 7 in the urine, a second followed by a third round, even though taken without an interval of any rest, only caused a further average rise of 0 5° From this and from other records it will be seen that the exercise reaction commences abruptly but that the continuance of exercise causes a more gradual further rise of temperature (see Chart 7)

CHART 7



Rectal temperature and that of urine (dotted line) showing effect of a round of golf followed by rest and of a second and third round without intervening rest

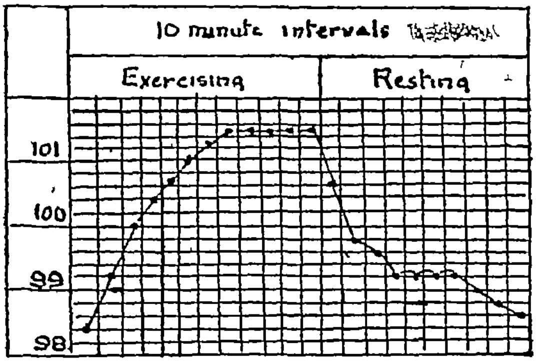
The effect of a game of tennis on the rectal temperature has been observed in a large number of individuals After playing for an hour a rise of from one to three degrees has been constantly noted

We have also tried bicycling and have taken the rectal temperature at stated intervals during a moderate ride. Before starting, for instance, the rectal temperature was 99°, after five minutes it rose to 99 4°, after another period of 20 minutes it rose to 100°, after a second period of 20 minutes to 100 2°, and after two hours to 101°, the exact degree of rise depending apparently on differences in the susceptibility of different persons and on the severity of the exercise. Thus a rise of 3 5° has been obtained by three hours' hard bicycling

The amount of elevation of temperature produced by exercise is much greater according to our observations than that commonly described But other observers have frequently used the mouth, which is valueless for the detection of the temperature of exercise, or if the rectum has been used the evanescent nature of the rise has not been allowed for We are satisfied from the agreement of a very large number of observations that a rise of the rectal temperature will be constantly found if it is taken immediately after exercise.

Chart 8 records the rectal temperature of a healthy man taken every ten minutes while he walked briskly at the rate of over four miles an hour It will be observed that the temperature rose abruptly during the first part of the walk, but after reaching 101 5° from an hour's hard exercise it remained at this level during 40 minutes' continued walking On resting the temperature fell abruptly at first and more gradually during the latter period of the rest.

CHART 8

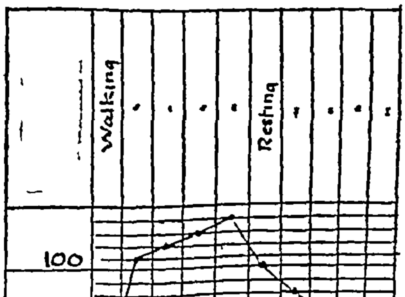


Rectal temperature of a healthy man walking fast observed every ten minutes. To interfere as little as possible with the exercise only one minute was allowed for each reading The subsequent rest temperatures are also taken every ten minutes

The effect of exercise on the temperature in tuberculosis — Repeated observations have been made upon ten cases of tuberculosis to ascertain the amount of their reaction to the slight effort entailed in assuming the standing posture. With only one exception a distinct elevation of the rectal temperature has been noted, occasionally as much as a degree's difference has separated the rectal temperature of rest and that of standing It is necessary again to state that the patient must have rested completely beforehand in order that the reaction to standing may be discernible. A patient with arrested pulmonary tuberculosis and wholly free from fever found that his rectal temperature while lying down was 98 9°, he then stood quietly by his chair and the temperature taken each succeeding five minutes read 99 3°, 99 4°, 99 7°, and 99 9° A rise of one degree, then, had occurred as a consequence of merely standing for 15 minutes It remained stationary at this point and the patient then resumed the horizontal posture when the temperature was ascertained to have fallen again in ten minutes As regards the pulse, its frequency was 68 during rest and on standing it rose at once to 80, but while the temperature steadily increased until 15 minutes had elapsed, the pulse showed no further change. Taking all our observations on the reaction of the rectal temperature to standing the average rise in tuberculosis was 0 5°, the limits being 1 0°-and in one case *nil*

Reaction to more active exercise in tuberculosis —50 observations have been made on the effect of a walk of a quarter of an hour in cases of non febrile tuberculosis The average rectal rise of temperature was 1 0° The smallest elevation was 0 6° which occurred in a case of pulmonary tuberculosis and the greatest was 2 2° in the case of a boy suffering from white swelling of the knee and who walked easily on crutches. Lupus and peritonitic, pleural, and glandular tuberculosis were included in this list and their behaviour did not distinguish them from cases of pulmonary tuberculosis. A second walk of a quarter of an hour increased the rise by another 0 5° on an average. Beyond this the effect of further exercise was difficult to generalise upon, in some cases no further rise of temperature would occur until an hour's walking had been done, when an increment of 0 2° might be noticed, in others such an elevation might be observed at shorter intervals. It did not appear that the absence or presence of fatigue determined the amount of elevation nor necessarily the general condition of the patient. The more robust invalid often showed more susceptibility in his temperature to the slighter degrees of exercise than did the weaker individual. In all, however, we observed that with the commencement of exercise the temperature rose rapidly, and that with continued exercise the ascent either ceased altogether or anyhow became much more gradual Though their reaction to the slight effort of standing or of walking for such a short time as a quarter of an hour did not distinguish the favourable from the unfavourable case of pulmonary tuberculosis, we think that the behaviour of the temperatures of the two classes does differ when exercise is taken for longer times The effect of walking for an hour at the pace of about three miles an hour has been investigated in the cases of nearly 100 patients affected with pulmonary tuberculosis, on most of whom daily observations were made for many weeks. We would say that the ordinary amount of elevation for this length of walk is 2 0° Patients who were progressing favourably and whose subsequent histories declared them to have successfully subdued their disease usually manifested a rise from about 99° while resting to about 101° immediately after a walk of one hour The few patients who habitually showed a smaller rise than this, perhaps of only one degree from an hour's walking, were the most favourable cases. They were cases of very limited disease and especially they were cases with a constantly normal rest temperature. Our patients with apyrexial pulmonary tuberculosis may be divided into two classes, those who have barely conquered their fever and are always on the verge of becoming more or less febrile and those whose tuberculosis may have been unaccompanied by fever at all and who appear to be secure against this manifestation. The latter group were distinguished by the small amount of their reaction to prolonged exercise In fact, a walk of an hour might cause a rise of only 0 2° above that noted at the end of a quarter of an hour In all cases the amount of elevation of temperature was usually more proportionate to the violence of the exercise than to the length of it. Mere sustained effort as in slow hill climbing appeared occasionally to cause a lesser rise of temperature The reaction to exercise of a patient whose disease was slight and whose rest temperature had recently become normal is illustrated in Chart 9, the readings are taken at ten minutes' intervals and show the rapid rise on commencing exercise and the more gradual rise with its continuance.

CHART 9

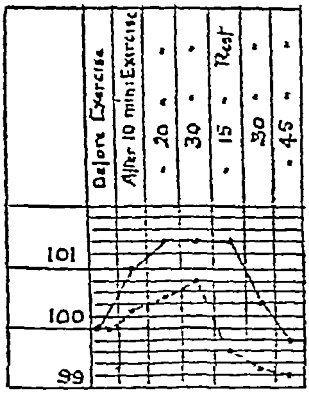


Ten minute readings of rectal temperature during slow walking in a case of pulmonary tuberculosis

By way of contrast observations have also been made on the subjects of other diseases. We have 28 records of the rectal temperature on standing after lying down in the cases of patients suffering from various ailments such as chlorosis, bronchitis, cirrhosis of the liver, cancer, dyspepsia, and heart disease. The results have been curiously inconstant, no rise occurring in half the number and an average rise of 0 4° being noted in the remainder A girl suffering from chlorosis, for instance, on one occasion showed a rise of 1 4° on standing and another patient similarly affected was uninfluenced by the same procedure. A large number of observations have been made on the effect of exercise for a quarter of an hour on the sufferers from various diseases. Again the effects were inconstant, for in one-third of the patients no rise was observed, while in the remainder there was an average rise of 0 4° In the case of a patient convalescent from bronchitis, who certainly walked particularly briskly for a quarter of an hour, the rectal temperature was elevated by 1 9°, whereas a man who was debilitated by cirrhosis of the liver walked less sharply for the same length of time without affecting his temperature at all.

In the manifestation, then of an exercise reaction there is nothing peculiar to tuberculosis, the same kind of rise of temperature occurs in health and in other diseases Generally speaking however we have found that the patient with tuberculosis is characterised by the constancy of his reaction to the slighter degrees of effort and by the fact that this reaction usually exceeds that of health or other diseases (see Chart 10) With more prolonged exercise the reaction of the tuberculous patient is less different from that of the healthy individual and this applies especially to the favourable cases It is important to bear in mind that an elevation of temperature normally occurs after exercise and that from 30 to 60 minutes must elapse before the reaction disappears. We have, however heard of sanatoriums where a rule existed that if a patient's temperature exceeded 100 4° on his return from a walk such patient must in future be confined to his couch. A bare record of the rectal temperature is value less for exact guidance unless information is also furnished as to the conditions under which the observation was made.

CHART 10



A patient with pulmonary tuberculosis and a healthy man (dotted lines) found their rectal temperatures agreed. They then walked side by side and observed the temperatures each ten minutes and again during rest

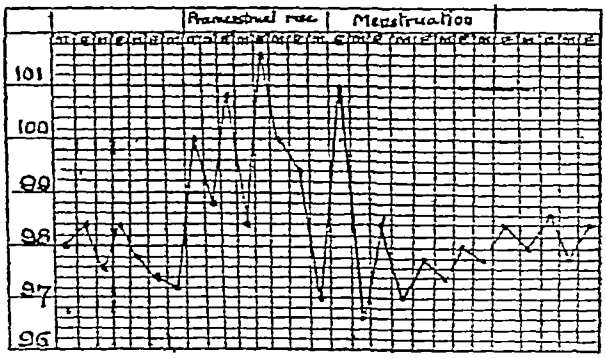
These points have a bearing on the vexed question as to whether the rectum or the mouth should be habitually used for the observance of the temperature in tuberculosis Personally we have not seen reason for attaching much importance for practical purposes to the rectal temperature during the hour that immediately succeeds exercise and by the end of that time the temperature can be reliably gauged in the mouth For general use we submit that the temperature may satisfactorily be taken in the mouth, provided that due regard be paid to the conditions already set forth. We would not, however, by any means under estimate the value of the rectal temperature for purposes of control or occasional observation of the exercise reaction. We present in tabular form (see previous column) a summary of our observations on the effects of different amounts of exertion in health, tuberculosis, and other diseases.

—	Reaction to standing		Reaction to 15 minutes walking		Reaction to one hour's walking	
	Percentage in whom rectal temperature rose	Average amount of rise	Percentage in whom rectal temperature rose.	Average amount of rise	Percentage in whom rectal temperature rose	Average amount of rise.
Health	75	0·3°	87·5	0·5°	All.	1·0°
Tuberculosis	99	0·5°	All.	1·0°	All.	2·0°
Other diseases ...	50	0·[illegible]°	66	0·[illegible]°	—	—

REACTION TO MENSTRUATION

On looking through the charts of 24 women under treatment at the Mundesley Sanatorium for pulmonary tuberculosis we find that in 18 a distinct rise of temperature preceded each menstrual period. These observations were made in the mouth and the average amount of elevation was 0 5°, this affected the morning and evening records and was spread over an average period of six days, ending on the day which preceded the onset of menstruation or running on into the first or second day of the period. This pre-menstrual rise of temperature was most declared in patients whose tuberculous lesions were either very slight or had become satisfactorily arrested and whose temperatures were in either case running a normal course (see Chart 11) In patients whose temperatures ranged higher the menstrual period produced no appreciable change. While more than half of our patients manifested a distinct though slight elevation of temperature before menstruation set in we only accidentally observed any rise to occur during the establishment of the flow or after it. For the sake of comparison the temperature charts of 50 women admitted successively into the Norfolk and Norwich Hospital for various maladies other than tuberculosis have been examined and in only eight of the number was there any regular rise observed to occur before menstruation

CHART 11.



Unusually marked premenstrual rise of temperature in a patient with tuberculous glands.

The effects on the temperature of high frequency electric currents have been tested in the cases of eight patients treated by Dr R. J Mills Six of his patients had pulmonary tuberculosis and the remaining two had lupus vulgaris We are indebted to Dr Mills for allowing one of us (S. G C) to record the temperature of these patients before and after the application of the electricity and to compare the effects with those obtained in two healthy persons All the eight patients manifested a rise of from one to three degrees as the result of ten minutes application of the high frequency current and this elevation persisted at the end of 15 minutes rest. With two healthy persons there was a rise of only from 0 4° to 0 6° after the same application. The administration of galvanic and faradic electricity to patients with tuberculosis caused no rise of temperature.

A very brief reference may be made to a few observations that have been carried out in animals Mr C. Hedworth Golledge was kind enough to test the effect of exercise on the temperature in 12 cows. The temperatures of the animals having been taken while resting they were made to walk with occasional running for ten minutes, at the end of which time their temperatures were again observed. In the case of 10 out of the 12 an elevation took place which varied from 0 2° to 1 4° and which averaged 0 8° Many of these cows presented cough and loss of flesh and were suspected of having tuberculosis, but unfortunately none of them reacted to tuberculin At the same time we must state that the amount of reaction to exercise did not correspond exactly with the manifestation of suspicious symptoms. A couple of dogs have also been experimented on Their rest temperatures having been ascertained to be 101 8° and 101 4°, they were taken for a run of ten minutes and their temperatures then registered 104 2° and 104° respectively The average of five observations on the effects of running for ten minutes on the temperature of these dogs showed a rise of 2 1° With ten minutes' rest the normal temperature was regained The temperatures of these animals appear to be particularly easily affected, for a rise of 0 6° occurred on making a dog stand up on its hind legs for ten minutes.

The subjects with which we have imperfectly dealt in the preceding pages afford a field for more complete investigation [2] The present contribution is little more than a collection of numerous observations, largely taken for us by the nurses of the Norwich Hospital and Mundesley Sanatorium and by Mr W J Fanning, late resident medical officer of the Mundesley Sanatorium. We are under a great obligation to them for their labour

Norwich

MEDICO-LEGAL POST-MORTEM EXAMINATIONS [1]

BY HENRY HARVEY LITTLEJOHN, M A., M B, C M, F R C S EDIN,

LECTURER ON MEDICAL JURISPRUDENCE AND PUBLIC HEALTH
EDINBURGH SCHOOL OF MEDICINE ETC

WHEN I was asked to read a paper before the Medico-Legal Society it was not my intention to take up a subject of such a general nature as that indicated by the above title. I proposed merely to give an account of some anomalous and uncommon post-mortem conditions and it was in deference to the suggestion of the joint secretary, Dr W McCallin, that it would be advisable to have a paper admitting of more general discussion that the present subject was chosen It is with some feeling of trepidation that I approach, in a society of experts, a subject apparently so simple and which has been so often discussed by others, more especially since I am fully conscious of having nothing original to add to what has been already frequently spoken and published A perusal of the admirable address which the President delivered at the inaugural meeting of the society, however, has given me confidence to some extent, since I find among the questions which he touches upon and suggests for our consideration that which I shall now endeavour to deal with At the same time, also, when we remember that this society is only commencing its career—and I trust that it will be a long and useful one—it is perhaps well that our early discussions should deal with elementary facts and fundamental principles, so that we may endeavour to arrive at a clear understanding amongst ourselves as to any matters which are open to doubt and by this means form a solid foundation from which we may attempt to exert a beneficial influence upon the judicial procedure and practice of the country and likewise build up for ourselves a superstructure of sound and progressive knowledge of the science in which we are interetsed It will only be possible for me this evening to refer briefly to some of the many questions which naturally arise in a discussion of the whole subject of medico-legal post-mortem examinations and I purpose, therefore, to consider (1) in what cases should a post-mortem examination be performed, (2) who should perform it, and (3) the procedure and methods which should be followed in such examinations

IN WHAT CASES SHOULD A MEDICO LEGAL POST MORTEM EXAMINATION BE PERFORMED?

It is hardly necessary for me to state that the cases of death which I have in mind are those which ought naturally to come under the cognisance of the coroner (or the procurator fiscal in Scotland)—viz., cases of sudden or unexpected deaths, cases of deaths from violence, and those cases in which the medical attendant is unable, or refuses, to give a certificate.

We are no doubt all agreed that the law as it at present stands in regard to the preliminary investigation of such cases leaves much to be desired. A system which leaves to the registrar the duty of setting the machinery of investigation going, and an investigation carried out often solely by an official (the coroner's officer) who has neither legal status nor in many instances the qualifications necessary for the efficient discharge of such an important and responsible task, cannot be regarded as satisfactory or as one which inspires confidence in the methods for detecting crime and administering justice. Nor can it be deemed a satisfactory system which places on the shoulders of the coroner the responsibility of deciding on unofficial and frequently superficial investigation, firstly, whether there shall be an inquest, whether, secondly, when a person is found dead it is necessary for a medical man to inspect the body, and, lastly, whether a post-mortem examination is required to determine the cause of death The coroner is not responsible for the objections we take to the system. He merely carries out the law, and does so, as a rule, in an efficient manner We cannot, however, shut our eyes to the evils of a system so closely related to the public welfare and the administration of justice in which the element of chance plays such a large rôle Authorities well able to form an opinion have stated that under such a system numerous crimes must every year pass undetected and it is not difficult for us to believe these statements when we consider the statistics of "uncertified" deaths and read in the papers accounts of inquests on bodies found in circumstances which might well arouse suspicion and yet in which no medical evidence is adduced as to the cause of death In no other country boasting of a civilisation even approaching that of the United Kingdom is so great a laxness in the investigation of the cause of death in such circumstances tolerated In France, in Germany, and in Austria no person found dead could be buried without the body being at least viewed by a qualified medical inspector, and it is a matter for wonder that in this country, where so much has been done by legislation to safeguard and to prolong human life, more stringent measures have not yet been enacted in regard to the medical examination of persons found dead in order to protect the community from the possibility of criminal violence.

What is required, however, in a large proportion of the cases which are the subject of inquests is not merely an inspection of the body by a medical man but a post-mortem examination By no other means is it possible to exclude death from violence The external inspection of a body can seldom give a true indication of the cause of death in cases where persons are found dead or even entitle a certificate of death from "natural causes" to be given should the coroner hold the view that his duty does not require any more specific statement. History teaches us that the greatest crimes have often occurred where they were least suspected and where at first sight the circumstances and the external appearance of the body afforded no indication of the true nature of the case. Many cases illustrating the unreliability of an external examination in cases of violent death will recur to all of us, but I will instance the following from my own experience, in all of which death might have been due to murder and in which a mere inspection of the body afforded no clue to the real cause of death. An old man was found lying dead in bed one morning having apparently died during his sleep The face was placid and pale and there was nothing to indicate that death was due to other than natural causes As the dwelling house was a small one the body was removed to the mortuary and there, on making a post-mortem examination, it was found that he had taken carbolic acid. There was no smell of the acid in the room and no bottle was found near the body, although one which had contained the substance was afterwards found in the house. Even in the mortuary the odour was not noticed until the stomach was opened and its typical appearance suggested the poison There was no corrosion of the lips—in fact, there was nothing externally to indicate the nature of the case

The same difficulty may arise in connexion with other poisons which one might naturally expect to be able to recognise by their odour, even without opening the body A man travelling in the train from Aberdeen to Edinburgh was found at Dundee to be apparently asleep in the compartment He was supposed to be under the influence of alcohol and the officials at Dundee therefore telegraphed to the ticket-collector at Edinburgh to get his ticket on arrival there When the compartment was entered the man was found still sitting in the same position but was evidently in a dying condition. He died before reaching the infirmary to which he was at once taken. There was no odour or bottle noticed in the carriage and as a result of the most careful inspection of the exterior of the body nothing was found to suggest death from other than a natural cause. The man was known to be addicted to drink and therefore death was supposed to be due to the effects of intemperance. The procurator fiscal only demanded a certificate as to the cause of death—i.e. a report based on the external examination of the body Having received, however, permission from the friends to make a complete examination, owing to the fact of the man's life being insured, I detected in the stomach a faint odour of prussic acid and on applying tests I was able to verify the presence of this poison. How and where the poison was obtained remains a mystery, but in all probability the case was one of suicide.

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[1] A paper read before the Medico-Legal Society on Dec. 9th 1902.

I could give many instances of death from direct violence in which there were either no external signs of injury or in which these were so slight as not to attract attention It is, for example by no means uncommon to find extensive fractures of the skull, fractures of the ribs and sternum, or ruptures of various organs of the chest and abdomen produced by direct violence, without there being any external wound or mark , indeed, I can recall the case of an old man who was thought, after an inspection of the body, to have died from heart failure and old age but who was subsequently found to have shot himself in the mouth with a small revolver There were no external evidence of the cause of death in this case no alteration of the features and no effusion of blood, and no weapon was found until some days after the event Similar cases are occurring every day throughout the country and it is not therefore difficult to understand how under the present system of imperfect investigation and with medical evidence based on an external examination only, crimes may pass undetected.

Naturally the practice of coroners varies in regard to the cases in which post-mortem examinations are thought to be necessary and the opinion which many used apparently to hold that a medical man by mere inspection of a body should be able to say what the person died from is becoming modified. At the same time, I maintain that there should be greater uniformity of procedure on this question throughout the country The initiative must come from the Government, since it is a question affecting not a locality but the whole State I would suggest that the first step towards uniformity and greater efficiency should be the promulgation of a code of regulations applicable to all coroners, defining the procedure to be followed in various circumstances and more especially enjoining that no body shall be buried without its having been previously inspected by a competent medical inspector, but also requiring that a post-mortem examination shall be held in all cases of persons found dead no matter whether the body presents indications of violence or not, in which positive and direct evidence is not forthcoming from reliable and impartial witnesses, or from the circumstances of the case, that the deceased died from natural causes.

WHO SHOULD PERFORM THE MEDICO-LEGAL POST MORTEM EXAMINATION ?

Let us now consider the question of who should make the medico legal post-mortem examination Should it be *any* medical practitioner—the one who happens to live nearest at hand , the house surgeon of the hospital to which the deceased was removed and who may just have received his qualification to practise , the practitioner who has been attending the deceased, who may be an excellent physician but possibly has never made a post-mortem examination in his life before , or should it be a person of recognised experience and capacity to perform the duty irrespectively of other considerations ? It would be ludicrous if it were not such a serious matter to reflect that in this advanced age and in an enlightened and humane country the law still permits *any* medical practitioner to be summoned to make a post-mortem examination without any regard to his knowledge, his previous experience, or his capacity to fill the duty thus imposed upon him. In other words, while we all when ill try to obtain the best advice, seek the man who by devoting himself to special study has best qualified himself in a particular branch of medicine, in order to treat our case, or to operate upon us, any medical man, no matter what is his qualification or his experience, is good enough when the question for decision is merely one affecting the liberty, or it may be the life, of another, although the points at issue are no less difficult to decide and require equally for their elucidation special study and experience No question is necessarily asked by the judicial authorities as to the medical practitioner's fitness or knowledge of the duty thus required, or, indeed, whether he has ever given any attention at all to forensic medicine, apart from the small amount of information required in order to pass the examination of the medical curriculum

That this view is not an exaggeration must be known to anyone who reads the daily papers, where we continually see in cases of the most serious nature, entailing on the accused party prolonged terms of imprisonment or the capital sentence, evidence given on extremely nice points of forensic medicine by gentlemen who—without casting any reflection upon them as excellent medical men—are neither competent from experience or knowledge of the subject to decide the questions at issue Numerous examples could be given to illustrate the truth of this contention and cases could be easily recalled in which there can be little doubt that serious miscarriage of justice has resulted from the incompetency and defects of the medical evidence I will relate one case from my own experience, with reference to this point, which is but a type of what occurs every day under the present system. A woman died, it was believed, as a result of septic infection conveyed by a midwife who had a short time before infected two other puerperal women with fatal results The coroner was informed of the circumstances of the third case and of the patient's death and he ordered the medical man who had been called in to see the woman before death to make a post mortem examination I obtained permission to be present and I was greatly surprised when this medical man informed me that he had never made a post-mortem examination before—a fact which was easily discernible from his methods of operation—and yet a woman was committed for trial at the assizes on a charge of manslaughter on this gentleman's evidence Even if the case had been a perfectly clear one—of death from wounding, for example, in which little depended on the post-mortem examination—the circumstance would have been bad enough and the choice which the coroner made would have been inexcusable , but in a case such as I have related, where everything depended upon the determination of the exact cause of death—and that from a cause so difficult to verify as acute septicæmia in a puerperal woman—I think it was little less than a travesty of justice and that a system which makes such an occurrence possible is not one which can be upheld.

Is it right that such an important and responsible duty should be thrust upon medical men ? Are the majority of general practitioners qualified to do it and themselves justice ? I do not hesitate to say that they are not, and in saying this I do not for a moment cast any aspersions on their skill and experience as medical practitioners. They are engaged in a laborious and engrossing occupation which, as a rule, hardly permits of their devoting time to a study of those special branches of their profession of use to them in general practice Is it to be expected, then that they will be able to prosecute a study of forensic medicine ? The knowledge of the majority will therefore be confined to what they picked up as students together with any little experience that they may have obtained afterwards. I am sure I do not overstate the case when I say that the above forms the sum total of medico-legal information possessed by most practitioners. No doubt a reference to 'Taylor" may suffice to enable many to pass through the ordeal of the coroner's inquest and even of the assize court in ordinary cases without their real incapacity becoming apparent , but I ask, Is it right that such a grave and responsible duty should be demanded from gentlemen who have not the requisite experience to enable them to undertake it efficiently and who themselves, as a rule, regard the duty with distaste and would willingly escape from its performance if they could ?

While it may be admitted that the *majority of medical* time their temperatures were again observed. In the case of 10 out of the 12 an elevation took place which varied from 0 3° to 1 4° and which averaged 0 8° Many of these cows presented cough and loss of flesh and were suspected of having tuberculosis, but unfortunately none of them reacted to tuberculin. At the same time we must state that the amount of reaction to exercise did not correspond exactly with the manifestation of suspicious symptoms. A couple of dogs have also been experimented on. Their rest temperatures having been ascertained to be 101 8° and 101 4°, they were taken for a run of ten minutes and their temperatures then registered 104 2° and 104° respectively The average of five observations on the effects of running for ten minutes on the temperature of these dogs showed a rise of 2 1° With ten minutes' rest the normal temperature was regained. The temperatures of these animals appear to be particularly easily affected, for a rise of 0 6° occurred on making a dog stand up on its hind legs for ten minutes.

The subjects with which we have imperfectly dealt in the preceding pages afford a field for more complete investigation.[2] The present contribution is little more than a collection of numerous observations, largely taken for us by the nurses of the Norwich Hospital and Mundesley Sanatorium and by Mr W J Fanning, late resident medical officer of the Mundesley Sanatorium. We are under a great obligation to them for their labour

Norwich

MEDICO-LEGAL POST-MORTEM EXAMINATIONS[1]

By HENRY HARVEY LITTLEJOHN, M A., M.B , C.M.,
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WHEN I was asked to read a paper before the Medico-Legal Society it was not my intention to take up a subject of such a general nature as that indicated by the above title. I proposed merely to give an account of some anomalous and uncommon post-mortem conditions and it was in deference to the suggestion of the joint secretary, Dr W McCallin, that it would be advisable to have a paper admitting of more general discussion that the present subject was chosen It is with some feeling of trepidation that I approach, in a society of experts, a subject apparently so simple and which has been so often discussed by others, more especially since I am fully conscious of having nothing original to add to what has been already frequently spoken and published A perusal of the admirable address which the President delivered at the inaugural meeting of the society however, has given me confidence to some extent, since I find among the questions which he touches upon and suggests for our consideration that which I shall now endeavour to deal with. At the same time, also, when we remember that this society is only commencing its career—and I trust that it will be a long and useful one—it is perhaps well that our early discussions should deal with elementary facts and fundamental principles, so that we may endeavour to arrive at a clear understanding amongst ourselves as to any matters which are open to doubt and by this means form a solid foundation from which we may attempt to exert a beneficial influence upon the judicial procedure and practice of the country and likewise build up for ourselves a superstructure of sound and progressive knowledge of the science in which we are interetsed It will only be possible for me this evening to refer briefly to some of the many questions which naturally arise in a discussion of the whole subject of medico-legal post-mortem examinations and I purpose, therefore, to consider (1) in what cases should a post mortem examination be performed , (2) who should perform it , and (3) the procedure and methods which should be followed in such examinations.

IN WHAT CASES SHOULD A MEDICO LEGAL POST MORTEM EXAMINATION BE PERFORMED?

It is hardly necessary for me to state that the cases of death which I have in mind are those which ought naturally to come under the cognisance of the coroner (or the procurator fiscal in Scotland)—viz., cases of sudden or unexpected deaths, cases of deaths from violence, and those cases in which the medical attendant is unable, or refuses, to give a certificate.

We are no doubt all agreed that the law as it at present stands in regard to the preliminary investigation of such cases leaves much to be desired. A system which leaves to the registrar the duty of setting the machinery of investigation going, and an investigation carried out often solely by an official (the coroner's officer) who has neither legal status nor in many instances the qualifications necessary for the efficient discharge of such an important and responsible task, cannot be regarded as satisfactory or as one which inspires confidence in the methods for detecting crime and administering justice. Nor can it be deemed a satisfactory system which places on the shoulders of the coroner the responsibility of deciding on unofficial and frequently superficial investigation, firstly, whether there shall be an inquest , whether, secondly, when a person is found dead it is necessary for a medical man to inspect the body , and, lastly, whether a post mortem examination is required to determine the cause of death. The coroner is not responsible for the objections we take to the system. He merely carries out the law, and does so as a rule in an efficient manner We cannot, however, shut our eyes to the evils of a system so closely related to the public welfare and the administration of justice in which the element of chance plays such a large rôle. Authorities well able to form an opinion have stated that under such a system numerous crimes must every year pass undetected and it is not difficult for us to believe these statements when we consider the statistics of "uncertified" deaths and read in the papers accounts of inquests on bodies found in circumstances which might well arouse suspicion and yet in which no medical evidence is adduced as to the cause of death In no other country boasting of a civilisation even approaching that of the United Kingdom is so great a laxness in the investigation of the cause of death in such circumstances tolerated In France, in Germany, and in Austria no person found dead could be buried without the body being at least viewed by a qualified medical inspector, and it is a matter for wonder that in this country, where so much has been done by legislation to safeguard and to prolong human life, more stringent measures have not yet been enacted in regard to the medical examination of persons found dead in order to protect the community from the possibility of criminal violence.

What is required, however, in a large proportion of the cases which are the subject of inquests is not merely an inspection of the body by a medical man but a post-mortem examination. By no other means is it possible to exclude death from violence The external inspection of a body can seldom give a true indication of the cause of death in cases where persons are found dead or even entitle a certificate of death from "natural causes" to be given should the coroner hold the view that his duty does not require any more specific statement. History teaches us that the greatest crimes have often occurred where they were least suspected and where at first sight the circumstances and the external appearance of the body afforded no indication of the true nature of the case. Many cases illustrating the unreliability of an external examination in cases of violent death will recur to all of us, but I will instance the following from my own experience, in all of which death might have been due to murder and in which a mere inspection of the body afforded no clue to the real cause of death. An old man was found lying dead in bed one morning having apparently died during his sleep The face was placid and pale and there was nothing to indicate that death was due to other than natural causes As the dwelling house was a small one the body was removed to the mortuary and there, on making a post-mortem examination, it was found that he had taken carbolic acid. There was no smell of the acid in the room and no bottle was found near the body, although one which had contained the substance was afterwards found in the house. Even in the mortuary the odour was not noticed until the stomach was opened and its typical appearance suggested the poison There was no corrosion of the lips—in fact, there was nothing externally to indicate the nature of the case

The same difficulty may arise in connexion with other rate, the best available medical man for the purpose , (2) that two medical inspectors are usually conjoined for the purpose of making the post-mortem examination , and (3) that these are required to give in a written report of the facts ascertained at the examination with their opinion as to the cause of death. The written medical report does not, I believe, exist in England, but I most strongly uphold the desirability, both in the interests of the Crown and those of the prisoner, of such a document being prepared and received in evidence. I do not see that any valid objection can be offered to this method which is employed in regard to most other matters on which expert evidence is required, nor can it be denied that such a means of at once recording the facts of a post-mortem examination is more satisfactory, clear, and trustworthy than that of taking down in writing evidence given at the inquest with the aid of frequent references to a notebook

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THE PROCEDURE AND METHODS WHICH SHOULD BE FOLLOWED IN MEDICO-LEGAL POST-MORTEM EXAMINATIONS.

Finally, I should like to refer shortly to some questions in connexion with the procedure advisable in medico-legal post-mortem examinations. This, it is true, is a subject which is dealt with in most text-books on forensic medicine, but still there are divergencies of opinion on some points, while the information is not always so explicit and clear upon certain questions which sometimes arise and upon which it is desirable that we should if possible be in agreement. Since the time at my disposal is limited I shall, in the first place, merely submit for your consideration certain general elementary propositions Many of these will no doubt be readily acquiesced in and may hardly seem to require accentuation, but certain recent *causes célèbres* must have brought prominently under your notice the fact that even the most elementary and generally accepted rules of procedure are broken or ignored, even by gentlemen who have some claim to be regarded as experts in medico-legal work.

1. The medical inspector should, as a rule, have an opportunity of viewing the body before it is removed from the place or position in which it is found and in every case the body should be inspected before the clothes are removed.

2. The medical man who attended the deceased before death or was the first to see him after should not, as a matter of course, be appointed to make the post-mortem examination or, unless he is known to be fully qualified for the duty The reason for this must be obvious, since in many cases the treatment of the patient may be called in question by the defence, and it is against all principles of justice that a person whose conduct may be impugned, whether rightly or wrongly, should adjudicate on his own case In this connexion I noticed recently in a medical journal that exception was taken to the fact that the medical practitioner who had attended a child suffering from enteritis and supposed ptomaine poisoning was not called upon by the coroner to perform the necropsy The ground of objection to the action of the coroner in summoning an experienced pathologist to make the post mortem examination in this case apparently was that the medical practitioner who prescribed for and treated a case of illness was *ipso facto* the most competent person to make the necropsy and to determine the cause of death. With equal force it might be argued that the physician who attends a patient during the onset of an appendicitis is the best person to operate when surgical interference becomes necessary There may be many practitioners who are fully competent to treat a case of ptomaine poisoning but surely there are not many who are bold enough to affirm that their pathological experience is sufficient to enable them to distinguish between this and other causes of enteritis or to justify their giving a decided opinion upon the question in a criminal court of justice. There seems to be a tendency to regard inquest fees as a reliable source of income and perquisite of a practice transferable with its sale and impersonal to the owner of the practice , hence the outcry when a coroner, in the exercise of his discretion and plain duty, calls in outside aid. The position in many places appears to be—fees first and justice second , but such an attitude is wholly indefensible and the sooner it is recognised that there is no prescriptive right held by medical men to perform duties for which they have not rendered themselves specially fitted the better it will be for the community at large and the administration of justice.

3 A post-mortem examination should not be made on a case evidently judicial without informing the authorities beforehand and the warrant or authorisation to perform a dissection should always be taken by the inspector to the examination.

4 No one should be allowed to be present at the examination out of mere curiosity or unless specially authorised

5 Before proceeding to a dissection it is advisable that the examiner should be in possession of information as to the general, and also any special, circumstances of the case, and more particularly in regard to any injury or violence which the deceased may be stated to have received and as to any known diseased or other condition which may have contributed to the death If this precaution is not taken it is quite possible that certain questions may be raised at the trial which the medical examiner is unable to answer owing to his attention not having been directed to the matter Such questions may have little or no real significance as regards the main issues connected with the case, yet in the hands of counsel for the defence their importance may be so magnified as to lead the jury to believe that an imperfect and unsatisfactory examination of the body has been made.

6. The examination should not be commenced without sufficient daylight in prospect to allow of the whole inspection being made without artificial light.

7 The body should be identified by witnesses before the dissection is commenced

8. Complete notes should be made during the dissection All measurements should be accurately determined.

9 Injured parts (if possible), all diseased organs or portions of them, and all foreign bodies, should be removed and preserved for further examination.

10 The examination in all cases should be complete and all the necessary instruments, bottles, &c., should be provided before commencing the dissection

With reference to the *external* examination of the body it is very advisable that this should include an examination before the clothes are removed, so that any signs of a struggle, marks of blood, &c., may be seen by the examiner and comparisons made with the injuries on the body If clothes are removed before the body is seen by the examiner many accidents can occur, the results of which may seriously complicate the subsequent examination Thus, not only may the post-mortem rigidity be destroyed, but at the same time, in the bending of rigid parts, such as the arm or neck, rupture of muscles may occur—for example, the platysma, sterno-mastoid, and biceps—a fact which I have frequently observed. The careless handling of a body will also very easily cause the contents of the stomach, when this organ is distended, to be forced up the œsophagus into the mouth or into the pharynx or larynx, where the presence of such matters may afterwards give rise to the suspicion of accidental choking as the cause of death This is especially apt to happen in the case of young children. Apart however, from such considerations, it is undesirable that a body should be manipulated more than is absolutely necessary by other hands than those of the medical examiner since any roughness is liable to produce injuries, such as bruises and abrasions of the cuticle, which may not be easily distinguished by inexperienced examiners from the results of violence inflicted during life

In regard to the *internal* examination I would like to enter a strong protest against the statement found in many books that this should commence with the cavity which is apparently implicated in the causation of death. Such procedure is liable to destroy most valuable evidence and seriously to interfere with the formation of a correct opinion as to the case. I submit that in all examinations the procedure should be first, to open the abdomen and to inspect the contents of this cavity , then to open into the thorax and to observe the state of the heart in regard to its fulness and the fluidity of the blood , and afterwards to inspect the pleural cavities and external appearance of the lungs. The reason for this order of procedure is that we are able to observe the exact state of the abdominal viscera before there is any chance of their becoming soiled with blood, &c , from the thoracic cavity and before their position is altered through dividing the anterior attachments of the diaphragm We are thus also enabled to note the state of fulness of the cavities of the heart before this is changed, as it must necessarily be, if any other cavity is first of all dissected. The state of the heart in the above respect is, notwithstanding arguments to the contrary, a most valuable diagnostic sign of death from men engaged in general practice are not fitted to conduct medico-legal post-mortem examinations the question very rightly arises, Is the teaching of forensic medicine what it ought to be? and is it conducted in the manner best adapted to enable the student afterwards, when in practice, to perform the duties required of him? I have had experience for 13 years in both teaching and examining students in forensic medicine and I do not fear contradiction when I affirm that no subject in the medical curriculum is more inefficiently taught, bearing in mind the practical necessities and requirements of the student This result is due, in the first place, to the lecturers themselves who in many instances have not undergone special training or acquired any practical experience of the subject, but rather the reverse, since they are often men who have devoted themselves to other special branches of medicine and merely take the lectureship of forensic medicine temporarily as a means of getting placed on the teaching staff of the school Is there any other subject in the curriculum in which such a thing would be tolerated or in which the standard of special qualification for a lectureship is lower? What interest can the student have in listening to lectures laboriously extracted from books he possibly has read himself the night before? and what advantage does he derive from discourses on an eminently practical subject from a teacher who possesses no practical experience? But of even more importance than the deficiencies of the teacher in many cases is the method of teaching he adopts or is obliged to adopt—viz., a course of prelections without practical demonstration and instruction. By practical instruction I do not refer to chemical experiments and tests, which in my opinion are of minor value to the student, but to practical demonstration on the dead body—and also on living persons—of the conditions upon which afterwards the student as a practitioner will have to give expert evidence. In no other branch of medicine is such a mode of teaching attempted. What value would lectures on chemistry, anatomy, and physiology have without practical demonstration and experiment? How would we describe a method of teaching pathology in which the student saw no morbid specimens and never attended the post-mortem theatre? What would be thought of the student who attempted to go for the examination in surgery or medicine without having received practical instruction in the wards of a hospital? Why, then, should it be thought possible to impart a satisfactory knowledge of forensic medicine—a subject which I hold to be eminently practical so far as the requirements of the medical practitioner are concerned—without affording the student an opportunity of seeing those operations and conditions with which he ought to be familiar and about which he will have to give evidence in courts of law, in cases possibly entailing the gravest consequences to others? I could illustrate by examples how erroneous in regard to many subjects an opinion may be in connexion with medico legal cases, when the examiner's knowledge is based merely on written description and not on actual observation, and this holds good especially in regard to post-mortem appearances.

How many students when they obtain their qualification have personally performed a post mortem examination? Very few, and still fewer have even seen one performed with attention paid by the pathologist to the recognised and essential rules of procedure and the precautions required in medico-legal investigations It may be suggested that the student who has seen an ordinary pathological examination of a dead body is *ipso facto* capable, along with his knowledge of forensic medicine, of performing one in a medico legal case. The two operations, however, differ very materially, not only in regard to their objects, but also in the procedure to be followed. The pathologist is already aware in most cases of the cause of death, or, if not this question is of only secondary importance, so far as he is concerned, as compared with the confirmation of the presence or absence of the suspected disease and tracing the pathological processes in the various organs. External appearances do not interest him, the presence of injuries may be noted, but whether these were inflicted before or after death, how they were produced, in what time they must have proved fatal, and whether they were the result of suicide, accident, or murder, are questions which do not concern him or receive his attention. In the internal examination it matters little to him in what order the various cavities are opened, whether the heart is distended with blood, or empty, what is the condition of the blood, and what significance is to be attached to petechial ecchymoses on the lungs or the presence of froth in the trachea, and so on. In fact, the very points which may be of vital importance in a medico-legal case rarely engage his attention and the student who has assiduously attended the pathological post-mortem theatre may still remain ignorant of the most elementary rules for the performance of a similar operation in a medico-legal case

It may be asked, How is the teacher to provide practical instruction in such matters for his students? I quite appreciate the difficulty and probably the best solution both for remedying the defects in the teachers to which I have already alluded and at the same time for providing means of more efficient instruction would be that the teachers should be men holding such an office, for instance, as that of surgeon of police. They would thus find many opportunities of demonstrating the facts which they taught and of illustrating their lectures in a practical manner Failing the teacher being a surgeon of police he should at least be a gentleman trusted by the coroner of the district and employed by him regularly to make post-mortem examinations (In this connexion I may remark that the professors of forensic medicine in the four Scottish universities—Edinburgh, Glasgow, Aberdeen, and St Andrews—are all gentlemen in constant medico-legal practice, a fact which confers a mutual advantage on lecturer and student) Apart, however, from a teacher having such facilities as are indicated above, I think a great deal could be done to improve the teaching of the subject with the material at present available in all general hospitals In such institutions there are always cases from which valuable lessons can be learnt and impressed on the student cases of poisoning, various forms of injury, children with vaginal discharges, and so on, while in the post-mortem theatre every cadaver presents some appearance or condition which will serve as a text for a useful demonstration Such teaching, carried out with the permission of the pathologist, could not fail to interest and to impress the student and would at least make him conversant with many important facts in forensic medicine which would afterwards be of the greatest use to him

Even, however, if the medical practitioner could be rendered, by improved teaching, more competent to fulfil the duties which the law demands from him I still do not think that he would be qualified to undertake many of the cases which now fall to his lot, or that he could fulfil the duty so satisfactorily as an official specially appointed to carry out such work whose continually increasing experience would be of the greatest advantage to the whole community Our President referred to the question of appointing medical investigators or assessors to be attached to each coroner's court—a recommendation which was made by the Committee of the House of Commons on Death Certification in 1893 I am strongly of opinion that such appointments would be in the interests of the efficient administration of justice and would be welcomed by the profession at large. In France and Germany such officials already exist and in the opinion of competent judges their appointment has led to a diminution of crimes from a greater certainty of their detection and also to the distribution of equal justice. In Scotland the method of investigation in criminal cases, though by no means perfect, is, I think, open to fewer objections than the English procedure. In the regulations of the Crown Office for the guidance of procurators-fiscal it is laid down that in all cases where the discovery of a dead body shall come to the knowledge of the procurator fiscal it is his duty to obtain from a qualified medical practitioner a written report relative to the cause of death, and, again, "where there is any reason to suppose that death has been caused by violence the body must be immediately examined by persons of medical skill." The procurator fiscal, moreover, is responsible for the investigation of the case on behalf of the Crown and hence he naturally chooses a medical man whom he trusts and knows has had previous experience in similar cases to make the post-mortem examination, while in all cases in which there is any likelihood of a prisoner being put on trial the rule is to employ *two* medical men to perform the examination, one at least of whom is always a person of recognised skill and experience in such cases. The advantages of the Scotch procedure in regard to post-mortem examinations and other criminal investigations are (1) that the medical inspector must be a person of skill or, at any tissues and the urethra was still intact, but this I have never seen and I should doubt if it ever occurs On the other hand, cases are met with, rarely, it is true, in which the urethra alone is attacked and, more commonly, cases are seen in which the disease is in an early stage and in all of these the urethra is affected. At the same time it is a singular fact that the urethra is the only part commonly attacked by bilharzia, where the disease instead of spreading along the surface attacks the deeper parts The course taken by the disease in "roof" fistulæ is peculiar, for at first it is directed upwards towards the limiting membrane of the corpus spongiosum on the side of the corpora cavernosa, but on reaching this it turns round the urethra and makes its way down to the skin in the perineum which it finally destroys and opens on to the surface The amount of inflammation involved in the formation of a "roof" fistula is but small and the symptoms to which it gives rise to in its formation are by no means severe

"Floor" fistulæ from their earliest stages take on the form of peri urethral abscesses probably because being in a dependent position, they tend to retain the urine and their own débris which decompose and excite a septic inflammation, at the same time during their formation they cause the formation of a great deal of new fibrous tissue round themselves and they also discharge a large amount of intensely irritating pus which causes secondary inflammatory changes in the distal urethra. The origin of all "roof" fistulæ is practically limited to the part of the urethra immediately in front of the bulb, whereas the "floor" fistulæ are by no means so limited The ' floor" fistulæ develop much more slowly than the "roof' fistulæ and owing to their septic nature their symptoms are much more severe. In "roof" fistulæ the history given by the patient begins with the formation of a small subcutaneous abscess to which he does not attach much importance and which he says burst and left a wound from which after a time he noticed that urine passed on micturition, in 'floor' fistulæ, on the other hand, the patient complains of great pain and scalding on micturition, with difficulty and increased frequency, and if, as is often the case, he seeks advice early in the disease of a painful spot in the course of the urethra

The signs of the two forms are also quite distinct. In "roof" fistulæ there will be one or more openings in the perineum, situated somewhat away from the immediate course of the urethra, the skin around which will be scarred and drawn into the central point but not greatly infiltrated, and there will be some thickening in the underlying tissues. In "floor" fistulæ the signs are more marked, the openings will be in the immediate line of the urethra, either in the perineum or in the penis, there will be extensive implication of the skin and the underlying structures will be infiltrated by a mass of stony hardness extending down to the urethra, there will probably be a plentiful discharge of pus from the urethra and the meatus will be scarred and markedly narrowed, and on passing a sound there will probably be found a bad stricture extending from the meatus to the point of origin of the fistula

The treatment of both forms of fistulæ is by free excision but the method of operating differs in the two forms. In "roof" fistulæ an elliptical incision is to be made in the perineum including all the fistulæ present and the surrounding skin, and this is to be carried down to the level of the urethra which is to be defined by the passage of a full sized catheter, when this is reached the mass of tissue included in the incision is to be removed, by which means the fistulæ will be cut through at the point where they curve round the urethra to reach the ' roof ', the remaining part of the track must then be thoroughly scraped with a sharp spoon until every particle of granulation tissue has been removed and the opening in the urethra defined, the wound should be plugged wide open with some antiseptic gauze and left to close by granulation. It is rare to find strictures in roof" fistulæ, but they do occur in old cases with great destruction of tissue, they are then most intractable, for either they consist of dense fibrous tissue replacing the part lost or else they consist of granulation tissue the organisation of which is so low that although a catheter may be driven through it no canal will remain on the withdrawal of the instrument When these strictures are met with the only thing to do is to excise them and to try to maintain a channel for the passage of the urine during healing

In floor" fistulæ the method of operating has to be different, because in them stricture is the rule and prevents the passage of a sound and because the tissues are so infiltrated that even with a sound in position it is impossible to locate the position of the urethra at the time of operating In these cases it is necessary to locate the urethra by cutting directly down on it and laying it freely open, when once this has been done the infiltrated tissue can be dissected away from the urethra without any fear of accidentally injuring it. The incision into the urethra not only protects it from injury, but it also acts as an external urethrotomy and assists in the cure of the stricture. The rest of the stricture should, of course, be dilated at the time of operation and the dilatation subsequently be kept up by the frequent passage of sounds.

The most intractable of all fistulæ are certain "roof" fistulæ which go astray, as it were, and instead of coming to the surface in the perineum, make their way along the division between the spongy and cavernous bodies and find an exit at the pubes or in the anterior part of the scrotum. No partial operations are of any good in these cases—the only thing to do is to lay the whole track widely open by slitting the scrotum in two halves and then leaving the wound to granulate

In a few cases bilharziosis is limited to the termination of the urethra and the glans penis and causes the formation of an intractable ulcer at the meatus or multiple minute fistulæ in the glans. In these cases also free excision must be done and the diseased part removed, care being taken in the after treatment to prevent stricture at the meatus. The diagnosis of most forms of urethral bilharziosis is easy, with straightforward cases there can be no difficulty, as practically all urinary fistulæ in this country are due to bilharziosis In some early cases of "floor" fistulæ in the stage of peri ureteral abscess there may be difficulty in diagnosing the disease from impacted stone in the urethra with incomplete occlusion of the canal, but the history, the typical pus escaping from the meatus, and the passage of a sound will clear up the case. Bilharziosis of the meatus and glans is, I am afraid, often taken for gonorrhœa, but the pus is quite different in character and the presence of the typical ulcer or of the equally typical fistulæ should make the diagnosis easy when once the existence of the disease is recognised

In the rectum particularly good examples of the atrophic and hypertrophic forms of the disease are found. The atrophic form is developed best in the neighbourhood of the anus where the mucous membrane will be found to be replaced over large areas by the peculiar form of scar tissue, forming patches of a pyramidal shape and raised above the level of the surrounding bowel, of a grey colour paling to white in the thicker parts and with their surfaces pencilled with fine creases and fissures and with isolated patches of the same nature in the neighbourhood. In the hypertrophic cases there is great thickening of the whole of the mucous membrane with the formation of enormous numbers of branching polypi extending up the bowel beyond the reach of the finger The earliest symptoms of rectal bilharziosis are a constant desire to go to stool owing to the irritation of the part and the excessive secretion of mucus and tenesmus from constant efforts at expelling the offending matter As the disease advances the necessity of evacuating the bowel becomes more frequent and urgent and the straining causes the hyperæmic mucous membrane to bleed, inducing the so-called bilharzia dysentery This is followed after a time by the stage of prolapse, when the lower bowel, as a result of constant straining, is protruded from the body the protrusion being assisted by the heavy engorged state of the gut. In the atrophic form the disease does not, as a rule, go on to prolapse, but the straining and tenesmus are very marked. True stricture of the rectum is rare but there is a sort of false stricture due to loss of resilience and dilatability of the part which causes the patients much suffering Bilharziosis of the rectum kills in much the same way as bilharziosis of the bladder—by exhaustion from want of rest, constant pain, and the continual loss of blood.

The treatment of bilharziosis of the rectum in the early stages consists in allaying the irritability of the bowel by local sedative and astringent applications such as enemata of starch and opium or of solutions of sulphate of copper or of nitrate of silver When polypi are formed an attempt may be made to remove them, but this is very unsatisfactory as they extend so high up the bowel that it is impossible to get beyond them and to do anything like a radical cure, still a certain amount of relief may be given which is also asphyxia If the above procedure is followed so far I do not think it then matters which cavities are first of all subjected to more detailed examination unless the case be one of poisoning, in which circumstance the abdomen would naturally come first, or unless, again, it is evident that one of the cavities is specially concerned in the causation of death. In ordinary cases my practice is to proceed with the dissection of the mouth and upper air passages, then to follow these parts downwards and to remove them *en masse* along with the contents of the thoracic cavity, thus to obtain a connected view of the whole respiratory tract and to be able to trace foreign matters, &c., down into the smaller bronchi without the risk of accidental contamination by blood which is apt to occur if the lungs are removed separately The heart and aorta also can thus be more satisfactorily examined while the now empty thorax is visible in every part. I notice that some books on forensic medicine in describing the method of removing the skull cap still recommend the use of the chisel after sawing through the external table of bone. Such a proceeding is, of course, inexcusable and in any circumstance the use of a chisel is quite unnecessary Lastly, in regard to the examination of the vertebral column and cord, this should always be the final object of examination, because so far as regards the cord, to remove it before the other cavities and organs had been examined might seriously affect conditions existing in the latter of great importance in arriving at a just appreciation of the cause of death, while in regard to the vertebral column, its exact condition *quâ* fracture or injury can only be made out after it has been fully exposed to view and its manipulation thereby facilitated. The examination of the spinal cord constitutes the sole exception to the general rule that all the chief cavities and organs of the body must be examined in every medico legal post-mortem examination. This exception will be readily conceded in the majority of cases which come under investigation, but there are some circumstances in which neglect to examine the cord would undoubtedly be a grave error, as, for example, in suspected poisoning by strychnia or some of the other alkaloids, in cases of death from tetanus, or cases in which there have been prior to death symptoms of spinal irritation or inflammation.

I fear that I have very inadequately brought before you some of the considerations which the title of this paper suggests, but if it leads to a useful discussion its primary object will have been fulfilled, at any rate, perhaps we may feel that ground has been broken in regard to a question which is of great importance and which will frequently engage our attention in the future

Edinburgh

BILHARZIOSIS SURGICALLY CONSIDERED

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The morbid changes occurring in the body and known by the name of bilharziosis are due to the deposition in the tissues of the eggs of the bilharzia parasite. Surgically we have only to do with these changes when they occur in places where they can be reached by the ordinary means at the disposal of the surgeon—viz, in the bladder, the urethra, the rectum, and the female genital organs.

Bilharziosis develops in two distinct ways which may, however, be combined in the same case. Thus it may cause the destruction of the mucous membrane of the part which it attacks by the formation of new fibrous tissue replacing the glandular elements of the part, this being the atrophic form, or it may cause great overgrowth of the normal elements of the part attacked with the formation of polypi and similar outgrowths, this constituting the hypertrophic form of the disease, or these two forms may be combined to bring about a variety partaking of the characteristics of the two with the formation of an enormous mass of tissue *sui generis* which may be called bilharzial tissue

The symptoms of bilharziosis of the bladder are hæmaturia characterised by the loss of blood occurring at the end of micturition, pain and scalding at the time of the passage of the urine, and some frequency in micturition. These all occur in the early stage of the disease and the majority of cases never get beyond this If, however, the disease progresses owing to repeated infection of the host by new parasites it takes on more serious characters and an intractable cystitis is developed which gradually passes into septic cystitis of the worst form, with loss of function of the bladder and constant tenesmus, entailing most severe suffering on the patient. The patient is also liable at any time during the progress of the disease to acute retention of urine from blocking of the urethra by a calculus, a piece of detached bilharzial tissue, or a clot, or to excessive hæmorrhage with retention of the extravasated blood. He is also commonly the subject of stone in the bladder and he may develop carcinoma in addition to his bilharziosis In cases where the formation of bilharzial tissue is extreme adhesions may form between the distended bladder and the anterior abdominal wall with the subsequent formation of urinary fistulæ in this part, through which the greater part or even the whole of the urine may escape. Bilharzial infiltration of the prostate and seminal vesicles does occur, but it does not seem to give rise to any very definite symptoms and need not be considered separately Bilharziosis of the ureter is important in that it may cause obstruction to the passage of the urine and constant hydro- and pyo-nephrosis, either by narrowing of the canal in the atrophic form or by blocking of it by polypi in the hypertrophic form Death occurs in bilharziosis of the bladder either from exhaustion from constant pain and hæmorrhage or from disorganisation of the kidneys or from septicæmia.

The diagnosis of bilharziosis of the bladder rests chiefly on the peculiar hæmorrhage and on the detection of the eggs in the urine. The treatment of bilharziosis in all its forms must be purely symptomatic, the primary cause of the disease, the parasite, being protected from attack. The stage of hæmaturia is best treated by the administration of liquid extract of male fern which has a marked effect in controlling the loss of blood Cystitis may be treated by washing out the bladder with mild antiseptics, such as boroglyceride or quinine, astringent solutions having very little effect. In the later stage medication by the mouth by means of salol, urotropin, or methylene blue may be added to the treatment locally Calculi, if formed, should be removed by lithotrity as cutting operations run a comparatively unfavourable course. In the very late stages of the disease, when there is a great accumulation of bilharzial tissue in the bladder and the patient is being exhausted by constant tenesmus and want of rest, it will be necessary to drain the bladder The simplest way of doing this is by means of a Cock's puncture through the perineum, as it is a simple operation and avoids all unnecessary manipulation. In certain favourable cases an attempt may be made to remove at the same time the accumulated bilharzial tissue, but this must be done with the greatest care on account of the diseased state of the bladder walls which may easily be perforated. If a cleansing operation can be done it greatly shortens the subsequent duration of the case, for even in the most favourable conditions the diseased mass will have to be thrown off by sloughing before the patient recovers. Unfortunately, the prognosis in these cases is very bad, for the kidneys are, as a rule, extensively diseased and the patients are very liable to die during the process of sloughing Acute retention complicated by hæmorrhage must also be treated by perineal drainage in order to clear the bladder and to prevent a recurrence of the bleeding

There appears to be no satisfactory way of treating suprapubic fistulæ, for by the very nature of the disease the bladder is incapable of resuming its functions and the urine will continue to escape by the fistulæ. Bilharziosis of the prostate would seem to be benefited by simple incision and hydro and pyo-nephrosis must be treated on general principles.

Bilharziosis of the urethra, for practical purposes, only exists as urethral urinary fistula and may be described as such. These fistulæ are of two kinds, one, the more common, arising from the pubic side, or "roof" of the urethra, and the other the more rare, arising from the perineal side, or "floor" of the urethra The two forms are distinct in all respects and merit a description apart It has been suggested that both these forms arise primarily in the peri urethral tissues and extend to the urethra secondarily, but I do not think this is so, for if it were cases would be met with in which the disease was still localised in the surrounding tissues and the urethra was still intact, but this I have never seen and I should doubt if it ever occurs. On the other hand, cases are met with, rarely, it is true, in which the urethra alone is attacked and, more commonly, cases are seen in which the disease is in an early stage and in all of these the urethra is affected. At the same time it is a singular fact that the urethra is the only part commonly attacked by bilharzia, where the disease instead of spreading along the surface attacks the deeper parts. The course taken by the disease in "roof" fistulæ is peculiar, for at first it is directed upwards towards the limiting membrane of the corpus spongiosum on the side of the corpora cavernosa, but on reaching this it turns round the urethra and makes its way down to the skin in the perineum which it finally destroys and opens on to the surface. The amount of inflammation involved in the formation of a "roof" fistula is but small and the symptoms to which it gives rise to in its formation are by no means severe.

"Floor" fistulæ from their earliest stages take on the form of peri-urethral abscesses, probably because, being in a dependent position, they tend to retain the urine and their own debris which decompose and excite a septic inflammation; at the same time during their formation they cause the formation of a great deal of new fibrous tissue round themselves and they also discharge a large amount of intensely irritating pus which causes secondary inflammatory changes in the distal urethra. The origin of all "roof" fistulæ is practically limited to the part of the urethra immediately in front of the bulb, whereas the "floor" fistulæ are by no means so limited. The "floor" fistulæ develop much more slowly than the "roof" fistulæ and owing to their septic nature their symptoms are much more severe. In "roof" fistulæ the history given by the patient begins with the formation of a small subcutaneous abscess to which he does not attach much importance and which he says burst and left a wound from which after a time he noticed that urine passed on micturition; in "floor" fistulæ, on the other hand, the patient complains of great pain and scalding on micturition, with difficulty and increased frequency and if, as is often the case, he seeks advice early in the disease of a painful spot in the course of the urethra.

The signs of the two forms are also quite distinct. In "roof" fistulæ there will be one or more openings in the perineum, situated somewhat away from the immediate course of the urethra, the skin around which will be scarred and drawn into the central point but not greatly infiltrated, and there will be some thickening in the underlying tissues. In "floor" fistulæ the signs are more marked, the openings will be in the immediate line of the urethra, either in the perineum or in the penis, there will be extensive implication of the skin and the underlying structures will be infiltrated by a mass of stony hardness extending down to the urethra, there will probably be a plentiful discharge of pus from the urethra and the meatus will be scarred and markedly narrowed, and on passing a sound there will probably be found a bad stricture extending from the meatus to the point of origin of the fistula.

The treatment of both forms of fistulæ is by free excision but the method of operating differs in the two forms. In "roof" fistulæ an elliptical incision is to be made in the perineum including all the fistulæ present and the surrounding skin, and this is to be carried down to the level of the urethra, which is to be defined by the passage of a full sized catheter; when this is reached the mass of tissue included in the incision is to be removed, by which means the fistulæ will be cut through at the point where they curve round the urethra to reach the "roof"; the remaining part of the track must then be thoroughly scraped with a sharp spoon until every particle of granulation tissue has been removed and the opening in the urethra defined; the wound should be plugged wide open with some antiseptic gauze and left to close by granulation. It is rare to find strictures in "roof" fistulæ, but they do occur in old cases with great destruction of tissue; they are then most intractable, for either they consist of dense fibrous tissue replacing the part lost or else they consist of granulation tissue the organisation of which is so low that although a catheter may be driven through it no canal will remain on the withdrawal of the instrument. When these strictures are met with the only thing to do is to excise them and to try to maintain a channel for the passage of the urine during healing.

In "floor" fistulæ the method of operating has to be different, because in them stricture is the rule and prevents the passage of a sound and because the tissues are so infiltrated that even with a sound in position it is impossible to locate the position of the urethra at the time of operating. In these cases it is necessary to locate the urethra by cutting directly down on it and laying it freely open; when once this has been done the infiltrated tissue can be dissected away from the urethra without any fear of accidentally injuring it. The incision into the urethra not only protects it from injury, but it also acts as an external urethrotomy and assists in the cure of the stricture. The rest of the stricture should, of course, be dilated at the time of operation and the dilatation subsequently be kept up by the frequent passage of sounds.

The most intractable of all fistulæ are certain "roof" fistulæ which go astray, as it were, and instead of coming to the surface in the perineum, make their way along the division between the spongy and cavernous bodies and find an exit at the pubes or in the anterior part of the scrotum. No partial operations are of any good in these cases—the only thing to do is to lay the whole track widely open by slitting the scrotum in two halves and then leaving the wound to granulate.

In a few cases bilharziosis is limited to the termination of the urethra and the glans penis and causes the formation of an intractable ulcer at the meatus or multiple minute fistulæ in the glans. In these cases also free excision must be done and the diseased part removed, care being taken in the after treatment to prevent stricture at the meatus. The diagnosis of most forms of urethral bilharziosis is easy; with straightforward cases there can be no difficulty, as practically all urinary fistulæ in this country are due to bilharziosis. In some early cases of "floor" fistulæ in the stage of peri-urethral abscess there may be difficulty in diagnosing the disease from impacted stone in the urethra with incomplete occlusion of the canal, but the history, the typical pus escaping from the meatus, and the passage of a sound, will clear up the case. Bilharziosis of the meatus and glans is, I am afraid, often taken for gonorrhœa, but the pus is quite different in character and the presence of the typical ulcer or of the equally typical fistulæ should make the diagnosis easy when once the existence of the disease is recognised.

In the rectum particularly good examples of the atrophic and hypertrophic forms of the disease are found. The atrophic form is developed best in the neighbourhood of the anus where the mucous membrane will be found to be replaced over large areas by the peculiar form of scar tissue, forming patches of a pyramidal shape and raised above the level of the surrounding bowel, of a grey colour paling to white in the thicker parts and with their surfaces pencilled with fine creases and fissures and with isolated patches of the same nature in the neighbourhood. In the hypertrophic cases there is great thickening of the whole of the mucous membrane with the formation of enormous numbers of branching polypi extending up the bowel beyond the reach of the finger. The earliest symptoms of rectal bilharziosis are a constant desire to go to stool owing to the irritation of the part and the excessive secretion of mucus and tenesmus from constant efforts at expelling the offending matter. As the disease advances the necessity of evacuating the bowel becomes more frequent and urgent and the straining causes the hyperæmic mucous membrane to bleed, inducing the so-called bilharzia dysentery. This is followed after a time by the stage of prolapse, when the lower bowel, as a result of constant straining, is protruded from the body, the protrusion being assisted by the heavy engorged state of the gut. In the atrophic form the disease does not, as a rule, go on to prolapse, but the straining and tenesmus are very marked. True stricture of the rectum is rare but there is a sort of false stricture due to loss of resilience and dilatability of the part which causes the patients much suffering. Bilharziosis of the rectum kills in much the same way as bilharziosis of the bladder—by exhaustion from want of rest, constant pain, and the continual loss of blood.

The treatment of bilharziosis of the rectum in the early stages consists in allaying the irritability of the bowel by local sedative and astringent applications such as enemata of starch and opium or of solutions of sulphate of copper or of nitrate of silver. When polypi are formed an attempt may be made to remove them, but this is very unsatisfactory as they extend so high up the bowel that it is impossible to get beyond them and to do anything like a radical cure; still a certain amount of relief may be given which is also increased by the stretching of the sphincters which is necessarily done at the same time It will also be found that where the polypi are too numerous for removal swabbing out the rectum as high as can be reached with a solution of 1 in 40 chloride of zinc will cause an abatement of the more urgent symptoms. The question of excision of the rectum naturally arises in this connexion and in some few cases it may be done with advantage, but this only in cases where the prolapse has occurred in men in fair general health, who have not been broken by suffering and where the prolapse is, as it were, traumatic in its nature. In performing excision of the rectum for this disease there is no necessity for removing the sphincters and they should be carefully preserved in order to obtain a good result. Bilharziosis of the rectum has only to be diagnosed from dysentery and the onset of the disease, together with the nature of the stools and the absence of general gastro-intestinal disturbance, is quite sufficient to distinguish between them.

In females the place of the rectum and urethra, in liability to attack by bilharzia, seems to be taken by the genital organs and especially by the vulva and vagina. In the vulva any of the structures may be attacked, but the most common seat is in the labia minora. Here the disease generally takes on the hypertrophic form, with occasionally the formation of warty masses which resemble bunches of currants and which may attain considerable size. In the vagina both forms are found, the hypertrophic form occurring at the outlet and vault and the atrophic form in the canal of the vagina itself The symptoms of bilharziosis of the vulva and vagina are not well marked, they consist for the most part of discomfort and inconvenience from the presence of the tumours and from the accompanying discharge. Bilharziosis of the uterus takes the form of polypi growing from the vaginal aspect of the cervix and I have never seen a case where it did not occur in association with bilharziosis of the vagina

The treatment of bilharziosis of the female genitalia is by excision, which, except in cases of generally diffused bilharziosis of the vagina, is easy in execution and appears to give good results. At first some difficulty may arise in diagnosing between advanced bilharziosis of the vaginal vault and carcinoma of the cervix uteri, for the fleshy polypi closely surrounding the cervix, and shutting it in resemble very closely the typical cauliflower growth of cervical carcinoma, but the absence of ulceration and foul discharge and of invasion of surrounding parts serves to put the surgeon on his guard, and a more careful examination will reveal the healthy cervix hidden behind the mass of new growth In general bilharziosis combinations of any or of all of the above forms may occur, together, it may be, with other forms which are as yet beyond the reach of the surgeon, such as bilharziosis of the liver, spleen, kidneys, and probably other organs

STATISTICS.

The few statistics which I have been able to collect are worked out from the patients treated at the Kasr el Aini Hospital during the year 1901 These in all numbered 930, but of this number 714 attended in the out-patient department only and about these very little information can be recorded. The chief deductions which I have been able to make are as follows —

1 *Age* —All ages are liable to be attacked, the records showing three cases of children aged four years with bilharziosis of the bladder and 19 patients aged over 60 years By far the largest number, however—viz, 687, or 75 per cent. of the total—were between the ages of 15 and 45 years. The total numbers were up to five years 10, or 1 per cent., from five to 15 years 87, or 9 3 per cent., from 15 to 30 years 432, or 46 5 per cent., from 30 to 45 years 255, or 27 4 per cent., from 45 to 60 years 122, or 13 1 per cent., and over 60 years 26, or 2 5 per cent

2 *Sex* —The vast majority of cases occurred among males, the totals being males 893 and females 37, or more than 24 males for every female. Part of this apparent excess is due, no doubt, to the females not coming so freely to the hospital for treatment as do the males, but it cannot be entirely due to this, for a very fair number of women come to the gynæcological out patient department for treatment Among children under 15 years of age the proportion of males to females is certainly a good deal less, the numbers being males 90 and females eight or a ratio of about 11 to 1 Up to this age the sex variant is practically non existent, but at the same time any difference in the mode of life or in occupation which may occur among adults has not yet developed

3. *Race* —As regards race a very marked difference is found Of the 925 patients under consideration, leaving out five cases of foreign or mixed nationality (a half breed, a Jew, a Greek, an Armenian, and a Tunisian), no less than 908, or nearly 98 per cent., were Egyptians, the remainder being made up of six Berberines, six Copts, and only five Soudanese. The small number of Copts and Berberines may be accounted for by these being essentially indoor or town races, but the markedly small number of Soudanese patients can hardly be thus accounted for, it must be remembered that a large number of these blacks have passed the greater part of their lives in Egypt and under the same conditions as the native Egyptians At present I am altogether unable to account for this apparent immunity of the dark races, but I think that it is probable that as our knowledge of the disease increases some reason for it will be found either in their habits or in their diet.

4 *Occupation.*—The statistics of occupation point very strongly to one particular class as being peculiarly liable to infection, this class being the *fellahin*, or peasant class, for out of 199 male patients whose occupation was known no less than 140, or 70 per cent., were returned as belonging to this class. In only one other class did the numbers touch double figures, and this was the class of *fiki*, or slightly educated persons of the peasant class who are attached to mosques and who also give instruction in the country elementary schools, and of these there were but 13.

5. *Geographical distribution.*—The great majority of the cases, as has been seen, come from the country the numbers coming from the towns being very small indeed Thus although the hospital from which these observations are taken is situated in Cairo and would naturally draw the majority of its patients from its immediate neighbourhood, yet out of 208 cases localised only 37, or about 17 per cent., are noted as coming from Cairo, and this including Old Cairo, Shubra, &c, which are practically country districts. Of the cases coming from the provinces the great majority came from the Delta. Of the 170 cases no less than 145 came from Lower Egypt and these were distributed as follows Gharbieh, 20, Sharkieh, 39, Dakhlieh, 20, Galioubieh, 19, and Menoufieh, 38 Only 25 cases were left for the whole of the rest of Egypt and these were distributed as follows Ghizeh (which physically is more akin to Lower than to Upper Egypt), 14, Beni Souef, two, El Fayoum, five, and Minieh, four, the provinces of Assiout, Ghirgeh, Keneh, and Assouan not sending a single case.

6 *Forms of the disease* —The most common form of the disease as seen at the hospital is bilharziosis of the bladder, of which there were 599 cases, or 64 per cent. of the whole number treated, the next most frequent form was what is almost the same form of the disease—viz., vesical calculus, of which there were 134 cases, after this urinary fistulæ, 113 cases, and then bilharziosis of the rectum and general bilharziosis, 53 cases, besides these there were 29 cases in which necropsies were made for other diseases and in which bilharzia worms were found in the portal vein.

These statistics relate to the year 1901 and they show only one case of bilharziosis of the vagina, but it is probable that other cases occurred which were not recognised An unclassified case was one of old standing sinuses over the sacrum in which the sinuses were found to be lined with unhealthy granulation tissue containing innumerable bilharzia eggs

I have throughout these observations included vesical calculi as one of the manifestations of bilharziosis but I am not quite sure that I have been right in doing so in all cases In a large number of cases of stone there is demonstrably also bilharzial cystitis, and this not only in cases of phosphatic calculi, with decomposition of the urine, but also in cases of uric acid and oxalate calculi Still, the connexion which I do not doubt exists between the two diseases has yet to be worked out properly The general statistics of bilharziosis as shown in this paper would not be greatly altered if the calculi were left out, as in the matter of age, sex, race, occupation, and geographical distribution the separate figures run altogether parallel, which also might be urged as an indication of the relation of the two diseases to one another

I had hoped to make some experiments with the urine of a number of healthy persons in order to estimate the frequency of the disease among the natives, which there is reason to believe is very great, but unfortunately I have not been able to carry this out. Mr W Bryce Orme, principal medical officer of Port Said Hospital, most kindly examined the urine of 40 healthy pupils in the Government school in that town and found bilharzia eggs in five cases. Port Said, however, is not a good bilharzia centre owing to its situation and water supply and I believe that the schoolboys of Cairo would show a much larger proportion than this. Dr Calamawy of Assiout Hospital also examined 32 pupils of the school there, but he failed to find eggs in any of them, but then again Assiout is also not a good bilharzia centre, none of the 200 odd cases in Kasr el-Aini Hospital having come from that province.

In order to make good this deficiency Mr Gurgis, house physician to Kasr el-Aini Hospital, examined the urine of 100 consecutive patients admitted to the medical side of the hospital in June of last year Of these 100 cases no less than 35 were found to have bilharzia eggs in their urine, although only two complained of any symptom of the disease. In no less than 15 of these 35 cases was the disease associated with pellagra and this out of a total of 25 pellagra cases only, in two cases the eggs were associated with ankylostoma and in six cases the patients were peasants who were admitted for inoculation after being bitten by dogs. The nationality of the cases admitted was as follows —

Egyptians	89	with 35	cases of bilharziosis
Soudanese	7	0	"
Berberines	2	0	
Others	2	0	

This illustrates the frequency of the disease among Egyptian peasants and the comparative immunity of the black races

If it is permissible to draw conclusions from such a small number of cases as are here reviewed these would be as follows. Bilharziosis is a disease of very frequent occurrence in Egypt, it is most commonly found among the peasants and more especially among the peasants of Lower Egypt, it is liable to attack all ages with the probable exception of nursing children, males are more frequently attacked than females, the black races appear to enjoy a certain amount of immunity, and many more people suffer from the disease than are aware of the fact.

Cairo.

FURTHER NOTE ON THE PULSE WAVE IN AORTIC REGURGITATION

By PAUL M. CHAPMAN, M.D, F R C P LOND,

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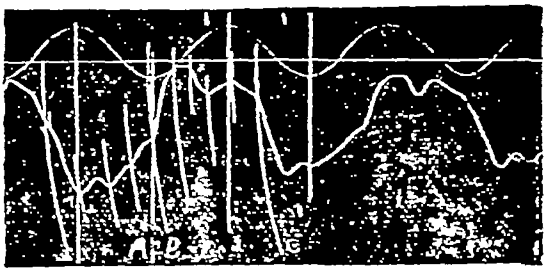
IN a previous note on the heart-index interval[1] I discussed the extreme views held by various writers as to the shortening or lengthening of the interval in aortic regurgitation. I then furnished definite experimental proof that both those writers who stated that the heart-radial interval was always shorter than normal—e.g, Keyt—and those who stated that the interval was always longer—e.g, Sir William H. Broadbent—were equally inaccurate. Sir William Broadbent[2] having said that "the pulse in aortic regurgitation is always retarded or delayed, I expressed myself as being in disagreement with him and in agreement with Dr. Walshe[3] who confined himself to the more accurate statement that "the retardation (of the pulse) may with care be detected in many but unquestionably not in all, cases of that disease." When everyone cannot speak with equal authority as a clinician and when many clinicians of equal authority differ on a point of observation it is a relief to turn to actual physiological experiment for some undeniable facts. So I do not propose to discuss the matter again at any length.

1. The normal heart-radial delay is about 0·18" 2. The normal heart-index delay is about 0·20" In my former note (of a case of simple aortic regurgitation) the delay (2) was 0·216" A lengthening of $\frac{1}{65}$" quite indistinguishable by touch.

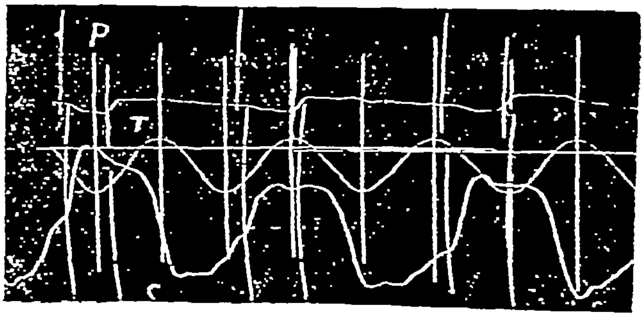
I now publish the following tracings from the case of a young man suffering from well marked aortic regurgitation The first tracing is a simple cardiogram of unimpeachable accuracy (see Fig 1). The second is a simultaneous pulse and heart tracing (see Fig 2) The three letters in this figure, P, T, and C simply indicate pulse, time, and heart. The straight vertical lines measure off abscissæ of time in quarter seconds The curved ordinates are described by movements of two levers attached to the pulse and apex beat respectively by suitable connexions. In a long series of measurements, of which this is only a specimen, the heart-index delay is 0·182" usually only in some few instances reaching a maximum of 0·200" The heart muscle in this case is largely hypertrophied and the duration of ventricular systole is at its extreme maximum for a pulse rate of 80 It is usually less in health, varying in different circumstances between 0·30" and 0·33" It is to be noticed that the duration of ventricular systole, strangely independent of extraneous circumstances, is some evidence of structural change in the heart muscle. If very short it is direct evidence of degenerated muscle and is a means of differentiating between (1) fatty infiltration or deposit and (2) fatty degeneration of the muscular fibre itself. In the hypertrophied compensatory heart of aortic regurgitation the duration of systole is rather longer than in a normal heart, the larger muscular mass responds more slowly to stimulus, moves more slowly and against a much larger initial pressure. The heart-index delay in this case is seen to be never longer than normal while it is usually less than normal. It varies inversely with the vigour of the heart's contractions and the tension in the arteries When (in other cases than this) the delay is longer than in health it is owing to a collapsed and empty state of the arteries between the beats and partly to their large size and loss of tone, as Sir William Broadbent[3] says. But to this must be added want of due compensation arising from a heart which has not yet responded, or will never respond, to the new calls made upon it or which, having long borne

FIG 1.



A, Beginning of auricular systole. B Beginning of ventricular systole and cessation of auricular systole. C Cessation of ventricular systole. Pulse-rate 80 Duration of ventricular systole, from 0·330" to 0·325" Duration of auricular systole, 0·083" From B to bottom of dicrotic notch, 0·175"

FIG 2.



Simultaneous pulse (P) heart (C) and chronographic (T) tracings. Heart-index delay 0·182" (occasionally it was 0·200") a heavy burden, is now commencing to fail or is slowly undergoing degeneration. The burden is great. In a normal heart the ventricular blood pressure at the beginning of systole is about 20 mm. Hg, in aortic regurgitation it may be 150 mm. Hg I have shown that in the latter case the contraction of the heart is more of the nature of a steady push against a weight, and the resulting wave, not being created by impact, is a slowly propagated wave—that is, one of much less velocity I believe this to be the real reason why the appearance of the radial pulse is not more often anticipated and that it is only thus we can account for the fact that the disappearance of the *pre sphygmic interval* is not more frequently accompanied by shortening of the heart-radial interval.

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[1] Brit. Med. Jour., Feb. 16th, 1901.

[2] Heart Disease, 1897

[3] Practical Treatise on Diseases of the Heart and Great Vessels American edition, 1882, p. 72.

[3] Loc. cit

As I have now furnished graphic proof in support of my contention that the pulse in aortic regurgitation is *not* "always retarded or delayed," I think it must stand as an established fact that my contention is justified Indeed, the tracing (Fig 2) here given is complete evidence of what I was not prepared to state on the authority of my sense of touch, but what from my studies on the physics of the circulation I felt sure must be possible—viz., that in some cases of aortic regurgitation the heart-radial interval may be even shorter than normal There may be some who think that the matter is small and unimportant and after all not worth the trouble of proof I would bid them not to be hasty but to consider the matter more deeply In it lies quite a small world of interest, of beautiful and absorbing questions of physics, and, bound up with them, we have a means of estimating compensation or its absence, of avoiding certain commonly employed but baneful methods of treatment, and we have a means of wisely using our reason for the benefit of each individual case of aortic disease These cases are too often treated according to some general method, as if all cases of aortic incompetency were, on broad grounds to be treated alike That this is not so, and also the reasons why it is not so, and what means we should employ to bring about a state resembling as far as possible a normal condition, follow directly from the evidence gained by such experiments Here a new field lies open and in it in the future much useful work may be done.

Hereford

ON THE

NECESSITY FOR A MORE FREQUENT USE OF THE CYSTOSCOPE IN THE DIAGNOSIS OF DISEASES OF THE URINARY SYSTEM

By JOHN G PARDOE, M.B, C M ABERD, F R C S ENG,
SURGICAL ASSISTANT TO ST PETER'S HOSPITAL FOR STONE AND GENITO-URINARY DISEASES COVENT GARDEN W C

ALTHOUGH a good many years have passed since the introduction of the electric cystoscope as an instrument of precision and as an unequalled means of diagnosis in diseases of the urinary tract, it is scarcely an exaggeration to say that the interest taken in it by the majority of surgeons is very faint and that it is looked upon either as a somewhat ingenious toy of little practical value, or so difficult to use and so uncertain in its results as to restrict its employment to the few Such is the impression which I have gathered from conversation with members of all ranks in the profession, from the general practitioner as well as from the operating surgeon. This fact is also demonstrated by reference to the latest editions of the text books upon general surgery in the English language which are at present most widely read by student and practitioner alike, for although in the majority of them some reference is made to the instrument and its use the importance of cystoscopy and the valuable results to be obtained by all who care to gain the mastery of this instrument most certainly are not urged upon the reader This probably is due to the fact that it takes time to learn how to use the cystoscope correctly, just as it takes time to learn the use of the ophthalmoscope or laryngoscope, not so much from the circumstance that it is difficult to gain a satisfactory view of the interior of the bladder—for any surgeon can overcome that difficulty very readily—as from the necessity of gaining sufficient experience to appreciate at their proper value the appearances observed Certain writers apparently consider that the dangers of the instrument outweigh the benefits to be obtained, but these dangers are, after all, but little if any more than those attending the passage of any metal instrument into the bladder One writer, for instance, in discussing the diagnosis of bladder growths, says "In certain obscure cases, as when a growth is present for some time without causing bleeding, this instrument will be of much service. But it must not be forgotten that its use entails certain disadvantages. Thus, very easy to use in the bladder of women, in men it is a very different matter Here, in the deep urethra, it may exite bleeding or it may cause grave febrile disturbance, one case has been related to me in which difficulty of manipulating it through the prostatic urethra was followed by fatal injury to this part Such cases are not published" This statement would apply equally to the use of any metal instrument of an equal calibre, roughly speaking, No 11 of the English scale, yet this writer in an adjacent paragraph says "Sounding should be made use of thoroughly and carefully, by using the sound with judicious and gentle vigour particles of a villous growth may be detached for microscopical examination. This perhaps may be aided by washing out with a lithotrity evacuator" To advise a judicious yet 'gently vigorous" stirring up of a possible growth of the bladder, to be followed by the use of so powerful an instrument as a lithotrity evacuator whilst damning with faint praise the cystoscope, which to be of any service must be used with gentleness, is at least curious, and convinces me that the writer can have had but little practical experience of the latter instrument. But it is necessary to justify to others the faith that is in one and I trust to do so by the following striking examples which illustrate the reversal by the cystoscope of diagnoses made without the aid of that instrument and the calamitous results which sometimes follow neglect to use it.

CASE 1—The patient was a male, aged 42 years who for some months had suffered from hæmaturia, increased frequency of micturition and pain The hæmaturia was intermittent but on at least two occasions it had been profuse. The abnormal frequency of micturition was also intermittent, whilst the pain was chiefly suprapubic in situation and of a dull, aching character Pain of the same nature was also complained of over the upper part of the sacrum and occasionally in the glans penis after passing urine The bladder had been sounded by several competent surgeons with negative results and a rectal examination revealed nothing abnormal. A growth in the bladder was suspected and suprapubic exploration was advised if the cystoscope should confirm the provisional diagnosis. Cystoscopy however, revealed a bladder normal in all respects save that there was a swelling of the right ureteral orifice. Through the opening I saw the gleam of a calculus which was filling the ureteral ampulla and gradually dilating the orifice The patient was directed to drink large quantities of bland fluids and to take fairly violent exercise, with the happy result that three days later he had the pleasure of sending for inspection a rough calculus rather smaller than a horse bean But for the cystoscope this patient would undoubtedly have been submitted to a suprapubic cystotomy He gave no history of renal colic or pain along the course of the ureter Pain evidently commenced only when the stone reached the narrow opening into the bladder He had been sounded several times and as the exposed portion of the stone was only of about the size of a pin's head it was only natural that it was not felt. The negative sounding, combined with the somewhat profuse hæmaturia and the absence of renal symptoms, justified the provisional diagnosis which fortunately was only provisional.

CASE 2.—The patient was a male, aged 62 years, who for six months had suffered from severe pain, gradually increasing in severity, in the left lumbar region radiating thence to the left inguinal and suprabubic regions. The pain was intermittent in character and was worse during some attacks than in others There was also fairly profuse hæmaturia which was generally most marked when the pain was most severe. The urine between the attacks was normal both in appearance and upon examination The symptoms pointed, therefore, to left renal stone or to renal growth. On examination with the cystoscope a villous growth was discovered attached by a pedicle to the bladder wall in the vicinity of the left ureter, the orifice of which was completely hidden by the growth. On removal of the growth through a suprapubic incision all renal symptoms disappeared. In this case left kidney trouble was closely mimicked by a growth of the bladder, the lumbar and ureteral pain being caused obviously by the drag of the growth upon the ureteral orifice. The patient was saved a useless nephrotomy, which was certainly indicated by the symptoms.

CASE 3 —The patient, a male, aged 61 years, had suffered for four years from an enlarged prostate complicated by cystitis and the formation of phosphatic calculi. On three occasions litholapaxy had been performed. For nine months he had been absolutely dependent upon the catheter, the cystitis had increased and was only kept in check by washing out the bladder twice daily, and the sound revealed the presence of another stone. The prostate, per rectum, was found to be moderately enlarged, both lateral lobes being about equally involved. The advisability of suprapubic prostatectomy was considered, but before proceeding to this radical measure cystoscopy was advised to ascertain the condition of the prostate on its vesical side The cystoscope showed a stone, one inch in its longest diameter, lying under, and half hidden by, a pendulous median enlargement of the prostate This adenomatous mass, of the size of a small walnut, was attached to the main body of the prostate by a distinct though short pedicle. A small median perineal incision sufficed to remove both stone and growth and to provide for adequate draining to cure the cystitis. The wound healed in a fortnight and during the 20 months which have elapsed since the operation this patient has had complete control over his urine, which remains clear, and has had no further stone formation. Here, by the aid of the cystoscope, a simple operation was substituted for one much more dangerous and the period of convalescence was reduced by one-half.

CASE 4 —The patient was a male, aged 34 years who had suffered from four or five attacks of profuse hæmaturia during a period of nine months The attacks lasted from one to four or five days and were unattended by other symptoms save some pain from the passage of clots and occasional dull aching in the left loin Physical examination failed to reveal anything further, but the cystoscope showed me a large single ulcer to the inner side of and below, the orifice of the left ureter Tubercle bacilli were afterwards found in the urine. Under appropriate treatment the ulcer gradually healed, the process being watched from time to time by means of the cystoscope until healing was complete This patient has returned to his work as a postman and has kept well during the past nine months. Could this diagnosis have oeen made with equal certainty by any other method ? and without the cystoscope would not this patient have been subjected to a suprapubic exploration ?

CASE 5 —The patient, a male, aged 61 years suffering from severe intermittent hæmaturia with pain on micturition and increased frequency, I found on examination with the cystoscope to be suffering from carcinoma of the bladder chiefly implicating the posterior wall and trigone, but of so extensive a character as quite to contra indicate any operative interference. Growth of the bladder was diagnosed, it is true, before cystoscopy, but the nature of the growth was doubtful and the cystoscope alone could settle the advisability or otherwise of operation

CASE 6 —The patient was a male, aged 45 years who suffered from three quickly repeated attacks of violent hæmaturia without any other symptoms to account for the trouble. He was in good general health and complained of no pain except that caused by the passage of clots along the urethra. He came from the country, a long journey by rail, for examination. Nothing could be felt either abdominally or per rectum to throw light upon the case. The railway journey started the bleeding afresh and on the following morning on attempting cystoscopy the bladder was found to be half full of soft clot and the bleeding was still proceeding In such circumstances cystoscopy was impossible and as from the severity of the hæmorrhage and the bright red colour of the blood it seemed probable that its source was vesical the bladder was opened suprapubically but was found to contain only clot No further bleeding occurred whilst the wound was healing but on rising for the first time some 14 days later another slight hæmorrhage took place The further history of this case is sad in the extreme. Six weeks after operation the left kidney was felt to be enlarged the first definite indication of the site of the disease. The patient was warned of the probable nature of the disease but refused to undergo another operation so soon after the suprapubic cystotomy Within six months death took place from metastatic deposits of sarcoma in the brain, whilst other masses were found in the lungs and liver This patient lost his only chance by neglect to verify the diagnosis by cystoscopy, for though he was quite willing to submit to one operation he could not bring himself to face a second within six weeks of a first so barren in results. Had he been kept at rest until the bleeding had sufficiently abated to render cystoscopy possible the kidney would have been removed with a fair chance of success.

Conclusions —The cases here described have been chosen from the records of cystoscopies which I have made during the past five years. They are sufficiently striking to vindicate the position which I claim for the cystoscope as a diagnostic instrument of the first importance. I could narrate many other cases of a like nature which I have examined, or have seen, in the practice of other surgeons. The only objections which can be urged against the cystoscope are those which apply with equal directness to metal instruments of a like calibre In the great majority of cases the examination can be conducted under local anæsthesia induced by the injection of eucaine, and I can deliberately state that I have never yet seen more serious after results from the proper use of the cystoscope than those which might follow the passage of any other instrument In cases of disease of the urinary organs where the diagnosis is doubtful I consider that no examination is complete which does not include the use of electric cystoscopy

I wish to express my acknowledgments to Mr Reginald Harrison for permission to publish the cases.

Lower Berkeley street W

AN UNUSUAL CASE OF MATTING OF INTESTINES FOR WHICH DOUBLE ENTERECTOMY WAS PERFORMED SUCCESSFULLY

BY BILTON POLLARD, B S LOND, F R C S ENG,
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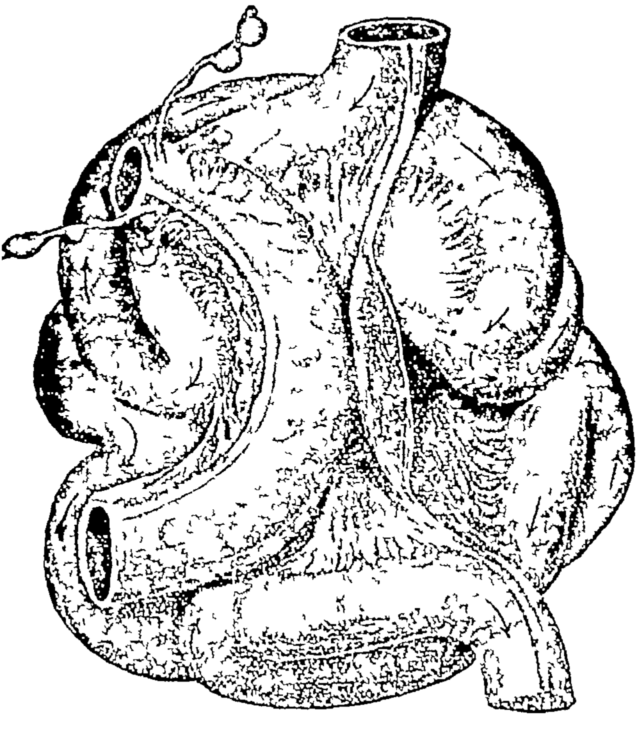
DOUBLE enterectomy is, I believe, very rarely needed except in cases of gunshot injury and so I think that a case in which such an extensive operation was performed for disease is worthy of record. But apart from the unusual character of this case I think that all cases of operation on the intestines should be reported for some time longer in order that we may be provided with facts from which to determine, in the first place, the symptoms which in chronic cases should lead to an exploratory operation and, in the second place, that we may by comparing cases with one another, both as regards the operative technique adopted and the immediate and remote results of the operations, arrive at more definite conclusions with regard to these matters than have hitherto been formulated.

I propose shortly to publish a series of cases in which I removed portions of the colon for chronic intestinal obstruction due to malignant disease, but this case, although it involved the removal of several inches of the colon, does not properly belong to that series because there was no malignant disease in this case and because it was necessary in addition to the piece of large intestine to remove three feet of small intestine

The patient was a woman, aged 57 years whom I saw in consultation with Dr J P A Gabb on May 25th, 1902 Her father died from cancer She herself had been healthy and free from any definite symptoms of illness till November, 1901. She then only complained of vague dyspeptic symptoms with pain about the umbilicus and epigastrium. During the winter months she lost flesh and her complexion became gradually more and more sallow In March, 1902, she was taken ill with influenza, complicated with diarrhœa and sickness. On March 24th a swelling was detected in the abdomen and Dr Gabb was called in in consultation with a view to operation. The swelling proved to be due to flatulent distension of intestinal coils—very probably the ball of intestinal coils removed at the operation. The bowels were not obstructed and there was no visible peristalsis. The patient returned home in order to be under Dr Gabb's care on the 27th and from that date to May 11th she was always more or less ailing with pains in the lower part of the abdomen which had no special relation to food, and she was always more or less constipated. The bowels always responded to aperients and there was never any real obstruction, although there was a good deal of of the bowels. On May 11th a severe hæmorrhage from the bowels occurred. This was not repeated The patient was now seen by Dr J F Goodhart who thought that there was probably a malignant growth in the upper part of the rectum and pronounced the case to be one for surgical treatment I saw the patient with Dr Gabb on the 25th. There was some general distension of the abdomen but no obstruction No lump could be made out in the course of the colon The rectum, as far as could be reached by the finger, was normal, but feeling through the bowel at the extreme limit to which the finger could reach it was possible to detect an indistinct swelling which suggested the presence of a growth in the bowel higher up either in the sigmoid loop of the colon or in the upper part of the rectum The frequent abdominal pains, the flatulent distension of the bowels, the loss of flesh, and the hæmorrhage all tended to support this view

On May 27th I operated at the patient's home Dr Dudley W Buxton gave the anæsthetic and I was assisted by Dr Gabb and Dr P Levick As no tumour could be felt with certainty a median incision below the umbilicus was made in order to explore and this proved to be the best situation which could have been selected if the condition of the intestine had been known beforehand A hard mass surrounded by intestinal coils was at once felt in the pelvis and after the incision had been extended from the umbilicus to the top of the bladder it was possible to lift the mass out of the pelvis and to bring it out of the wound. A good idea of this mass can be obtained from the annexed reproduction of a very accurate drawing of the parts removed at the operation It was composed of intestinal coils which together formed a mass of about the size of two fists. On the left side was a piece of the sigmoid loop of the colon about seven inches long and on the right side were coils of ileum, measuring rather more than three feet in total length, which were adherent to one another in many places and were darkly congested. The mesentery was much thickened and the colon was very firmly adherent to it. At the site of the adhesion there was a dense mass which appeared to all of us to be a tumour of the colon which had become adherent to, and had invaded, the mesentery The illustration depicts the appearance of the mass of intestines as seen from behind There are more coils of the ileum on the other side which cannot be shown. The divided mesentery is well seen and the sigmoid mesocolon, which was divided close to the bowel, is sufficiently indicated for identification The whole mass was tethered to each side of the abdomen near the iliac fossa, on the left by the sigmoid mesocolon and on the right by the mesentery After making some attempts to separate the adhesions between some of the coils it became obvious that either the operation must be abandoned or the whole ball of adherent coils of intestine must be removed—an operation which would involve section and suture of the sigmoid loop of the colon and section and suture of the small intestine. The latter alternative being decided upon a quantity of plain sterile gauze was packed into the wound so as thoroughly to isolate the rest of the abdomen from the field of operation. The small intestine was dealt with first. The course of the blood vessels in the mesentery was noted in order to determine the places where the bowel could be divided without jeopardising its circulation, for, as shown in the illustration, the mesentery had to be divided at a considerable distance from the small intestine owing to the colon being inseparably adherent to it It may appear from the illustration that more small intestine was removed than was absolutely necessary This was not so, however, and, indeed, it may be said that no greater mistake can be made in enterectomy than by removing too little bowel to jeopardise the circulation in the sutured ends The ileum on each side of the mass of adherent coils was divided between a clamp and a ligature, the ligature, of course, being placed on the piece of bowel which was going to be removed. The divided ends of the bowel were disinfected and temporarily plugged with gauze whilst the mesentery was being tied in segments and divided just beyond the place where the loop of colon was adherent to it As a rule it is preferable to separate all the attachments of a piece of bowel to be removed before the bowel itself is divided but in this case, owing to the adhesion between the colon and the mesentery, it was difficult to tie off the mesentery before the bowel was divided. The ball of adherent coils of intestine was now free from the rest of the small bowel and was drawn over to the left side and wrapped up in gauze whilst the suturing of the small intestine was proceeded with The bowel was sutured end to end with two rows of simple continuous sutures—a method which is just as easy to apply as, and in my opinion far safer and in every way more satisfactory than, the various mechanical contrivances which have been devised for enterorrhaphy The two ends of the bowel were first of all fixed together by an interrupted stitch at the mesenteric attachment and then the first row of continuous stitches was inserted from the mucous surface through all the coats of the bowel. The stitch was commenced at a point about one third of the circumference away from the mesenteric attachment and owing to the skilful way in which my assistant held the bowel, at first with his fingers and later with forceps, it was possible to stitch from the mucous surface for fully five-sixths of the circumference. The final sixth had to be stitched from the peritoneal surface which takes more time and is less efficient than stitching from the mucous surface The weak part of the first row of stitches—the final sixth—was at a part of the bowel far away from the mesentery and therefore favourably located for being securely controlled by the second row of continuous suture which was applied from the peritoneal surface according to Lembert's method and penetrated all the coats except the mucous The gap in the mesentery was closed by a continuous suture on each side which was also inserted according to Lembert's plan and was prolonged on to the bowel for about a third of an inch The bowel in the neighbourhood of the suture line was dabbed with 1 in 1000 solution of perchloride of mercury and then washed with sterile salt solution. The gauze packing was now removed and the sutured bowel was dropped into the abdomen. Fresh packing was applied so as to protect the abdominal cavity and then in a manner corresponding to that just detailed the sigmoid loop of the colon was removed. After the sigmoid mesocolon had been ligatured and divided and the colon itself was cut on each side beyond the adherent part, the ball of adherent intestinal coils figured above was entirely free and was removed. The colon was united by two rows of continuous sutures and the wound in the sigmoid mesocolon was stitched upon each side The gauze packing was then removed and the colon was returned to the abdomen. The abdominal wound was stitched up in three layers and dressed with plain sterile gauze.



About three hours after the operation the patient was recovering consciousness. There was very little shock Her temperature was 99° F and her pulse was 120 Dr Gabb took charge of the patient and she got on so well that it was unnecessary for me to see her again On the day after the operation the pulse-rate rose to 130 but by the second day it had fallen to 112, and on the third day it was as low as 90

For the next ten days it varied between 90 and 100 and afterwards it kept below 80 The highest temperature, 99 8° was registered on the day after the operation and on and after the second day the temperature kept below 99° The patient remained remarkably free from pain or abdominal discomfort, she got a fair amount of sleep and no morphia was needed, her tongue kept moist and there was no abdominal distension. Rectal feeding was continued for eight days A suppository of beef and milk peptone and a nutrient enema of an ounce of liquid peptone and three ounces of water were given alternately every four hours. The rectum was washed out daily As soon as the patient recovered from the anæsthetic she was allowed two drachms of water by the mouth every half hour and after 24 hours she took two drachms of liquid peptone and two drachms of water every hour On the third day the quantity was doubled and sometimes instead of it an ounce of milk and water was given, four ounces of milky tea were given in the afternoon and this was repeated each day On the fourth day either an ounce of liquid peptone and an ounce of water or a similar quantity of milk and water was given hourly On the seventh day the dose was doubled and given every two hours On the eighth day, after the bowels had acted, five ounces of Benger's food were substituted for one of these feeds The Benger's food was soon increased to eight ounces at a time, but otherwise there was not much change until the fourteenth day when egg and milk and pounded chicken were given. On the sixteenth day rusks were added to the dietary It is unnecessary to follow the diet farther On the second day after the operation flatus was passed through the rectal tube freely, on the third day, and afterwards, flatus was passed naturally and also through the rectal tube which was inserted whenever the patient felt the presence of flatus which was not readily voided. On the eighth day five ounces of olive oil were injected into the rectum and four hours later an enema of a pint of soapy water was given and the bowels acted well On the following day the patient passed a formed motion naturally Afterwards the bowels generally acted every other day, sometimes without and sometimes after an enema

The abdominal wound healed by first intention and the stitches were removed on the eleventh day after the operation On the twenty second day the patient left her bed and lay on the couch for three hours Nine months after the operation, except that her bowels were rather constipated, the patient was quite well—indeed, she was reported to be enjoying better health than she had done for several years.

It only remains to add that the diagnosis of carcinoma which was made on the symptoms and which was thought to have been verified at the operation was incorrect. The mucous membrane of the bowel looked quite healthy and the mass between the colon and the mesentery was due to inflammatory thickening The bleeding had probably taken place from the small bowel the coils of which were greatly congested. This may have resulted from pressure on the veins owing to a slight twist of the mesenteric pedicle of the mass of intestinal coils. There is nothing in the patient's history to explain the cause of the matting together of the intestinal coils The pelvic organs seemed to be normal and there were no adhesions between other intestinal coils. The rest of the abdomen seemed to be quite healthy The specimen is now in the museum of University College, London.

Harley-street, W

TREATMENT OF A FORMIDABLE CASE OF SPRUE BY DIET, THE VALUE OF STRAWBERRIES

By EDWARD H. YOUNG M.D DURH, L R.C P LOND, M R C S ENG L.S A.

A WOMAN, aged 59 years, whose medical history is detailed below, came under my care in 1901. It appeared that she had lived in India for some 24 or 25 years with intervals when she came to England to visit her children. She was never a strong woman, but she had never suffered from any serious disease either in England or in India. She finally left India ten years before the present illness. For the two years prior to coming under my care she had much anxiety about the health of one of her children. Always a woman of extremely active habits, she ate very little and became anæmic and sallow, over exertion often producing attacks of migraine and neuralgia. In 1900 the patient had had a prolonged and exhausting period in nursing another of her children through an attack of acute rheumatism. Very early in 1901 she suffered from a very serious attack of influenza, towards the close of which she was attacked with a nocturnal diarrhœa. Her convalescence from the influenza was slow and as its symptoms disappeared, those of sprue became apparent. The diagnosis of sprue was confirmed by Dr John Anderson, C I E, who saw the patient at the time and again a few weeks later The patient steadily refused to adopt a milk diet, though strongly urged to do so by Dr Anderson, and her diet consisted chiefly of meat-juice, plasmon, soup, oranges grapes, and plantains, a little bread and milk and milk puddings From the onset of the symptoms of sprue the patient had steadily wasted and lost strength. I learned that she had been a well set-up and active woman of about 8½ stones' weight and that she looked considerably below her real age She had been wholly confined to bed and was removed for change—a proceeding which was attended with grave risk.

I first saw the patient, who was lying in bed on Nov 2nd, 1901. She complained chiefly of severe cramps in the limbs, more especially on the left side, which came on the previous evening There were further complaints of chronic diarrhœa, soreness and rawness of the mouth, and progressive weakness and loss of flesh She was so emaciated that the bones projected under the skin and the wasted muscles were easily traced. The tongue was denuded of epithelium, with ulceration at the tip and sides The abdomen was distended and slightly tender on pressure, its attenuated parietes displayed the coils of distended intestine. The liver and spleen were not definable on account of the abdominal distension. The motions were of the typical sprue character—very large, pultaceous, ochreous sour-smelling, frothy, and very frequent. The heart sounds were normal and the lungs also were normal. The pulse was 104, it was regular in force and rhythm and of good tension. The temperature was 100 6° F The urine was normal The hands, the feet, the arms, and the legs were rigid in the typical position of tetany, causing the patient great agony A hypodermic injection of morphia was given, it afforded marked relief to the painful spasms and produced some sleep

During November there was a steady decline in strength, but the patient still insisted on getting out of bed unassisted With the view of keeping the carbohydrates as low as possible the diet was of a mixed character, consisting of soup fish, game, &c, but small quantities of bread and porridge were allowed with grapes plantains, and stewed pears The actual amount of ingesta was, however, very small, most things being merely tasted or inspected and then put aside. The patient still determinedly declined to adopt a milk diet, though this was repeatedly urged upon her There were one severe repetition of the attack of tetany and one or two minor ones On the first of these occasions a spasm of the larynx caused much alarm and necessitated the administration of chloroform The medical treatment was purely symptomatic. Bromide of potassium and antipyrin had some effect in relieving the minor spasms. Salicylate of bismuth was tried as an intestinal antiseptic but proved practically useless Opiates in the smallest quantities combined with other drugs, or otherwise, proved hurtful and the mildest astringents also did manifest harm when once or twice cautiously tried. The gradual and progressive decline in the patient's strength continued in December and the emaciation became extreme. There were two or three attacks of the tetany but none of these were severe. The pulse varied remarkably in character being sometimes soft and then hard and frequently intermittent, all within a few hours It was repeatedly noticed that hardness and intermittency of pulse almost invariably preceded a very large fermented motion The temperature was generally subnormal in the mornings and about from 99° to 99 5° in the evenings but was easily disturbed. The attacks of tetany usually sent it higher Towards the end of December the number of motions averaged 6 5 per diem. In size they varied considerably from about 12 ounces of a large whitish, thick pultaceous, mass, which moved slowly on the vessel being tilted to six or seven ounces of a whitish frothy fluid. These latter, if allowed to stand for an hour or two, slowly changed colour to a light brown The food and treatment were continued on the same lines as during November and really amounted to a series of experiments based on the principle of excluding starch as much as possible.

Early in January, 1902, an attempt was made to introduce raw minced meat as the staple and almost exclusive food. For a few days the number of motions diminished but soon rose again, they assumed, however, a less sprue like character, becoming more watery and more frequent, and this increased the exhaustion of the patient. The temperature still kept irregular, often only just above 97° in the morning and up to 99 6° at night. On the 10th a passing disturbance sent the temperature up to 102 6° and the pulse to 108, but they declined in a few hours From this date, however, the patient no longer insisted on getting out of bed. Attacks of breathlessness, even when lying still, became now more frequent and perspirations, at irregular times, were very troublesome. About the middle of the month the various preparations of plasmon were tried for ten days, but no beneficial result was apparent, the patient steadily losing ground. On the 21st there was a severe attack of tetany lasting for 18 hours and on the 23rd the whole of the body was affected by the spasm The motions now averaged eight daily Sleepless nights required occasional doses of trional and brandy was given during periods of great prostation. On the 26th the patient at last consented to go on a *milk diet only* For the first two days three pints were given each day and then the quantity was increased to three and a half pints The relief to the purgation was immediate, the number of motions diminishing by one half during the first week On Feb 1st the milk was increased to four pints daily The number of motions during the first week of this month averaged only three daily, but some of them still maintained the character of sprue On the 7th the milk was increased to five pints, but it then caused digestive disturbance and had to be diminished For the succeeding fortnight the amount of milk given was daily regulated, but it was found impossible for the patient to manage more than about four and a quarter pints and on some days even less The number of motions diminished to an average of two daily during this period and in character they became larger and semi solid and they lost their fermented appearance The symptoms of tetany disappeared. It was very clear, however, that asthenia was steadily increasing, the patient lost strength and flesh markedly, becoming as she well expressed it "more skully," and although her mental attitude was still courageous it was found necessary to give stimulants more frequently on account of cardiac and general weakness. It was quite evident that although the disease could be controlled by the milk yet the patient could not digest or absorb sufficient nourishment from it to sustain life Probably at this period her weight did not exceed 64 pounds, whereas her normal weight in house clothes was 120 pounds. This is a point upon which I shall bring definite evidence presently On Feb 21st (after three and a half weeks' pure milk diet) an attempt was made to combat the manifestly increasing asthenia by adding the white of two eggs beaten up with water, two drachms of arrowroot were also added to the daily allowance of milk. This addition was well borne for a week, but on the 28th a severe attack of tympanites, accompanied by frothy pultaceous motions caused the arrowroot to be stopped. On March 1st six drachms of cream were added to the milk and egg albumin diet. During the next few days an alarm was caused by the great prostration of the patient. Meat juice was added to the above but marked indigestion and an increase of the motions necessitated a return to the milk and egg albumin only The patient's state was then most precarious. A little bovril was now given occasionally instead of alcohol as a stimulant and with better effect. On the milk and egg albumin diet the motions again became fewer (averaging 1 2 per diem for ten days), semi solid, and not frothy, but the patient remained in the same utterly prostrate condition gaining neither flesh nor strength but, on the contrary, losing ground. On the 18th it was decided to try the addition of a small quantity of stale bread well soaked in hot water and then firmly squeezed through muslin. An ounce of this was at first given daily and as there was no untoward effect it was raised to two ounces on the 23rd and to three ounces on the 25th, when an orange was also allowed. An increase of bread on the 28th to four and a half ounces had to be withdrawn on account of a return of the diarrhœa and an endeavour to substitute rusks for bread led to abdominal distension. The notes at the end of this month, however, were of a more hopeful character Since the addition of bread the patient looked brighter and the skin was more elastic and not so muddy in appearance, although one could not definitely say that there was a gain in weight, yet the countenance certainly did not look so shrunken The patient slept better, did not require a stimulant so often, and there was no return of the tetany She still felt the exhaustion of being moved in bed and the attacks of both breathlessness and perspiration were present. Subnormal temperatures were not so frequent and the pulse was steadier and less intermittent. The conclusion was that bread gave strength, but that when pushed beyond from two to two and a half ounces daily it caused a return of the characteristic diarrhœa. Early in April the diet consisted of 91 ounces of milk, the white of two or three eggs, from two to two and a half ounces of bread, and an orange. A slight return of diarrhœa on the 5th caused the bread to be stopped for four days, when it was resumed in smaller quantities (one ounce) On the 10th the patient was weighed and found to be 70½ pounds Previously to this weighing was not attempted owing to her weak and prostrate condition On the 13th six ounces of chicken broth were added to the dietary By the 14th the bread had been worked up to three ounces and by the 24th to four and a half ounces On the 30th her weight was 74¼ lb. The note at the end of the month stated that the patient was decidedly brighter, with more vitality and strength She could sit up in bed for a few minutes and even slip out of bed unassisted, but required help to return Bovril was not now required. She no longer complained of breathlessness and palpitation or of abdominal and thoracic pain. The pulse and temperature were steadily normal. The soreness of the mouth was gone and the epithelium was returning on the tongue. There was no return of tetany and the abdomen was less distended. Diarrhœa was in abeyance, as there had been only 31 motions during the month as compared with 42 in March, 62 in February, and 188 in January The motions, however, were still heaped, semi solid, and putty like masses. A small boiled trout (about three-quarters of an ounce) was allowed on May 1st with no apparent harm The giving of a small custard pudding on the 4th at once caused trouble in the way of diarrhœa. A small trout was given on the 8th and again on the 9th, but returning diarrhœa led to the prohibition of this diet and the reduction of the bread to two and a half ounces. On the 13th the patient's weight was 75½ pounds. On the 16th an ounce of boiled sole was given but it was followed by five loose motions in the succeeding 24 hours and the patient was put on milk only for two days. Although the motions were not of the character of true sprue, but more of those of an ordinary intestinal catarrh, there was a distinct loss of vitality and strength. The patient did not look so well, was less bright and cheerful, the pulse again tended to intermittency, and there was a slight return of tetany and abdominal distention. Her weight on the 19th was 74 pounds—a loss of one and a half pounds in six days. Altogether there was cause for anxiety

Fortunately at this period the opportunity occurred to put in practice the suggestion of Dr Anderson that strawberries should be tried. On May 21st three strawberries only were given and their effect was watched, none being given again until the 25th when 12 were allowed On the 26th the patient's weight was 74½ pounds From this date strawberries were given daily and in increasing quantities. Up to the time of the giving of strawberries certain points were prominent—viz., (1) that milk diet alone would control the disease; (2) that the patient when kept on milk alone markedly declined in strength and vitality—so markedly, in fact, that anxious as one was to continue it exclusively it was quite clear that such a course was fraught with the utmost danger; (3) that the addition of mashed bread to the milk decidedly added to the strength, but was attended by a return of the motions of the character of sprue when given beyond a small and variable quantity during the 24 hours, and (4) that cautious attempts of addition to the dietary by small quantities of fish, custard, or arrowroot at once led to trouble. It was at this period of the case—when one felt that the disease was only slumbering but by no means cured when the patient's condition evidently required an advance in her dietary and yet the paths of advance were blocked—that the strawberries were started. In June the daily diet for the first week was 84½ ounces of milk, from four and a half to five ounces of bread two ounces of cream, and a pound of strawberries From the 11th onward strawberries were allowed *ad lib*, and one and a half pounds were daily consumed. The bread was steadily increased, so that by the 21st nine ounces were taken daily and by the 29th 11¼ ounces The strawberries certainly enabled much more bread to be eaten The milk and cream remained the same throughout the month. From the time of giving the strawberries the motions entirely changed. For the three weeks preceding the giving of the fruit the number of motions was 45, with an estimated aggregate weight of 186½ ounces. For the three weeks following the number was only 21 with an estimated weight of 113 ounces In character they also altered, became less bulky, more dehydrated, and towards the middle of the month they were entirely formed and natural in appearance The strawberry colouring matter tinged the urine in which the motions lay The note at the end of the month stated that the condition of the patient had entirely changed. She no longer looked ill and early in the month she began sewing and reading in bed and towards the end of the month she was able to walk a little without assistance and reclined on a couch on the verandah for a couple of hours daily There has been a steady gain in weight, at first one and a half pounds weekly, then two and a half pounds, so that now she weighs 83¼ pounds All things were favourable during July Milk, bread, cream, and one and a half pounds of strawberries were taken daily as in the latter part of June, but porridge, rusks, and butter with the bread were also allowed. The patient s strength was greatly improved and she walked gently about the room with ease Her weight at the end of the month was 96 pounds. The progress in August was still satisfactory The patient now moved about the house and did light work, &c. The bowel condition remained normal and there was no trace of sprue although the strawberries failed early in the month and the patient was on a more varied diet, including potatoes Her weight at the end of the month was 106 pounds. Little need be added to the above For the next three or four months the patient was just over eight stones in weight, there was no return of any symptom of sprue, although she was practically on a non restricted diet. In the autumn she took drives when the weather was favourable

The above case presents certain features which are of interest 1. The remarkable change in the condition of the patient after the addition to the diet of strawberries which distinctly appeared to act as a specific in the disease. Directly strawberries were given it was found possible to increase the bread, which previously could only be given in small quantities and even then with risk, to practically any extent without there being any return of sprue symptoms. 2. The attacks of tetany, so alarming in this case, are not mentioned as a complication in the articles on the disease in Allbutt s System and Quain s Dictionary, but of course one knows that tetany may follow some cases of chronic exhausting diarrhœa The age of the patient is also, I believe, unusual for tetany 3 The uniformity with which the pulse became peculiarly hard and always then intermittent before the advent of a large fermented motion was more than a coincidence. So uniform was this that it was always possible to predict the coming event even though things may have been quite quiescent for some time previously 4 In the same way the temperature conveyed information not to be disregarded When the tendency to tetany prevailed a rising temperature always put me upon my guard and enabled me to adopt timely precautions There was one curious point about the temperature A few days after strawberries were commenced the temperature rose slightly in the mornings reaching 99°, while the evening temperature generally kept lower This continued for some time after the strawberries were stopped. 5 The direction in the text-books of ' milk only " in sprue is not of universal application in advanced cases of the disease. Had it been further continued in the present patient I feel sure that the ending would have been disastrous.

One pathological question suggested itself strongly What is the source of the large quantity of matter passed from the bowel in these cases? Taking it at a minimum that the motions averaged eight ounces in weight and that there were six of them daily 48 ounces daily, or 90 pounds per month, of pultaceous material were expelled by the bowel of a patient certainly under 70 pounds in weight and who was taking a minimal quantity of food. I have failed to satisfy myself of any adequate explanation of this fact.

Okehampton.

ADVANCES IN THE TREATMENT OF PARALYTIC DEFORMITIES[1]

BY A H. TUBBY, M.S LOND, F R.C S ENG,

SURGEON TO THE WESTMINSTER AND EVELINA HOSPITALS

IN bringing this subject to the notice of the Fellows of this society to night I may be pardoned for dwelling upon the question somewhat fully It is necessary to specify the varieties of paralytic deformities which will pass under review These are (1) those arising from infantile paralysis or anterior poliomyelitis, (2) those due to infantile spastic paralysis, infantile hemiplegia, and cerebral diplegia, and (3) those due to injuries of nerves, such as the Erb-Duchenne type of palsy, affecting the upper root of the brachial plexus, or lesions arising from crushing or severance of nerve trunks.

To take the deformities succeeding infantile paralysis, there are certain features in connexion with the loss of muscular power and wasting immediately following the onset of the paralytic attack which are noteworthy One great characteristic of this form of paralysis is its selective tendency It picks out groups of muscles or a single muscle in a group or single muscles in several groups, and even individual fibres of a single muscle Another point, which I have verified by a somewhat extended clinical experience, is that in any given case it is impossible to foretell the extent to which recovery will take place, and one is continually surprised from time to time by seeing an apparently hopeless limb resume under appropriate treatment its entire, or nearly entire, functions. If it be permitted to step aside for a moment to indicate the means by which the fullest amount of recovery can be obtained it is this the surgeon should not on any account permit the affected muscles to be over stretched, either by the pull of their opponents or by the action of gravity, or, to put it into other words, to get the maximum amount of recovery in an affected muscle it must be relaxed to its full extent Unfortunately, it does not often happen to us as surgeons that we have the opportunity of seeing cases of infantile paralysis in the early stages Too often they are brought to us when deformity has set in, profound atrophic changes have taken place in muscle fibres, and much of the possible recovery in the remaining unaffected fibres has been discounted by over stretching for months or years Such is the class of case with which we have mostly to deal.

Now in infantile paralysis the limb is always pulled towards the side of the stronger muscles and away from the weaker muscles The result is twofold firstly, a want of balance of power around the joint, and, secondly, a certain amount of power misused or running to waste. The older method of treatment of these cases by tenotomy and lengthening of the tendons of the sound muscles and subsequent retention of the limb in a good position by means of weighty apparatus was imperfect, in that there were a failure of insight into the factors at work and a want of grasp of the possibilities presented by the remaining normal structures. It is in this relation that tendon implantation, tendon grafting or transference of muscular power exhibits such an advance on the older methods In the most severe cases resulting from anterior poliomyelitis all the muscles around a joint are hopelessly damaged and in such instances it is sound mechanics to fix the joint by artificial ankylosis or arthrodesis in its best or most useful position—as, for example, fixation of the ankle-joint at right angles

To enter more particularly into the methods of tendon-grafting and arthrodesis we will take them consecutively as they are adapted for varying degrees of deformity following poliomyelitis.

Tendon grafting or muscle transference.—Definition —By this is meant the reinforcement of a paralysed muscle by attaching to its tendon either the part or the whole of the tendon of a healthy muscle. The ways and means of attachment are various and will be alluded to presently

Bibliography —The operation originated with Nicoladoni in 1882 who in a case of paralytic talipes calcaneus attached the peronei to the tendo Achillis with a good result. In 1892 Parish[2] and Drobnik[3] applied the same method to other forms of club foot. In 1894 Winkelmann grafted a strip of the tendo Achillis on to the peronei and he was the first to publish and to analyse a series of cases, 16 in all Since then Goldthwaite and other American orthopædic surgeons have done good work on the subject Mr F S Eve[4] has recorded four cases on which he had operated and I have performed 57 of these operations, some of which are recorded in the *British Medical Journal*, 1899 and 1901. In the *Munchener Medicinische Wochenschrift* of April 25th, 1899, Vulpius gives his experience of 60 cases and in the same periodical in April, 1900, Fritz Lange contributes an interesting article on the subject with excellent illustrations. Ernst Künick[5] reviews the subject and discusses details of four different methods of tendon transplantation Karl Bruns[6] has employed the same method to prevent contraction after excision and erasion of the knee Mainzer[7] writes on the subject of indirect transplantation—that is, instead of joining the proximal end of the active to the distal end of the paralysed muscle, owing to the distance at which they are apart, he transferred the proximal end of the sound muscle to a neighbouring paralytic tendon, then divided the latter below the site of junction, and transferred the conjoint parts into the distal end of that tendon which he wished to reinforce. Lange,[8] owing to the distance between the sound and the paralysed tendon, made an artificial tendon of silk, following the example of Glück,[9] who in 1892 had used bundles of silkworm gut to bridge over the gap after division of tendons in injuries And be it noted Kümmell[10] in 1898 found that in a case so treated the strand of silkworm gut had become converted into fibrous tissue. Jochner[11] has succeeded in bridging a gap of two and a half inches in the extensor communis digitorum by a similar method

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[1] A paper read before the Hunterian Society on Nov 12th 1902.

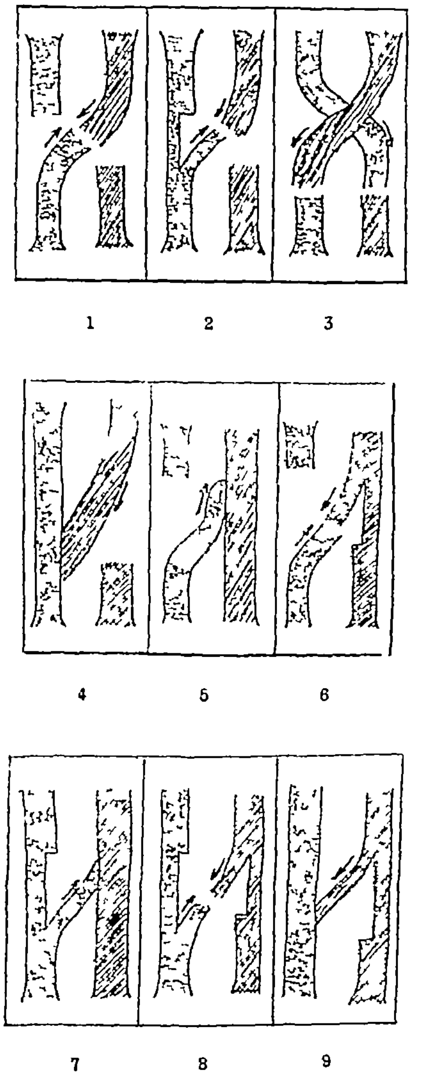
[2] New York Medical Journal 1892.

[3] Zeitschrift für Chirurgie Band xliii Sec 470

The *rationale* of the operation is first of all to utilise what is ill directed voluntary movement, and secondly, to restore the balance of muscle so far as possible in the affected part But it will be evident that the joint can never be a fully strong one, since the amount of power at the disposal of the surgeon has been diminished by disease Yet it must be conceded that a well balanced weak joint is better than an ill balanced and weak one. And, further, possibly one of the greatest benefits of all, much of the necessity of resorting to the instrument maker has disappeared There are, of course, anatomical and surgical limitations in the transference of tendons from one side of a joint to another, although most of the difficulties can be overcome by the indirect method alluded to above or by the use of silk to elongate the tendon to be carried into a new position. It also requires care to regulate to a nicety the amount of power transferred and occasionally it happens that some time after the operation an apparently functionless muscle, when it is no longer unduly stretched by over action of its opponents, will recover partially and disturb the balance which has been obtained

Cerebration after tendon grafting —In discussing the subject with neurologists and with physicians in general we are at once met with the question What about the brain—what happens to it? For my own part, and speaking from experience, I do not think that is a factor which requires discussion. The brain sends out an impulse which is carried to the muscle and the nature of the resulting movement depends upon the origin and insertion of that muscle, in the case of the limb the insertion being near or at the part to be moved. But what is really wanted in these cases is to insure a useful insertion To take a homely illustration. A train has for years run from Euston to Manchester until one day it is diverted at Crewe, the junction on to the Liverpool section, at the will of the signalman and duly arrives at that city The fact that it had always been accustomed to travel along the rail to Manchester in no wise prevents it arriving at Liverpool when it is so directed. So with the nerve impulse after the insertion of the muscle has been changed, and I take it that what happens in the brain is that the brain cells have to become appreciative and directive of new combinations of movements by education

Various methods of tendon transplantation.—These are numerous and are being constantly added to by the ingenuity of surgeons, but they are readily understood by reference to the accompanying diagrams which show the scheme of tendon transplantation according to Vulpius. Of them the most useful are No 4, where the whole of the proximal end of the strong tendon is implanted directly into the paralysed one, No 6, where a part of the strong tendon is implanted into the distal end of the paralysed one, and No 9, where part of the strong tendon is implanted into the intact paralysed one. To these should be added the indirect method alluded to above, the method of periosteal implantation, which is very valuable, and the artificial elongation by means of silk of the transplanted tendon, and lateral approximation. So far as I am aware there are at least 13 methods in vogue, nine of which are figured in the accompanying diagrams I may now proceed to describe individual instances where *tendon grafting* is applicable. Talipes calcaneo-valgus can be treated by insertion of the peroneus longus into the inner side of the tendo Achillis. Talipes calcaneo varus is treated by the insertion of the flexor longus digitorum into the outer side of the tendo Achillis, uniting the distal part of the cut flexor longus digitorum with the pollicis. Talipes equino-valgus is treated by splitting the tendo Achillis and the gastrocnemius up as far as the junction of the two heads of the latter and then inserting the inner portion of muscle and tendon either into the tibialis posticus or, better still, bringing it well forwards and fixing it on the under aspect of the scaphoid bone. This relieves the valgus portion of the deformity The equinus portion is



Diagrams showing the scheme of methods of tendon transplantation after Vulpius Nine different methods are illustrated The reinforcing tendon is in the darker shading the tendon of the paralysed muscle is in the dotted shading readily rectified by section of the remaining half of the tendo Achillis. Talipes valgus may be treated by transplanting the proximal part of the peroneus brevis into the tibialis anticus above the ankle-joint and, if necessary, tenotomising the peroneus longus, and talipes varus may be treated by transplanting the tibialis anticus or extensor proprius pollicis into the peroneus brevis or longus above the ankle

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[4] Brit Med Jour Oct 15th 1898

[5] Münchener Medicinische Wochenschrift May 27th 1902.

[6] Centralblatt für Chirurgie Feb 9th 1901

[7] Münchener Medicinische Wochenschrift May 27th 1902.

[8] Ibid Jan 7th 1902.

[9] Practitioner vol. lxix p 360

[10] Ibid

[11] Ibid.

So much for the feet. But tendon grafting finds a much wider use. It not infrequently happens that the extensor cruris is paralysed, while the sartorius or the ham strings or *the adductors escape* I have divided the sartorius just above its insertion and inserted it into the top of the patella on four occasions, with the result of enabling the patient to maintain the knee firm in standing and to advance the foot in walking In other cases where the sartorius is defective I have brought a portion of the semi membranosus from the inner side of the joint and a portion of the biceps from the outer side of the joint and inserted them into the top of the patella with great success Paralytic conditions of the hand and wrist lend themselves well to this method, and I shall allude presently to a case in which transplantation of part of the triceps cubitis into the biceps was wonderfully effective.

Preliminary points —Before it is decided to perform the operation the case must be carefully studied and a definite plan of procedure formulated The electrical reactions of the muscles should be previously ascertained and an attempt made to estimate the strength of those which it is intended to transplant. In the case of the foot all secondary contractions, such for instance, as contraction of the plantar fascia, giving rise to pes cavus, should be remedied. For mechanical reasons it is advisable to select the reinforcing tendon from a muscle whose line of action is as nearly parallel as possible with that of the muscle to be reinforced For instance, in a case of pure paralytic valgus it is better to graft a *strip from the tendo Achillis into the tibialis* posticus rather than to bring the tendon of the peroneus longus across the front of the ankle and insert it into the tibialis anticus. It is also important to remember that *muscles*, which before the operation appear to be hopelessly paralysed, exhibit after the operation signs of returning strength The operation is rarely called for when a single muscle is paralysed, nor should it be done when nearly all the muscles round the joints are implicated. The latter cases are only suitable for arthrodesis , and, indeed, there is a fear that an indiscriminate use of this method of transplantation may lead to unsatisfactory results in some cases and so bring the operation into undeserved discredit. The whole point is in the careful choice of cases

In selecting a healthy muscle for reinforcing a paralysed one it is advisable that the one chosen should belong to the same group, if possible, as the paralysed one the reason being that it is nearest and restoration of voluntary function is more quickly and perfectly secured Then, too, the reinforcing tendon should be carried as directly as possible to the paralysed muscle and not bent round at an angle, a manœuvre which has the effect of considerably lessening the transfer of power For instance, if the peroneus brevis were used to reinforce the extensor communis digitorum, the former should be attached to the latter above the ankle and not below and in front of the external malleolus. When an opponent of a paralysed muscle is used it gives emphasis to this principle—namely, that by selecting one of the opponents of a paralysed muscle we not only reinforce that weak muscle, but we lessen the antagonism which exists between the two groups , since by transferring for example, the insertion of the peroneus longus in a case of paralytic talipes valgus from the outer to the inner border of the foot we effect an *equality between* the forces acting upon the two borders Finally it should be unnecessary in these latter days to insist upon the absolute necessity of perfect asepsis, inasmuch as the success or failure of the operation depends upon healing by primary union.

Technique of the operation.—After the skin has been rendered completely aseptic—and if obscuring hæmorrhage be feared an Esmarch's bandage has been applied—a suitable incision is made of such a length and in such a position as to give free access to the tendons to be operated upon. In many cases a single incision will suffice, but it sometimes happens that, to avoid a single large incision two smaller ones are made—as, for instance, when the peroneus brevis is transferred to the inner border of the foot. In that case one incision is made over the front of the fibula and a second over the scaphoid bone. By burrowing through the subcutaneous tissues of the dorsum of the foot with a director a channel is made for the passage of the peroneus brevis tendon to the scaphoid. *It is curious to remark that no adhesion* takes place of the tendon transplanted in these circumstances to the subcutaneous tissue, doubtless owing to the endothelium on its surface, and this teaches the necessity of very careful handling of the tendons. But it will be better to illustrate the operative procedure by a simple example, *such as, for* instance, the implantation of the peroneus longus into the tendo Achillis. The two tendons are exposed by an incision about four inches in length made above the external malleolus and between them. Their sheaths are quickly and deftly opened, and a longitudinal aperture is *made through the tendo Achillis at its thickest* part. The peroneus longus tendon is then severed just above the external malleolus, taking care that there is sufficient length *to be passed through the tendo Achillis* and to allow of the end of the reinforcing tendon to be sewn to the tendo Achillis The foot should now be placed in the position which it is desired subsequently to obtain, that is somewhat in equinus, and a silk ligature having been threaded through the proximal end of the peroneus longus tendon it is drawn through the tendo Achillis from the front to the back and then *sewn to the posterior* aspect A very important question arises as to the tension of the reinforcing tendon at the time of stitching Over-extension is to be avoided, because experience has shown that the muscle loses its contractile power subsequently I am accustomed to pull upon the proximal end of the tendon to ascertain the elasticity of the muscle. The tension of the reinforcing muscle and tendon should be gauged thus it should be pulled upon so far and for so long as it shows signs of complete resiliency, and no further—at least, such is my experience. As to the material for stitching one tendon into *another, some have used catgut and others* kangaroo tendon I have preferred strands of fine Chinese silk prepared as follows. The silk is boiled for half an hour and is then placed in a solution of 1 in 1000 potassio-mercuric iodide in spirit for a week. With these precautions I have never on any occasion had the slightest trouble with the silk in the way of its attempting to work out. The Esmarch's bandage is taken off, all hæmorrhage is arrested, and the wound is closed

The value and necessity of re shaping the joint surfaces.—If a foot has been for several years in a position of valgus or varus the joint surfaces, especially at the ankle, undergo alterations in shape And to make the operation complete and to overcome fully the tendency of the foot to assume its old position, despite the tendon grafting, I have found it necessary to open the joint and to remove a wedge-shaped piece from one of the lateral aspects of the articular surface of the astragalus. In the case of valgus I remove a wedge-shaped piece from the outer side of the astragalus, the base of the wedge being upwards. In the case of varus the base of the wedge is downwards and situated well below the tip of the external malleolus This procedure interferes in no way with the mobility of the joint The removal of a wedge I carried out for the first time in July last in a case of calcaneo-valgus with great success

After treatment —The foot or limb is placed in the fully corrected position and therefore in such a way that there is no tension whatever on the reinforcing muscle. It is left thus for six weeks to insure good union of tendon. It is worthy of note that in many cases the *muscles*, the tendons of which have been used for transplantation, show the reaction of degeneration immediately after the operation and the normal reaction does not return for from six to eight weeks *It may appear that in some cases*, immediately on removing the splint or plaster-of-Paris, over-correction has been made and the reinforcing tendon is so tight as to seem to demand tenotomy If it has not been over stretched at the time of operation, no interference is called for as with free movements of the part the muscle readily adapts itself to the length required and this leads on to another question—namely, Can all retentive apparatus be dispensed with at once? It is better not to do so because there is a strong tendency for the reinforcing *muscle* to become over-stretched and weak on account of the extra work it has to do It is therefore well to employ a light retentive apparatus to assist in keeping the foot in its new position. But at the same time the ordinary physiological measures should not be neglected. Daily massage of the reinforcing muscle or muscles should be assiduously practised and the application of the interrupted current appears to be of value When it is evident that the muscle is undergoing hypertrophy then the supporting apparatus should be dispensed with, and it is remarkable how exceedingly great is the overgrowth of such a transplanted muscle when properly tended and coaxed for several months after the operation. It must be acknowledged that muscle-grafting has the greatest possibilities in the future now that we have grasped the main details of the procedure It is applicable in most parts of the body and we have been of late endeavouring to stimulate our ophthalmic friends to use it in cases of paralytic strabismus. After careful consideration I can see no reason myself why we should not take the leap from muscles to nerves and graft nerves in the same way

Arthrodesis —Arthrodesis, or artificial ankylosis of a joint, is, as I have mentioned, adapted for those cases where the joint is flail like owing to complete loss of power of the muscles around it. It has been performed chiefly in the ankle but sometimes in the knee joint. I cannot myself recommend it in the latter situation, because the long straight shaft of bone so formed is inconvenient, brittle from paralytic changes, and liable to fracture, and I would prefer either to use mechanical supports with a ring catch at the knee-joint or to transplant portions of fascia from the sides and back of the joint into the patella But at the ankle arthrodesis is a valuable measure, because it limits the flail like movements, and gives a stable base of support. It may be done through various incisions, either anteriorly or posteriorly or by an antero external incision. The essence of the operation consists in freely exposing the joint, removing completely the articular cartilage and placing the joint at a right angle Plaster of Paris is then applied and left on for six weeks. It is very seldom that complete bony ankylosis follows, but the close fibrous form is a usual result, and indeed I prefer ankylosis with about ten degrees of movement. It will be at once evident how much supporting apparatus may be dispensed with, if the junction between the foot and the leg is thus secured

Advances in the treatment of spastic paralysis —For many years all operative interference in the infantile forms of cerebral and spinal trouble, variously classed as infantile spastic paralysis, infantile hemiplegia, and cerebral diplegia, was strongly discountenanced by physicians and neurologists, on what grounds it is difficult to say, except that the results were often not so good as they should have been Tenotomy was sometimes seen to result in producing the opposite conditions for which the operation had been undertaken. This lamentable result was not due to the tenotomy, but to a want of grasp of the processes concerned in the union of tendons. Now in spastic paralysis the conditions are totally different to those obtaining in infantile paralysis. Instead of healthy and paralysed muscles we have to deal with healthy muscles on the one hand and over stimulated and contracted muscles on the other hand If, after section of the tendo Achillis for equinus due to contracted calf muscles the exact size of the gap between the divided ends of the tendon be not carefully regulated and controlled, the action of the normal muscles on the front of the foot comes into play, dorsiflexes the foot, and causes calcaneus The whole secret of success in tenotomy for spastic conditions consists in preventing elongation of the bond of union and carefully guarding it until the equilibrium between the opposing groups of muscles has been established. I should not recommend any operative interference under the following conditions if the child be semi idiotic, if fits are present, if athetotic movements exist, and not as a rule in cerebral diplegia and cases with marked atrophic and degenerative changes in the muscles, but in cases of spastic paralysis and in some of hemiplegia, if there be fair intellectual development and no fits, tenotomy of the contracted structures with suitable precautions as to after treatment results in nothing else but good, not only physically, but mentally, for the more these patients are able to get about and are placed in touch with ordinary surroundings the more their minds expand And I have noted also a change from an irritable to a placid condition of mind, due doubtless to the fact that they are conscious of less disability than previously I have undertaken numerous operations with satisfactory results in these cases, but time does not permit me to go into them. I, however, wish to allude to an operation I have practised on the forearm and wrist with good results It is detailed in the *British Medical Journal* of Sept. 7th, 1901, and consists in converting the pronator radii teres into a supinator and dividing the flexor carpi radialis at the wrist.

Muscle grafting for conditions of paralysis due to traumatism of nerve trunks —In cases where it is impossible to restore the continuity of nerves, as, for instance, where the cervical or dorsal nerve roots have been torn or where the gap between the ends of a severed nerve is great, muscle-grafting offers a ready means of overcoming our difficulties. A case in point, which was shown by me at the Clinical Society of London on Jan. 24th, 1902, is the following A man, aged 56 years, had lost power in the left arm, his general health was good and he was moderate in taking alcohol. About 16 months before he fell off a van and struck the left shoulder and left side of his head and was stunned for over an hour There were a large amount of swelling around the shoulder and some bruising He was treated by external applications and the use of electricity for about 12 months There was no evidence of fracture or dislocation There was wasting of the deltoid, infraspinatus, biceps, brachialis anticus and supinator longus on the left side and he was quite unable to abduct the shoulder or to flex the elbow There was entire loss of electrical excitability in these muscles and it was noted that there was anæsthesia along the outer side of the upper arm and forearm in the areas of skin supplied by the circumflex and musculo-cutaneous nerves. He was treated by application of the faradic current and hypodermic injection of strychnine and it was found on April 2nd, 1902, that the anæsthesia had disappeared, but the motor paralysis remained as before. On April 26th an examination of his condition by Dr Purves Stewart gave the following results The movements of the scapula were seen to be normal and sensation was good He could rotate the humerus inwards but not outwards, and he could not abduct it. The action of the pectoralis major and minor was strong He made feeble attempts to flex the elbow and when doing so the forearm was pronated and the wrist strongly extended to the radial side and the extensor carpi radialis longior was felt to contract. There was good extension of the elbow, with normal pronation and supination of the forearm, and the movements of the digits were good. The deltoid, infraspinatus, biceps, brachialis anticus, and supinator longus did not react either to faradism or galvanism, but the pectoralis, trapezius, and muscles of the forearm did Dr Purves Stewart, who had seen the case several times with Dr William Murrell, then consulted me as to whether anything could be done surgically and I suggested muscle grafting The patient's condition was not such as to render it safe to give a general anæsthetic. On June 10th, a 4 per cent. solution of β eucaine was injected, and an incision six inches long was made, beginning from the middle of the back of the upper arm and curving downwards and forwards over the musculo-spiral groove The biceps muscle was found to be atrophied and a small portion was removed for microscopical examination. The external head of the triceps was laid bare and a strip one and a half inches wide and one inch thick and from three to four inches in length was made An aperture was made through the middle of the biceps muscle, the lower end of the strip of the triceps was carried across beneath the biceps, made tense, and drawn through it and secured with kangaroo tendon sutures. The arm was put up with the elbow well flexed and by June 28th the wound was completely healed. On July 1st a second operation was undertaken. An incision from eight to nine inches long was made, commencing just below the middle of the clavicle, then passing across the tip of the acromion and downwards over the deltoid for about four inches. The clavicular part of the pectoralis major was separated distally near the humerus, and the end was carried up over the acromion and then fixed to the deltoid. As it passed over the acromion the muscle was secured by kangaroo sutures. Galvanic and faradic currents were afterwards applied At first there was total loss of excitability to both currents, but by Oct 10th it had returned in the grafted muscles It was found that the portion of the triceps transplanted to form a new biceps was acting satisfactorily and the patient had acquired a good degree of flexion power, and there was no doubt that, so far as flexion was concerned, there had been a very great improvement. But although the transplanted portion of the pectoralis major could be felt to harden when attempts were made to abduct, yet the patient was unable to lift his arm away from the side without corresponding movement of the scapula. On Dec 4th it was found that the faradic reaction could be demonstrated in both the transplanted muscles.

Although the results in this case were not quite perfect, yet there is no doubt that the patient's condition has been much improved and the limb has been transformed into a useful one and he is able to get his living again as a carman. Unfortunately, the case was not an entirely favourable one for this kind of treatment. The man's bulk and the fatty condition of his heart, which rendered a general anæsthetic unsafe, caused the operations to be done somewhat hurriedly, while the size of the limb and its weight, with the great leverage involved, made it very difficult to obtain sufficient muscular power to secure quick and rapid movement. The trapezius, being a thin muscular sheet, was not considered to be so useful for transference as the pectoralis major, and had it been interfered with it was thought that any attempts to abduct the arm by means of the transplanted portion would be associated with movements of the head towards the affected side. Examination of portions of muscle removed showed that they were profoundly atrophied. The sarcolemma had undergone proliferation and the individual muscle fibres had become smaller in diameter and in many cases had lost their striation.

Weymouth street W

A CASE OF GENERAL MILIARY TUBERCULOSIS, SYMPTOMS OF ACUTE MYELITIS INVOLVING THE CONUS MEDULLARIS AND CAUDA EQUINA,

WITH A NOTE ON THE VALUE OF THE ABDOMINAL ICE-BAG

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THE patient, a man, aged 23 years, a stoker on board one of His Majesty's battleships on the China station, was admitted into the Royal Naval sick quarters at Wei Hai Wei on Sept. 25th, 1902, having already been under treatment for five days, suffering from an abscess over the left elbow, pain in the region of the left loin and over the sacrum, and fever, his temperature reaching 103° F on the evening previous to admission.

On examination it was found that the patient exhibited symptoms which pointed to a lesion in the lower part of the lumbar region of the spinal cord and of the cauda equina. There was complete paralysis of the bladder and rectum and the patient complained of numbness of the scrotum and left leg an aching pain in the back about the lumbar region, and inability to stand. All the reflexes of both lower limbs were entirely abolished and ankle-clonus could not be elicited. A certain amount of, but not complete, loss of motor power existed, most marked in the left leg and sensation was dulled in the toes of both feet. Both lower limbs could be fully extended without lordosis resulting. There was no stiffness or rigidity of the spine and the patient could turn from side to side without pain.

The paralysis of the rectum was accompanied at first by constipation, afterwards involuntary evacuation of the fæces took place. The bladder was paralysed from the first, necessitating the passage of the catheter twice a day. Up to Oct. 2nd the urine was clear and acid in reaction, its specific gravity was about 1022 and it contained albumin in considerable quantity but no pus or blood. (The patient gave a doubtful history of previous kidney trouble.) The amount of urine secreted was about normal up to the day of death when suppression occurred. On Oct. 2nd pus first appeared in the urine, which became alkaline, and on the 3rd hæmorrhage into the bladder took place and this continued till the patient's death, and though the amount of blood varied from day to day it was always considerable. The blood was not intimately mixed with the urine and the catheter frequently was blocked by clots. The temperature remained elevated except for two days (three or four days before death), when it fell to 99° under the influence of an abdominal ice-bag. The morning and evening readings showed a difference of about one degree and varied between 101° and 102°, and 102° and 103°. On the evening of the 9th (two days before death) the patient brought up some ounces of coffee-ground vomit and this recurred on the evening of the next day. The condition of the lower limbs remained unaltered throughout the illness, but the patient latterly had some slight loss of motor power in the arms and the hands were tremulous. He took nourishment well and for a few days seemed to show some slight improvement, but on the morning of the 11th he became suddenly worse, his breathing was very quick, irregular, and shallow, and the urine was suppressed. He did not lose consciousness but died some two hours after the above symptoms developed.

No history of syphilis was obtainable and there was no evidence of disease of the spinal column. The lumbar pain at first complained of was chiefly in the muscles of the left side and soon disappeared. Girdle pain, but only to a slight degree, was present situated about two inches below the umbilicus.

The treatment adopted was to bring the patient under the influence of mercury as quickly as possible. For this purpose inunction was used combined with administration of the drug by the mouth. As soon as symptoms of approaching salivation appeared iodide of potassium was substituted for the mercury. The bladder was washed out twice a day with boric acid lotion, the greatest precautions being taken as regards asepsis. Before withdrawing the catheter a few ounces of a solution of nitrate of silver (10 grains to the pint) were introduced and withdrawn. Boric acid was also given by the mouth. Wet-cupping over the lumbar region was employed, but did not appear to be of any benefit. During the last ten days of his illness the patient was slightly delirious especially at night. This was combated with sulphonal or potassium bromide, but the remedy which had the most marked effect was an ice-bag resting on the abdomen which was kept continually applied from the evening of the 3rd to the evening of the 7th and again on the 9th and 10th. Under its influence the temperature gradually fell from 102·4° to 99°, a general improvement apparently took place in the patient's condition, he became brighter in aspect and was no longer delirious, at least during the daytime. On the removal of the ice bag the temperature again rose to its former height.

At the post-mortem examination the body was found to be well nourished. The heart was normal, its weight being 9½ ounces. Both lungs showed many old tuberculous lesions which had undergone calcification. At the apex of the right lung were a few more recent tubercles. On the right side also were many old pleuritic adhesions. The right lung weighed 15½ ounces and the left lung weighed 10 ounces. The peritoneal cavity contained no fluid. On the lesser curvature of the stomach at the pyloric end the mucous membrane was ecchymosed, this extended into the duodenum which was adherent to the pancreas. No ulceration was found and the valves were normal. The liver weighed 71 ounces. The capsule was slightly adherent but was otherwise normal. The left kidney was uniformly enlarged, its weight being 7½ ounces. The capsule was not adherent. On the anterior surface near the internal border were many yellow tubercles, varying in size from that of a pin's point to that of a millet seed, some of these were breaking down into pus. The right kidney weighed 6½ ounces and presented on its anterior surface near the hilum several similar tubercles, on section six small tubercles, some of them purulent, were seen around the upper part of the pelvis. The bladder was contracted and its wall was thickened. The whole of the mucous membrane was ecchymosed, eroded, and pitted and showed many small ulcers. On the anterior wall were several yellow sloughs raised above the surface and with well-defined edges. The lymphatic glands in the abdominal cavity were enlarged. On commencing to open the spinal canal from the front by the Vienna method—i.e., by removing the bodies of the vertebræ—a large abscess was opened in the left psoas muscle which extended from the lower border of the second lumbar vertebra to two inches below the brim of the true pelvis but had not reached Poupart's ligament. It had burrowed into the iliacus and occupied the whole mass of that muscle. Pus was found in the spinal canal pressing on the membranes covering the cauda equina. No sign of caries of the vertebræ could be detected and the first four lumbar vertebræ were removed and carefully dissected without discovering any evidence of disease. The cauda equina appeared to be healthy and there was no pus within the membranes There did not seem to be any disease of the hip-joint or the ilium, nor did the sacro-iliac synchondrosis appear to be affected

There are several points of interest in this case and amongst them two questions arise—viz., (1) What was the origin of the psoas abscess which during life gave no signs of its presence? and (2) What was the origin of the pus in the spinal canal? Here is a patient sent into hospital suffering from typical symptoms of acute myelitis in the region of the conus medullaris and cauda equina. He has no history and shows no signs of tubercle and, indeed, the fact that the symptoms were limited to the spinal cord and were unaccompanied by cerebral manifestations was against the idea that the disease was due to a deposit of tubercle in the cord or its membranes which moreover appeared to be healthy at the necropsy Neither could any caries of the vertebral column be detected to originate so large a psoas abscess, which must have existed for some considerable time and yet in life gave no sign of its presence We venture to put forward the following theory to account for the above phenomena—viz., that the abscess in the ilio psoas muscle was due to the caseation and subsequent softening of innumerable miliary tubercles deposited in its substance, similar to what had taken place in the various organs of the body, and that this tuberculous pus, instead of finding its way towards the surface beneath Poupart's ligament or other of the usual positions of pointing, had followed the course of the lumbar nerves and had penetrated into the spinal canal through the intervertebral foramina, there setting up symptoms of pressure myelitis We can find no record of such a theory having been broached before, but anatomically it appears to us to be a possible one.

As regards treatment, the value of the abdominal ice bag in many acute diseases is, in our opinion, too little appreciated Its value is best seen in the treatment of acute pneumonias, as first pointed out by Dr James Barr[1] in his clinical lectures on that disease. It can be kept applied to the abdominal surface for days together and the patient suffers no discomfort from it as long as the groins are protected by a layer of cotton wool. On the contrary the temperature falls, delirium ceases, the mind clears, the patients sleeps well, and his whole condition markedly improves By its use we have seen undoubted cases of acute pneumonia aborted at the very commencement of the attack. We have found it of value in many cases, such as the long-continued fevers met with in China, where it is often the only remedy which has permanently reduced the temperature, when all drugs including hypodermic injections of quinine, have failed. At times one has to be guarded in its use, as in appendicitis, when it may mask important symptoms, but even in these cases we believe it to be of benefit in localising inflammation and suppuration Its action appears to be a reflex one on the thermogenic centres through the solar plexus and splanchnic nerves The great advantage of the abdominal ice-bag is its ease of application, it can be kept in position by lightly securing it to a bed-cradle When one considers the difficulty of keeping ice continually applied to the spine, or even to the chest wall it is obvious that a method of securing the same advantages and more, without the inherent disadvantages must be a valuable aid to treatment as we have found it to be by the experience of many months past.

Wei Hai Wei China

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[1] Brit. Med. Jour June 16th 1900

BRISTOL EYE HOSPITAL —The annual meeting of the subscribers to this institution was held on March 20th under the presidency of the Lord Mayor The report stated that 465 in patients were admitted during 1902. 5954 out-patients were treated being an increase of 451 compared with the previous year The financial statement showed that the ordinary income of the hospital was £1345 and that an adverse balance of £381 remained.

DEVON QUEEN VICTORIA COMMEMORATION FUND —At the meeting of the committee of this fund held at Exeter on March 20th, under the presidency of Lord Clifford the following grants were made —Royal Albert Hospital, Devonport, £45, Royal Devon and Exeter Hospital, £40, North Devon Infirmary, Barnstaple, £32, and the Torbay Hospital, 15 guineas. Smaller amounts were also given to 11 other medical institutions in Devonshire

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RECENT EXPERIENCES OF THE UNITED STATES ARMY WITH REGARD TO SANITATION OF YELLOW FEVER IN THE TROPICS[1]

BY W O GORGAS,
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THIS being the section devoted to tropical diseases I have thought that some account of the original investigations made concerning one of these diseases and of the sanitary work carried out as the result of these investigations *in the tropical island of Cuba by the United States Army* might be of interest to the section.

While our sanitary work in Cuba was on general lines the particular interest in this work and our efforts were centred upon yellow fever and for very obvious reasons Yellow fever is the only one of the severe epidemic diseases to which the western continent has been subject to any extent. While cholera has spread in most parts of this hemisphere its ravages have not been at all comparable to those of yellow fever, and the plague has never affected the Western hemisphere to any extent. Yellow fever, on the other hand, has ravaged both continents many times, on the eastern shore from Quebec on the north to Montevideo on the south, and for long distances on the western shore, and within these limits the destruction of life caused by its prevalence has been second only to the great losses caused by cholera and the plague in the large European centres, sometimes, in as large a city as Philadelphia, killing one-third of the population present at the time of its prevalence. It has been particularly fatal where large numbers of non immunes have been brought together within the tropics, and this has made it the dread of military commanders in these regions In this respect it has been more certainly fatal than cholera or the plague in the East. Military expeditions in the tropics in the past have been almost certain to suffer from this disease and there have been several instances of large bodies of men being almost entirely swept off and the objects of the expedition frustrated by this disease alone, as in the French expedition in 1802 to Hayti, in which out of 25 000 men nearly 22,000 died from yellow fever in one season, leaving the remainder entirely at the mercy of the enemy who scarcely had to fire a shot.

To the United States for the last generation yellow fever has been particularly important, not only on account of the loss it has caused to the population, but on account of the great financial loss caused by the quarantines which were established all over the country when this disease appeared in epidemic form, and of late years, along our southern coast, these quarantines are established every summer to prevent the introduction of the disease from the neighbouring coast of the Gulf of Mexico. It is estimated, for instance, that the financial loss caused to the Mississippi valley by the last great epidemic of 1878 amounted to not less than $100,000 000 The origin *of the* disease, as that of all others, is shrouded in obscurity We have pretty good evidence that it existed among the Indians on the Mexican coast before the landing of Cortez and since that time it has been continually present in the West Indies, on the coast bordering the Gulf of Mexico, and in the Caribbean Sea. Occasionally it spreads from this, its constant home and about the beginning of the nineteenth century it looked as if it might become one of the great epidemic diseases of the world It made its ravages *at that time* in Spain, France, and Italy and all along the eastern inhabited coast of North and South America. It has never been known in the densely populated countries of China and India or any part of Asia or Australia.

I will not go into the symptomatology more than to say that yellow fever is a febrile disease of about a week's duration with well marked and characteristic symptoms in the pronounced cases and, as in other febrile diseases, a shading off into every variety *of mildness* in character A great deal of study had been given to yellow fever and the peculiarities as to its mode of spread, its history and symptomatology were very well known. At the time of the outbreak of the Spanish American war the following facts with regard to the disease had been pretty well settled and generally received. That it was endemic about the Gulf of Mexico, as stated above, that outside its endemic focus it was not found unless transported there in some way, that a temperature below the freezing point almost always caused its disappearance, and that it could not be communicated directly from person to person. It was universally received that it was transmitted by fomites, and it was well known that a sick person, or fomites, introduced into a non-infected house would not at once infect it, but that a considerable length of time had to intervene between the introduction and the infection That, for instance, a man sick from yellow fever, if introduced into an uninfected house, could be nursed with entire safety by a non-immune, but that in the course of time this house would become dangerous from the fact of the yellow fever patient having been there, and that after this time a non immune was liable to contract yellow fever from merely entering the house. It was known that heat and moisture were very favourable for its development, that it did not occur above certain altitudes that non immunes could escape the disease entirely by leaving an infected town, and that they did not, as a general thing carry the disease with them. At the outbreak of the Spanish American war Havana was generally believed to be the principal endemic focus in the western hemisphere. The disease was known never to have been absent from this city for the past 150 years and it was the point from which all the surrounding countries were being constantly re-infected. The States of the Union lying along the Gulf of Mexico were in particular danger from this source and the yellow fever of Havana was looked upon as costing these States the loss of many millions of dollars yearly From the experience of Spain and other European nations in sending large bodies of troops to the West Indies and from the experience of the English in India and their East Indian possessions, the United States military authorities looked with anxiety upon our expeditions into Cuba and feared a very large mortality from disease and particularly from yellow fever We had long been accustomed to protect our small garrisons from yellow fever when epidemic in the Southern States, by moving the garrison a few miles from the infected locality This was almost invariably successful and in a few cases in which the first move was not successful a second would be, if care were taken to remove those who sickened in the first few days. But an army undergoing active military operations is not always able to do this and we knew that, on account of the large body of Spanish soldiers present, nearly every part of the island was infected by yellow fever

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[1] A paper read at the First Egyptian Medical Congress Cairo on Dec 18th 1902.

On taking possession of Havana our principal sanitary object was to get rid of yellow fever We believed that the cities on the eastern coast of the United States, such as Boston, New York, and Philadelphia, had ceased to be subject to yellow fever on account of their improved sanitary condition. We therefore hoped that we would get rid of yellow fever or at least greatly decrease it, by placing Havana in first-rate sanitary condition, hence we promptly set about this work Liberal appropriations of money were made for the purpose and every measure that the sanitary science of that day could suggest was adopted Of course, I refer to more or less temporary measures. We knew that we would not have time for an expensive system of sewering or any such permanent improvements. So far as the general mortality of the city population was concerned, the results obtained by these methods were very gratifying The death rate, which in 1898—the last year of the war and of Spanish occupation—was 91 03, fell in 1899 to 33 67, in 1900 to 24 40, and in 1901 to 22 11, a rate which compares favourably with the rates of the more civilised cities of Europe and America, but, to our chagrin and disappointment, we apparently had no effect upon yellow fever

We had gone to Cuba with the idea that yellow fever was a filth disease, that its germ developed in decomposing organic matter We had hoped that if we thoroughly cleaned Havana we would deprive the city of the culture medium in which the yellow fever developed and thus rid it of the disease itself, but we found that, while we had little or no yellow fever in the early part of 1899 it began to increase very rapidly after August of that year when a large non immune Spanish immigration began to pour in, and December of 1899 was one of the worst Decembers for this disease ever recorded in Havana. During 1900 the sanitary conditions of the city, as evidenced by the general death-rate continued to improve. Yellow fever on the contrary, grew worse and worse, and the best and most cleanly parts of the city were most affected. The sanitary department had now had two years of most careful cleaning, disinfection and isolation of yellow fever, without having any perceptible effect and I became convinced that the disease could not be eradicated on these lines alone.

Early in 1900 a board of army medical officers, of which Major Walter Reed was president, was sent to Havana for the purpose of studying yellow fever After working on various lines they determined to study the mosquito with reference to the disease. They were led *to this determination* by several reasons as stated in their 'Preliminary Note,' more particularly by the well known epidemiological course of the disease, by the work of Ross on the transmission of malarial fever by the mosquito and by the report of H C Carter, Marine Hospital Service, U S A., on the interval between the infecting and secondary cases of yellow fever They established an experimental station in the country, about six miles from Havana and half a mile or more from any habitation, placed non immunes in this camp under military control so they could not leave it kept them there a sufficient length of time to be certain that they had not contracted yellow fever and then experimented upon them with the species of mosquito which Dr Carlos Finlay an eminent physician of Havana, maintained propagated yellow fever Dr Finlay had been writing and maintaining ever since 1881 that a certain species of mosquito in Havana was the means of transmitting the disease from person to person. Dr Finlay had made many experiments with the mosquito but the results obtained by him were such that they were not anywhere accepted as proving his contention. The army board after considerable experimentation found that it could take a stegomyia, let it bite a yellow fever patient within the first three days of the disease, keep the mosquito from 12 to 20 days, let it bite a non immune and almost invariably transmit the disease. Some 18 cases were transmitted in this way The fact that the disease so transmitted was yellow fever was established, not only by well marked symptoms, but by having the cases seen by well known physicians of Havana and also having them diagnosed by the official board of Havana, which diagnosed all cases occurring in that city The following year the Sanitary Department, in an endeavour to immunise, had patients bitten by infected mosquitoes and in this way had a death from yellow fever A necropsy was made which confirmed *the diagnosis in every respect.* But *the symptoms of* yellow fever are so pronounced in a case at all severe that there is ordinarily but little doubt about it.

As above described, the board had taken the precaution to isolate the men experimented upon, so that they could contract the disease in no other way At the same time that these experiments were going on the board had a mosquito-proof house built in which were placed fomites of all kinds, clothing bedding and all things soiled by yellow fever patients. In this building non immunes slept for two weeks, were then taken out, kept for two weeks longer in the camp, bitten by the *mosquito*, and promptly developed yellow fever The period of incubation was found to be from three to six days the shortest time being two days and 22 hours and the longest six days and two hours. The board also found that the disease could be transmitted by injection of the blood of patients suffering from yellow fever taken within the first three days of the disease. The incubation period in one of these blood cases was slightly under 48 hours. The board also found that the blood, after being passed through a filter which would stop all known micro-organisms, still retained the quality of transmitting *the disease, tending to prove that the micro-organism* which causes the disease is still sub microscopic

These investigations of the board of army medical officers convinced the sanitary department that the stegomyia mosquito was the only means of propagating yellow fever, and that fomites played no part whatever in its transmission Granting these conclusions as facts it was evident that if we could get rid of the infected stegomyiæ and prevent any more stegomyiæ from becoming infected we should get rid of yellow fever With these objects in view a scheme was worked out first, to prevent mosquitoes biting people who had contracted yellow fever For this purpose arrangements were made so that the quarters of a patient were screened with wire netting within two hours after the case was reported and a guard was placed over the quarters to see that the one wire door allowed was kept properly closed.

DEATHS FROM YELLOW FEVER ACCORDING TO YELLOW FEVER YEAR

Years	1890-91	1891-92.	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-1900	1900-01	Average	1901-02.	1902.
Months														
April	13	5	8	8	4	6	14	71	1	2	0	12·00	0	0
May	23	7	7	23	16	10	27	88	4	0	2	18 81	0	0
June	38	41	13	69	31	16	46	174	3	1	8	40·00	0	0
July	67	66	27	118	77	83	116	168	16	2	30	70 45	1	0
August	60	68	67	100	73	120	262	102	16	13	49	84 36	2	0
September	33	65	70	68	76	135	166	56	34	18	52	70·27	2	0
October	32	48	54	46	40	102	240	42	26	25	74	66·27	0	0
November	16	24	52	28	23	35	244	26	13	18	54	48 36	0	0
December	9	17	33	11	29	20	147	8	13	22	20	29·90	0	0
January	10	15	15	7	15	10	69	7	1	8	7	14·90	0	—
February	3	10	6	4	4	7	24	1	0	9	5	6 63	0	—
March	4	1	4	2	2	3	30	2	1	4	1	4 90	0	—
Totals	307	365	356	484	390	652	1385	745	128	122	302	466 90	5	0

Immunes were freely allowed to pass and no notice was taken of fomites of any kind Secondly, to kill all mosquitoes that might have become infected before the screening of the patient. For this purpose arrangements were made to kill all mosquitoes, both in the house occupied by the patient and in all the contiguous houses Each room was carefully close and sealed, just as if formalin was going to be used, and pyrethrum was burned in the room at the rate of a pound to a thousand cubic feet of space. Pyrethrum powder, while not the best insecticide, was found to do less injury than other substances, but care was taken to sweep mosquitoes up after its use and to destroy them, as a considerable portion of them would revive when exposed to the fresh air Thirdly, arrangements were made to keep out people suffering from yellow fever, either in its active or incubative stage. On the sea side this was managed by a five-day quarantine maintained by the Marine Hospital Service On the land side we had a system of inspection by which all non immunes were reported, registered, and seen daily by a physician for six days. During the latter six months of 1900 Havana admitted from the infected towns around on the land side, some 1200 non immunes. From these 1200 non immunes we picked up some 20 odd cases of yellow fever Business and travel did not appear to be interfered with in the least and no attention whatever was given to traffic or to the introduction of fomites of any kind. The system was entirely satisfactory and, I believe, could be adopted to advantage in all similar cases. Fourthly, brigades were organised for the destruction of mosquito larvæ in all parts of the city and suburbs This was the part of the work on which we put the most labour and that cost us most We modified our original system considerably as we learned the habits of the different species of mosquitoes and found the ways whereby our labour could be most advantageously expended. We were very successful in decreasing the numbers of mosquitoes. By the end of 1901 they were much less numerous in all parts of the city and in many parts had entirely disappeared. In January, 1901, just before the mosquito brigades were organised, an inspection was made of the whole city and it was found that mosquito larvæ existed in 26,000 different deposits in the city The inspection made in January, 1902, when the mosquito brigades had been at work about ten months, showed less than 300 deposits of larvæ in the same area. The effect of the destruction of mosquitoes can be well measured by the death rate from malaria In 1900 this was 344, in 1901 it was 151, and up to July, 1902, it was 47

The results as to yellow fever were complete. From the institution of these measures yellow fever began to decline rapidly Each focus was entirely destroyed as it appeared and gave no more trouble. The work was commenced in February, 1901 and on Sept 28th of the same year the last case of yellow fever occurred in Havana Since that time—now more than a year—not a single case has originated in the city As evidence that this is not accidental a table is inserted of the deaths from yellow fever for the last 12 years.

A glance at this table will show that yellow fever has probably never been absent from Havana for a single day in all these years, that the smallest number of deaths occurring from this disease was 122 in the year 1899, the largest number 1385 in the year 1896, average 466, and as far as we can find from the records the same condition of affairs has existed since 1762. The same favourable condition of affairs was evidenced as to the army The first year of our occupation, in 1898, with an average strength of 8345 we had a death rate from disease of 67 94 per 1000, in 1899, with an average strength of 11,969, we had a death rate from disease of 17 29, in the year 1900, with an average strength of 8690, we had a death rate from disease of 8 40, in 1901, with an average strength of 5297, we had a death rate from disease of 3 21, and in the fiscal year ending June 30th, 1902, with an average strength of 4187, we had a death rate from disease of 1 43. The death rate for 1902 was smaller than our death rate from disease either in the United States or in any of the possessions of the United States A consideration of these facts will, I think, convince an unprejudiced reader that our great success in the preservation of the health both of our troops and the native population, in the entire extirpation of yellow fever and the almost entire extirpation of malarial fever was due to the destruction of and the precautions taken against, the mosquito, and that these measures would never have been instituted except for the discoveries made by the army medical board

Washington, U S.A.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

NOTE ON A CASE OF HYDRAMNIOS ASSOCIATED WITH TRANSIENT GLYCOSURIA

By JAMES BURNET, M A., M B., M R C P EDIN,
FORMERLY RESIDENT PHYSICIAN, ROYAL INFIRMARY EDINBURGH

RECENTLY I was called to see a woman who was in labour On arriving at the house I found a midwife in attendance. The patient was a III para, her age being 39 years. Her last child was born six years ago. Her previous labours had been normal and comparatively easy She had been in labour for nearly three days. On examination I found the abdomen very much distended beyond the normal limits of pregnancy Per vaginam the os uteri was found to be fairly well dilated and through it could be felt the bulging sac of membranes The uterine contractions were very feeble and irregular On palpating the abdomen very carefully distinct fluctuation could be made out. The complication of pregnancy by ovarian cyst was thought of, but the subsequent course of events proved what was the true nature of the case As the os was fairly well dilated I resolved to rupture the membranes On doing so a large bowlful of liquor amnii escaped. The fœtal head could now be made out, lying in the left occipito-anterior position I then waited for half an hour, but the pains were so exceedingly feeble that I resolved to anæsthetise the patient and to apply forceps. No sooner was the first blade introduced within the uterus than a gush of fluid took place There was in all, roughly speaking, about two gallons. Traction proved by no means an easy matter but eventually delivery was completed. The child was a male. There was no deformity present and the child was well nourished. The placenta was carefully examined but no abnormality could be discovered, nor was its size larger than usual.

The interesting feature in this case is the fact that on examination of some of the urine which the patient had passed during labour sugar was found to be present I may note here that the urine was submitted to a very careful examination. A specimen examined during the puerperium was found to be absolutely normal. Occasionally diabetes has been noted in connexion with hydramnios, but it will be remarked that in this case there was a simple glycosuria of a transient nature. During pregnancy, so far as I could gather the patient experienced no trouble beyond the discomfort due to the large size of her abdomen which rendered progression somewhat difficult. Again, it has been stated that where hydramnios occurs the child is invariably a female and is often born dead or, if alive, presents some deformity In this case the child was a male and apparently healthy in every respect. There was no post-partum hæmorrhage, as is so frequently seen in such cases.

The cause of hydramnios is still a much disputed subject, Tarnier maintaining that it is due to deficient absorption of the amniotic secretion This however will not explain the association of glycosuria with the condition as exemplified in my case. That the glycosuria was of a transient nature is conclusively proved by the fact that the patient stated definitely that she experienced none of the attendant symptoms of this condition during pregnancy and also that sugar entirely disappeared from the urine a few days after labour Was the glycosuria in this case a pure neurosis occurring during labour, or was it coincident with pregnancy, being present without attracting the patient's attention by reason of any coexisting discomfort? I am afraid that it is impossible to state which view of the case is the correct one Nevertheless, the case has a certain clinical and pathological interest which warrants this brief record of it.

Edinburgh.

A CASE OF PURPURA RHEUMATICA

BY ROBERT S WELLS, L.R.C.P., L R.C S EDIN
L.F P S. GLASG

THE patient, a man, aged 19 years, first came under my observation on Nov 7th, 1902. He at this time complained of pain in his right knee and ankle joints which were swollen and tender. His temperature was 102° F and his pulse-rate was 96. His tongue was furred and his bowels were constipated. Nothing abnormal could be made out either in his lungs or heart. He was given five grains of calomel at once and 15 grains of sodium salicylate every four hours. Next day the pain in his joints had abated to some extent, but around each affected joint there was a very copious hæmorrhagic rash, the spots varying in size from that of a split-pea to that of a threepenny piece. The urine was dark-coloured but no blood was present. On the 12th he began to vomit, the vomited material being of a dark colour at first, but later in the day blood became visible in it. The urine which he passed contained a fair amount of blood and he had also severe bleeding from the nose He was put on a strictly milk diet and as his stomach was so irritable the sodium salicylate mixture was discontinued and he was given a mixture containing hydrocyanic acid and bismuth. On the next day the vomiting was much less severe, but his stools contained a large amount of blood and he complained of pain in his elbow-joints which were swollen and around which there was a copious hæmorrhagic rash There was also a blowing murmur in the mitral area, the pulse was rapid (120 per minute) and very irregular. A hypodermic injection containing $\frac{1}{30}$th of a grain of strychnia and $\frac{1}{100}$th of a grain of ergotin was administered and in the evening the pulse was more regular though still rapid, but the bleeding had ceased He continued to improve up to the 18th. On that date he had pain in his wrists and left ankle-joint His bowels, which had been regular now became loose, and his urine was almost wholly pure blood. His pulse became very irregular and weak, so $\frac{1}{30}$th of a grain of strychnia was given hypodermically and one drachm of brandy in milk was administered every hour He passed a comfortable night, the diarrhœa ceased, and the pulse was more regular though still rapid (100 per minute) The urine still contained a large amount of blood and as there was some epistaxis $\frac{1}{100}$th of a grain of ergotin was given and this was repeated in the evening He continued to improve up to the 28th when he complained of severe abdominal pain on account of which his nurse applied a linseed poultice, which, however, did not relieve him. The patient now became delirious and had to be held in bed, so a hypodermic injection containing a quarter of a grain of morphia and $\frac{1}{100}$th of a grain of hyoscine was given and in a short time he became quiet and fell asleep In the evening he was quite free from pain, but as his pulse was weak $\frac{1}{30}$th of a grain of strychnia was administered and two drachms of whisky in milk every hour were given. On the next day he continued to be free from pain, his pulse being stronger and more regular. On Dec. 1st the joints were entirely free from pain and no fresh hæmorrhages had appeared, the urine, however contained a small trace of blood. He was now put on a mixture containing ten minims of tincture of perchloride of iron, six minims of tincture of digitalis, and four minims of liquor strychninæ thrice daily He continued to improve so rapidly that he was allowed to leave his bed on Dec. 6th, his urine on that date being entirely free from blood but containing a mere trace of albumin. On the 9th the urine was free from albumin, the hæmorrhagic spots had all disappeared, and the joints were quite free from pain and tenderness on pressure and movement.

The interesting points in this case were (1) the large hæmorrhages from the stomach, the bowels, and the kidneys, and the good effect of ergotin in controlling those hæmorrhages, (2) the rapid recovery of the patient when once he had "turned the corner", and (3) the occurrence of abdominal pain.

A case presenting similar symptoms but of less severity was under my care in the months of July and August, 1902. At the onset of the illness there was loss of power of speech and motion, abdominal pain was also a feature. The treatment consisted in the administration of ten grains of sodium salicylate and ten minims of liquid extract of ergot every six hours, five minims of liquor arsenicalis being added to the dose at a later stage.

Kirkcowan.

NOTE ON A CASE OF FRACTURE OF THE SKULL WITH RUPTURE OF THE POSTERIOR BRANCH OF THE LEFT MIDDLE MENINGEAL ARTERY

BY FRANK M. MORRIS, M.B., B.S LOND.

AT 6 P.M on Nov 26th, 1902, I saw in consultation with Dr. Munnik a male patient with the following history About 5 P M. he had fallen from a horse, his head striking the stump of a tree. He got up and walked to his house, complaining of pain in his neck and back, but otherwise he felt himself fairly well, smoking and joking with his friends. He was seen by Dr Munnik at 5.15 P M. when he was quite conscious and complained of nothing At 5 30 P M. he stood up and said that something broke in his head, he began to cry and laid himself on the bed and quickly became stupid. When seen by me half an hour later the patient, a stoutly built man, aged 23 years, was restless and irritable, he answered questions coherently but shortly, his colour was livid and his face was covered with perspiration his pupils were equal and were slightly contracted and his left pupil reacted sluggishly to light There was no paralysis or paresis. At 7 P M he could not be roused, his left pupil was dilated and fixed, his right arm was paralysed and there was paresis of his right leg, his pulse was slow

A diagnosis of left meningeal hæmorrhage was made and an operation was decided on, but we were confronted with the difficulty that we had no trephine in the village and the patient was rapidly becoming worse. We therefore borrowed a large brace-bit and a gouge from the village carpenter On shaving the head a small bruise was seen behind and above the left ear This was made the centre of a semi-circular incision, which included all structures down to the bone, when a linear fracture was exposed from which a little blood oozed. The brace-bit was applied over this fracture and was cautiously worked by Dr Munnik, on getting through the bone we came on a blood clot. With a straight bone forceps the bone was chipped away in a forward and downward direction for about an inch and on cleaning away the clot blood spouted up A needle threaded with fine catgut was passed above and below the bleeding point which was tied, all of the clot which could be reached was removed and the wound was sewn up with silkworm gut, a small drainage tube being left in. No chloroform was needed at first, but on the clot being removed the patient became violent, with free movement of both arms

On the 27th he was conscious but stupid, slight paresis of the right arm remained and his pulse was still slow, there was much oozing from the wound On the 28th when the tube was removed, the wound was found to be healthy and the mental condition of the patient was becoming better The improvement continued uninterruptedly and such progress was made that the patient left his bed in two weeks and was able to bathe and to ride or to bicycle within a month

Ceres, Cape Colony

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias tum aliorum tum proprias collectas habere et inter se comparare.—MORGAGNI *De Sed et Caus Morb*, lib iv Proœmium

SUSSEX COUNTY HOSPITAL

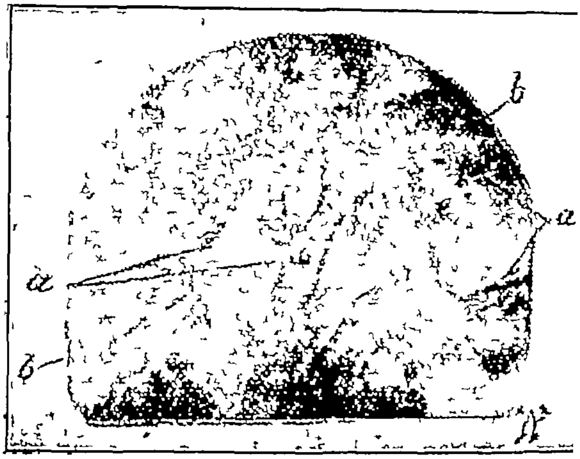
A CASE OF PARAPLEGIA WHEREIN MULTIPLE TUMOURS OF A THYROID NATURE WERE FOUND IN THE CEREBRO SPINAL MENINGES AND ELSEWHERE AFTER DEATH

(Under the care of Dr W AINSLIE HOLLIS)

A MAN, aged 45 years, was admitted to the Sussex County Hospital on Dec 12th, 1901. Both parents were dead. There was a history of tuberculosis on the mother's side At the age of 16 years the patient had had an attack of gonorrhœa, but there was no history of syphilis He had been married for some years He drank usually two or three pints of beer daily Since the preceding March he had suffered from attacks of lumbago of varying intensity, some four or five of which were very severe, at the same time he suffered occasionally with severe headache, giddiness, and vomiting About a week before admission into the hospital he found a loss of power in the left leg, then in the right This symptom was rapidly followed by almost total motor and sensory paralysis of the lower limbs and a girdle pain around the waist.

On admission the patient's aspect was healthy There was no paresis of the facial muscles, the eyesight and hearing were apparently normal, and the grip was good There was complete loss of sensation below the tenth dorsal vertebra and the lower costal margin in front, with loss of control over the sphincter ani. The patient had a large bedsore over the sacrum and a small one on the left ankle. The knee jerks were absent. The right plantar reflex was sluggish with feeble extensor response, the left was brisk with marked extensor response. The cardiac and respiratory sounds were natural. The urine was very offensive, alkaline, and phosphatic, containing also pus, spermatozoa, blood and mucus, its specific gravity was 1030 and there was some retention The temperature rose to 100° F during the first two days in the hospital, subsequently, as a rule, it remained either normal or subnormal

The patient continued much in the same condition until the middle of January His bladder was washed out occasionally and a headache from which he at times suffered was relieved by phenacetin. The spine was repeatedly examined but no tenderness was elicited by pressure. The girdle pain remained in the same situation. He now complained of pain through the shoulders and a sense of impending suffocation and he could not take a deep breath. At the end of the month œdema of the left leg began, but no blocked vessel was felt. On March 10th he complained of a stiff neck and a large deep seated tumour was felt behind the left clavicle and the sterno-mastoid. This swelling increased in size for several days until it was a couple of inches above the level of the collar bone and it could be felt as a soft nodular mass beneath the anterior border of the muscle. The tumour afterwards diminished in size until one or two small gland like tumours were alone to be felt After this attack the man went downhill rapidly His head became markedly retracted on April 3rd and the right arm somewhat rigid He wandered at night There was a troublesome cough with much glairy mucus which, owing to general weakness, the patient expectorated with daily increasing difficulty He was fairly conscious to the last, although his articulatory powers were extremely feeble, and he died, apparently asphyxiated, on April 11th



Section of a tumour of the falx cerebri showing structural resemblance to the thyroid gland *a a* Saccules lined with a single layer of columnar epithelium and containing a colloid substance with a few scattered nuclei imbedded in it *b b* Interlobular stroma of fibrous tissue

Necropsy—At the post-mortem examination which was held on April 12th, a tumour of the size of a walnut was found beneath the cerebral membranes posteriorly and to the left of the falx cerebri The grey matter of the external occipito parietal fissure beneath the tumour was indented. On the left side of the cerebellum was a similar tumour On the anterior aspect of the body of the third dorsal vertebra there were a tumour and some extensive narrowing of the spinal canal The spinal cord was quite degenerated below the third dorsal vertebra. The thyroid gland was not enlarged. Nothing very abnormal was found in the chest. There were two tumours found in the liver each of them of the size of a walnut Both adrenals were much enlarged and showed some structural changes Portions of the tumours were forwarded to the Clinical Research Association In due course the following report was received "The growth in the suprarenal body has a remarkable structure. It is evidently a secondary deposit and resembles the specimens from the cerebellum and falx cerebri. There is, however, more solid growth arranged in alveoli which seems to indicate a more rapid epithelial proliferation The tumour in the cerebellum and that attached to the falx cerebri have the same peculiar structure numerous spaces and cysts lined with columnar epithelium and filled with a colloid secretion or with vascular intercystic papillomata They most nearly resembled certain tumours found in the thyroid gland" The reporter, Mr J H. Targett, subsequently added "It would be interesting to know whether any enlargement of the thyroid gland existed which might have been the primary focus of the disease." There was, however, no enlargement, and notes of the case including this statement were forwarded to Mr Targett. That gentleman then sent a further report on the case to the house physician, Dr Henderson After stating that the disorganisation of the spinal cord was due to mechanical compression he continued "As to the exact nature of the tumours I am still somewhat in doubt. Many parts of the section bear a very close resemblance to thyroid gland and at the same time the growth is obviously malignant. I note in your report of the case that the thyroid was normal. A lump, however, formed in the anterior triangle of the neck which might have been connected with an accessory thyroid gland or the so-called parathyroid bodies

Remarks by Dr HOLLIS.—This case of malignant disease, apart from its rarity, is interesting both in its clinical history and from its histological significance. We learn, firstly, that a patient may suffer from a metastatic development of rapidly growing tumours of a thyroid nature without a goitrous enlargement, and, secondly, the structural peculiarities of the tumours suggest that during life they performed functions resembling those of the thyroid body It is incredible that the metastasis of these highly differentiated tumours was achieved through the agency of psorosperms or other alien germs circulating through the system. The case, then, is interesting in its relation to the "parasitic theory," if I may so name it, of the causation of malignant disease. There is little doubt that the tumour in the falx cerebri was one of the earliest if not the first, to develop. Its histological features pointed to this conclusion On section this tumour presented a close resemblance in structure to a supplementary thyroid body It consisted of similar saccules lined with a single secretory layer of cubical epithelium and filled with a colloid material which stained readily The saccules were bound together by strands of areolar tissue supporting the blood vessels Such a highly differentiated body probably grew slowly We had clinical evidence in the early onset of giddiness and vomiting that this and the cerebellar tumours were then developing On the other hand, the suprarenal growths displayed a neoplasm of a far more malignant type. Although saccules, visible in the cerebral tumours, could also be made out here, yet their characters were much changed. They no longer contained a homogeneous colloid but were stuffed in many instances with proliferating cellular elements. These histological peculiarities agreed also with other macroscopic characters separating the adrenal growths from the others. Instead of being sharply defined from the surrounding tissues as was the case in the first-mentioned tumour, the latter growths partook of the characters of a diffuse cellular invasion of the neighbouring tissues I am indebted to Mr H. T Marriott, who saw the case for some time before admission to the hospital, to Dr Henderson and to Mr R H W Garle, the third house surgeon and pathologist, for much of the information here recorded.

Medical Societies

ROYAL MEDICAL AND CHIRURGICAL SOCIETY

Paroxysmal Hæmoglobinuria of Traumatic Origin.—Remarkable Series of Cases of Molluscum Fibrosum in Children.

A MEETING of this society was held on March 24th, Mr ALFRED WILLETT, the President, being in the chair

Mr C W ENSOR and Dr J O WAKELIN BARRATT communicated a paper on Paroxysmal Hæmoglobinuria of Traumatic Origin. They said that the purpose of the paper was to describe a case of paroxysmal hæmoglobinuria which was of unusual interest since the attacks of hæmoglobinuria were associated with preceding violence. The subject of the paroxysms was a lunatic who for some years had contracted a habit of beating his forehead with the palm of his right hand. At irregular intervals this habit took the form of a bout of extreme violence, lasting for from half an hour to one hour or longer, such bouts were quickly followed by hæmoglobinuria. Indications of local syncope and local asphyxia were absent, nor did the paroxysms depend upon exposure to cold. The interdependence of the paroxysms and the bouts of violence was shown by the fact that (1) every attack studied had been preceded by a bout of violence (2) no undoubted instance of a bout of violence not being followed by hæmoglobinuria had been discovered, and (3) restraining the patient from beating his forehead tended to reduce the number of paroxysms The hæmoglobin was present in the urine in the form of oxyhæmoglobin. A small amount of a compound giving an absorption band in the red of the solar spectrum was also present. The amount of hæmoglobin lost during a paroxysm was equal to that contained in from 1 5 to 2 0 grammes of the patient's blood. The suggested explanation of the attacks of hæmoglobinuria was as follows the self inflicted violence caused extravasation of blood into the subcutaneous tissue. Hæmoglobin rapidly passed out of the red cells owing to the local development of an autolysin The dissolved hæmoglobin entered the blood stream and became rapidly filtered off through the glomerular epithelium of the kidneys — Dr LOUIS W SAMBON said that Mr Ensor and Dr Barratt attributed the hæmoglobinuria in this case to the frequent blows which the patient inflicted upon *himself* by beating his forehead with the palm of the right hand. To explain the pathology of this so-called 'traumatic hæmoglobinuria" they were obliged to surmise that the blows caused effusion of blood in the underlying tissues, a fact which they contradicted themselves because they stated "that the skin of the forehead did not exhibit any bruising, even after severe beating" They were obliged, moreover to suppose that the hypothetically effused blood underwent auto-hæmolysis, a condition of which he knew no other example But Mr Ensor and Dr Barratt did not prove that the hæmoglobinuric paroxysms always followed every repetition of traumatism—in fact, they stated that they could give no definite proof of the hæmoglobinuria not presenting itself without previous violence. He was inclined to look upon the violence of the patient as an accompanying phenomenon. Mr Ensor and Dr. Barratt suggested that the paroxysms might be due to muscular exertion and they stated that though in man exertion was not known to be *ever followed* by hæmoglobinuria, it did, however occur in horses. Horses, like oxen and sheep, did suffer from attacks of paroxysmal hæmoglobinuria, or *red water fever* as it was called, but in such cases—at least in oxen and sheep—the disease was due to a protozoal parasite and muscular exertion could only be an *exciting* cause which brought into activity the latent parasite In the Roman Campagna newly imported oxen invariably suffered from hæmoglobinuria with fever during the summer but the indigenous cattle never developed the disease except under the stress of great fatigue during the harvesting season Paroxysmal hæmoglobin was attributed to *many causes* such as exposure to cold syphilis, malaria, and tuberculosis, and he hesitated to add traumatism to this list The occasional epidemic occurrence of paroxysmal hæmoglobinuria among infants in lying in institutions, he thought, proved that a more specific cause must be looked for —Dr J W W STEPHENS thought that many of the features in the case recorded resembled those occurring in blackwater fever The urine of a patient previously to the onset of an attack of blackwater fever often contained urobilin, as shown by the spectroscope, and a trace of albumin, and a similar condition had been present in the case recorded The quantity of hæmoglobin in the plasma of the blood was often of too small a quantity to give rise to any apparent hæmoglobinæmia.—Dr VAUGHAN HARLEY questioned whether the presence of the hæmoglobinuria could be attributed to a hæmolysin which was supposed to be formed at the seat of injury He suggested that mechanical vibration might liberate the hæmoglobin from the stroma of the corpuscles He stated that in certain individuals urobilin was constantly to be found in the urine —Dr A. E. GARROD said that there could be but little doubt that exposure to cold was an exciting cause of paroxysmal hæmoglobinuria. The lowering of the superficial temperature of the body was sufficient to produce an attack, but there was probably some underlying factor in most cases which was not clear In some cases exertion would produce an attack when cold would not. An explanation must be sought for rather in the formation of a hæmolysin than in any actual friability of the corpuscles.—Dr W BULLOCH said that laking of corpuscles was produced in two ways firstly by substances such as ether, and, secondly, by animal products, of which cobra venom might be given as an instance. The question arose whether the production of the hæmoglobin was due to a simple body of the first group or to the more complicated body of the second group. The mechanical act of beating on the forehead might produce a substance which would act as a hæmolysin and that body might, as Ehrlich had suggested be derived from the endothelial cells of the vessels at the point of injury — Dr BARRATT replied.

Dr ARTHUR H. ROBINSON and Dr ARTHUR WHITFIELD related a further account of a remarkable series of cases of Molluscum Fibrosum in Children communicated to the society by Dr John Murray in 1873. They said that the description of the condition of these patients in later life had been thought of sufficient interest to justify a further report, especially as, owing to the death of one of them in Islington Infirmary, material for investigation was obtained from various positions The patients were originally three in number, two females and a male, and constituted the second, third, and fourth children of a family of five, the eldest and youngest being healthy When described by Dr Murray the abnormality consisted in the presence of numerous tumours, varying in size from that of a pea to that of a walnut and situated on the face, head ears, back, and extremities Similar growths were also found on the gums and the terminal phalanges of the fingers were buried in purple tumours This condition was most marked in the eldest child, a girl, aged seven years, but a similar state of things was to be observed in the boy, aged three years and nine months, with the exception that his fingers were not affected, and also to a very slight degree in the girl, aged two years. Of these three children one, the youngest, had been dead some time and nothing further could be found about her The eldest lived in a home for incurable patients and was visited and the size and position of the tumours in the present year were carefully noted The male died in Islington Infirmary and photo graphs were taken after death, as well as material for histological examination The chief change in the female patient appeared to be the enormous growth of the tumours in size rather than in number Instead of reaching the size of a walnut as a maximum they now formed in places, especially the buttocks, great lobed masses larger than an orange, those on the ears alone being as large as a walnut Charts were shown giving the size and distribution of the tumours and it was noted that one or two new growths appeared to have developed, whilst one at least seemed to have disappeared. The appearance of the head of this patient was so hideous that she was constantly wrapped up in linen. The male patient also showed enormous develop ment of the original tumours in a similar manner and also the formation of a large number of small subcutaneous tumours about the fingers and toes. Histological examination was made of portions taken from the nose, ear, and fingers The two former pieces presented identical appearances—viz., that of a tumour composed of a hyaline ground substance containing fine connective tissue fibres and large cells, while the latter showed partly similar growth and partly ordinary fibroma The tumours from the nose and ear seemed to blend with the corium and might be called cutaneous, while that of the finger was distinctly subcutaneous. No nerve fibres or elastic tissues were found within the tumours which were fibromata and not neuro-fibromata.—Sir **THOMAS BARLOW** said that the patients had been under the care of Dr Murray as children and he had attributed the condition to the insanitary surroundings in which they were brought up The father died from cancer of the stomach and this was of especial interest in connexion with the non malignant affection of the children. The eldest child was most affected and in the two elder the disease was progressive, while in the third child the disease became arrested These children were liable to severe febrile disturbances The mental condition of these patients also varied with their disease, for the first was mentally defective, the second was brighter, and the third was intelligent.

MEDICAL SOCIETY OF LONDON

Exhibition of Cases

A MEETING of this society was held on March 23rd, Mr **PEARCE GOULD**, the President, being in the chair

The **PRESIDENT** exhibited a severe case of Rodent Ulcer treated by the x rays The patient was a man, aged 73 years the whole of whose upper jaw and part of the lower jaw had been gradually in the course of 40 years eroded by the disease He had undergone several operations but the disease had always recurred. He had been treated by the x rays since April last. It relieved the pain, but the disease did not improve until in February the strength of the current was increased to three ampères. Three exposures were made per diem with a spark of from four and a half to five inches. The case had made very marked improvement since February

Dr S E. **DORE** exhibited a case of Rodent Ulcer in an Unusual Position treated by the X Rays and the Finsen Light. The patient was a woman, aged 44 years, in whom the disease had started 18 years ago as a small pimple on the right cheek which began to ulcerate about five years ago After 30 applications of the x rays the ulcer had entirely healed and the edge was further treated with six applications of the Finsen light. Treatment had been discontinued for the past five months and the edge now showed signs of recrudescence. The case illustrated the readiness with which an ulcer healed when treated with the x rays, also that the hard edge often resisted this treatment and had to be dealt with by other methods On the side of the face which had been treated solely by the x rays the scar was hard and telangiectatic, on the other side, treated by the Finsen light, it was soft and pliant Mucous membrane, however, did much better under the x rays than under the Finsen light. Dr Dore also exhibited two cases of Lupus Vulgaris similarly treated The first was a woman, aged 34 years, who had been under treatment for three years, and the second was a woman, aged 24 years, who had had the disease for 14 years. Both cases showed very great improvement, while they both illustrated the tendency to relapse.

Dr **WILLIAM EWART** exhibited a case of Multiple Symmetrical Fatty Swellings resembling Dercum's disease (adiposis dolorosa) The patient was a married woman, aged 43 years, who was sent to St. George's Hospital in February, 1903, for symptoms of hepatic cirrhosis. A flat soft swelling painful and tender, situated over the seventh cervical vertebra was first noticed three months ago Quite recently similar swellings of the same kind had been observed in the arms, shoulders and neck, for the most part symmetrically situated The case was of interest as suggesting the view that multiple painful and tender lipomata, such as those described by Dercum, might occur in association with wasting as well as adiposis

Dr T **GRAINGER STEWART** exhibited (for Dr J A. **ORMEROD**) a case of Syringomyelia occurring in a man, aged 29 years, who was admitted to the National Hospital for the Paralysed and Epileptic for weakness of the right arm and leg When an infant he had had a "fleshy lump" of doubtful origin cut away from the back of his neck. His illness had commenced with a cold dead feeling in the right leg which extended to the right arm. On admission there were weakness and wasting of the right forearm and hand and a spastic condition of the lower extremities The knee and ankle jerks were very brisk but the deep reflexes were absent in the upper extremities. The plantar reflexes were both of an extensor type —Mr T **HERBERT KELLOCK** suggested that the operation on the neck was for spina bifida, which might be an indirect cause of the syringomyelia

Dr **STEWART** also exhibited a case of Functional Paralysis with Tremor, occurring in a female, aged 20 years The present illness had commenced six years before with the gradual supervention of weakness of the left leg The tremor in the right arm commenced suddenly three months later She was admitted for the second time to the National Hospital for the Paralysed and Epileptic in November, 1902, when there was weakness of all the extremities with tremor on exertion Her gait was of a markedly "functional" type though of a somewhat spastic type. There was no wasting or rigidity of the muscles The deep reflexes were increased and ankle clonus was present, there were also hyperæsthesia over the spine and ovarian regions. There was marked contraction of the visual fields, especially for colour The patient had improved considerably since admission

Dr F **PARKES WEBER** exhibited a case of Multiple Congenital Deformities The child, aged one and a quarter years, presented chronic hydrocephalus, quiescent at the present time, complete syndactylia of both feet and both hands, cleft palate, and slight umbilical hernia. The frontal and parietal bones were widely separated in the sagittal line, and the shape of the supra orbital regions likewise indicated chronic hydrocephalus, but the absence of any bulging in the sagittal line indicated that the hydrocephalus was quiescent at the present time. The occasional association of chronic hydrocephalus with spina bifida was generally recognised. The present case illustrated its association with other malformations.—Dr **GEORGE SHUTTLEWORTH** asked if there was any history of syphilis or any trouble during labour He doubted if such cases of hydrocephalus ever got quite well and referred to a case which he had had under observation for many years.

Dr WEBER also exhibited a case of the Form of Chronic Joint Disease in Children described by Dr G F Still in 1896.[1] When the boy was shown before the Medical Society of London in April, 1902, he was a typical example of this clinical condition, having, in addition to the cervical rigidity and *characteristic articular swellings, enlargement of the spleen,* liver, and lymphatic glands The condition of his articulations was now almost normal with the exception of crackling in the knees and slight spindle-shaped enlargement about the finger joints, and the rigidity of the upper part of the spinal column had practically disappeared. The heart, which was affected by an attack of endocarditis in November, 1901, still presented signs of slight mitral disease. This case seemed to show that the articular affection described by Dr Still was sometimes practically recovered from. The most important part of the treatment had consisted in the child having been kept away from the unsatisfactory conditions of his own home since May, 1901, combined with suitable diet. Dr Weber still thought that the original affection was, or was complicated with, true rheumatism.

Dr F J POYNTON exhibited a case of Chronic Rheumatic Arthritis in a child. The patient, a girl aged six years, was first seen in October 1901, and had then been suffering for five months from rheumatic fever which had affected all the larger joints, had caused dilatation of the heart and a periosteal nodule on the lower end of the right radius The chief points of interest were the length and severity of the arthritis in a young child who had been eight months at least bedridden from arthritis, the failure of salicylates in a case of simple rheumatism, and the completeness of the recovery under liberal diet including meat and tonics—The PRESIDENT asked Dr Poynton if there was any swelling of the spleen and glands as in Dr Weber's case and in those cases published by Dr Still.—Dr A. E. SANSOM emphasised the difference between what he regarded as an occult form of rheumatism which tended to affect the heart and the more obvious form which tended to affect the joints.

Dr CHARLES W CHAPMAN showed a case of Multiple Cardiac Murmurs in a boy aged nine years, who had had scarlet fever four years before and chorea three years later On examination there were marked prominence of the left side of the chest, visible cardiac action with forcible apex beat, jerky pulsation of the vessels of the neck, considerable increase of cardiac dulness, especially in the lateral direction, and thrills of systolic rhythm could be felt over the aortic mitral, and tricuspid areas. There were a loud sawing double murmur in the aortic area with obliteration of the second sound, a blowing mitral systolic murmur and a harsh systolic murmur in the tricuspid region. The pulse was regular and collapsing It was probable that the lesions were partly congenital and partly due to endocarditis during scarlet fever and chorea. It was remarkable how little inconvenience the boy had suffered from the state of his heart.—Dr EWART remarked on the enormous cardiac dilatation which might exist with very little cyanosis

Dr. H. A. CALEY exhibited a case of Arthropathy of the Right Hip and Left Ankle Joints of Neurotrophic Origin with Osteo-Arthritis of the Right Hand, with skiagrams of the affected joints. The patient was a man, aged 73 years, who in January 1903 slipped and fell upon the right hip, for which he was admitted to St. Mary's Hospital. The osteo-arthritis in the wrist, metacarpal and phalangeal joints of the right hand had commenced 30 years before, but the trouble in the right hip and left ankle had commenced quite recently It was uncommon to find two forms of arthritis in a man of this age. The only distinct nerve symptom which existed in this case was Argyll Robertson pupil of the right side only—a circumstance which was also unusual. The knee-jerks were exaggerated, but this pointed to the fact that lateral sclerosis might exist with other spinal disease. Skiagrams showed that whereas there was thickening of the bones in the osteo-arthritic joint lesions of the hands in the hip and knee joints the affection of which was of neurotrophic origin, there was atrophy—Dr F J POYNTON remarked on the possibility of rheumatoid arthritis becoming atrophic in the aged and asked whether this might not be so in the present case, all the joint lesions being of one kind.—Dr CALEY in reply pointed out the long duration of the osteo-arthritic changes and the more recent supervention of the neurotrophic changes which were moreover of an atrophic description as shown by the skiagrams.

OBSTETRICAL SOCIETY OF LONDON

Exhibition of Specimens.—Presidential Address

A MEETING of this society was held on March 4th, Dr EDWARD MALINS, the President, being in the chair.

Dr C H. ROBERTS showed microscopical sections of a case of Tuberculosis of the Fallopian Tube and Ovary, removed by operation from a woman, aged 32 years The patient had been in failing health since 1899 In December, 1902, she was much worse with irregular uterine hæmorrhage, fever, and wasting A considerable tumour was found in the lower abdomen On opening the abdomen both tubes and ovaries were found to be enlarged The left tube was from four to five inches long and adherent to a necrotic ovary of the size of the fist The pelvis was roofed in by dense adhesions and the intestines were adherent to the tubes and back of the uterus. Both tubes were banana like in shape and contained pus Sections of the uterine ends of the tubes showed distinct tuberculous nodules giant cells and breaking down caseous areas. The ovarian tissue also contained tubercle nodules The patient sank in 36 hours from shock. The question of the advisability of abdominal section in such desperate cases was discussed. Tuberculous pyosalpinx pointing in the vagina could easily be opened and drained by that route, as in another case under the care of Dr Roberts, though, of course, the tubes could not be removed. In such cases abdominal section might be undertaken when the patient's condition allowed.—Dr WALTER SWAYNE said that three months ago he had to deal with a case which presented many features similar to those described by Dr Roberts. The patient had a large mass in the pelvis and much distension of the abdomen which contained fluid. On opening the abdomen the whole of the peritoneum was studded with what to the naked eye was apparently miliary tubercle. The appendages were imbedded in exudation which formed the mass felt in the pelvis and the peritoneum was full of ascitic fluid, it was obvious that removal of the appendages was impossible and the wound was closed after flushing the peritoneal cavity with a hot saturated solution of boric acid The patient made a good recovery and at the end of a month she had put on several pounds in weight.—Dr P HORROCKS, Dr W S. A GRIFFITH, and Mr J H. TARGETT also joined in the discussion.

Dr A. H N LEWERS showed a specimen of Keratinising Carcinoma of the Body of the Uterus. The patient from whom the specimen was removed was a single woman, aged 45 years She had suffered from metrorrhagia for two years and from some pain about the lower abdomen which came on some time after the commencement of the bleeding The cervix was dilated and a malignant growth was found in the body of the uterus. There was a lump felt to the right of the uterus of the size of a Tangerine orange. Abdominal panhysterectomy was performed on Nov 27th, 1902, in the London Hospital The lump to the right of the uterus proved to be the right ovary enlarged, partly by cystic change and partly by a malignant growth secondary to that in the uterus. The ovary was not adherent, and there was no evidence of any other secondary deposit elsewhere. As regards the operation the case illustrated the advantages of the abdominal operation, especially since the exact nature of the lump to the right was ascertained at the very beginning of the operation, instead of towards the end of it, as would have been the case if vaginal hysterectomy had been performed. The patient made a good recovery As regards the specimen the growth was a columnar-celled carcinoma, but over a considerable extent it had become keratinised so that in parts of the sections the appearances were very similar to those of squamous carcinoma of the cervix.—Mrs STANLEY BOYD M.D in reference to the association in Dr Lewers's case of carcinoma of the body with carcinoma of the ovary, mentioned a similar case where she had removed by abdominal panhysterectomy a large uterus the seat both of fibroids and cancer of the body, from a middle-aged woman The right ovary contained a secondary growth and was non adherent and easily removed with the uterus. No other secondary growths were discoverable. The patient died some six months later with cerebral symptoms. There was no evidence of local recurrence or of involvement of abdominal glands.—Dr C. J CULLINGWORTH said that Dr Lewers's case and the one to which Mrs. Boyd had referred had a special interest for him at that moment as he had that very morning operated upon the second case the best treatment was by the means he had advocated to restore the vigour of the patient so that he could play games and take outdoor exercise. In his opinion that patient was better off under those conditions, even if he were still passing a small amount of sugar, than if he were being plied with sedative medicine and submitted to restricted diet. Of course, he knew that there were many cases which were too far gone to admit of their being treated in that way, but there were many which if taken sufficiently early would yield good results.

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[1] Transactions of the Royal Medical and Chirurgical Society vol. xx., p. 47

The PRESIDENT said that it was generally stated in text-books of medicine that in conditions of chronic venous congestion sugar was found in the urine That was an exceedingly indefinite statement. He had gone through 200 consecutive cases in which there had been chronic venous congestion the result of valvular heart disease In 171 of these cases albumin was present in the urine, but sugar, as far as it could be traced by Fehling's solution, was only found in one instance and appeared to be purely dependent on alcoholic excess, as it was only evident after excessive indulgence in that respect. The President was therefore of opinion that in cases where there was chronic venous congestion sugar was not of common occurrence

Dr HALE WHITE in closing the debate said that it could not be too strongly insisted that glycosuria was only a symptom and probably not the most important symptom of diabetes, for there was no reason for thinking that death was ever directly due to glycosuria while it certainly was often due to another symptom—namely, coma. Glycosuria, or to be more accurate dextrosuria, was a symptom of diabetes, as albuminuria was of Bright's disease, but both occurred in other conditions than diabetes and Bright's disease respectively and a patient with diabetes might be desperately ill when he had but little sugar in his urine as a patient with Bright's disease might be near his end with but little albumin in his urine. In both diseases the most important thing was to understand the formation of the coma producing poison. In diabetes metabolism was perverted in at least six ways there was the failure to use sugar, there was its production from proteid, there was the effect that ingested sugar had in exciting sugar formation, there was the formation of oxybutyric acid and its allies, there was, probably separate from the last, the low tension of carbon dioxide in the tissues, and there was the formation of the so called fatty blood Dr Hale White thought that more progress would be made by studying these together rather than separately Dr Pavy's remarks had raised the question whether it was necessary for a case to fall in the composite category, that some of the excreted sugar should come from decomposition of proteid. He (Dr Hale White) thought that in a composite case some of the sugar ultimately had this origin, but in a slowly progressing composite case the sugar in the urine was probably for many years derived entirely from the failure of the body to oxidise it. Dr Pavy's remarks as to the difficulty of dealing with cases in which sugar was only occasionally present would appeal to all. It was most remarkable to observe how sometimes there might be a large amount of sugar in the urine and within two hours none at all. The great difficulty with these cases was to decide whether they were the early stage of genuine composite diabetes or only alimentary glycosuria. If there was no ferric chloride reaction time only could show They could probably all bring to mind cases supporting Dr Pavy in his statement that little sugar did not necessarily mean that the case was not one of genuine composite diabetes, the patient might be suffering severely from this disease with an intense ferric chloride reaction and yet have but slight glycosuria. Dr Saundby had referred to alcohol and had suggested that it was a cause of diabetes. In connexion with this it must be remembered that some of the instances of glycosuria after excessive consumption of alcohol were very likely examples of alimentary glycosuria rather than genuine diabetes and were probably due to a premature wearing out of the tissues Many of the cases which in Germany followed excessive beer drinking belonged to this class. Many alcoholic drinks contained much sugar and all alcoholic drinks contained other substances than alcohol. There was often too great a tendency to ascribe disease to alcohol when all that was known was that it followed the ingestion of alcoholic drinks. There was he thought, no proof that absolute alcohol could produce genuine composite diabetes and also there was no proof that unsweetened alcohol in moderate quantities was harmful to diabetics Until this was shown to be the case it would be well often to allow alcohol to diabetics, for their carbohydrate-free diet was short of energy and an ounce of brandy yielded about 90 calories Lævulose had been deprecated because of its expense, but if a diabetic could take two ounces of lævulose he gained 250 calories and the cost of this amount of lævulose was just under a shilling The cost of four ounces of brandy was well under a shilling and represented 360 calories, so that a diabetic could by spending about one and ninepence in brandy and lævulose obtain 610 calories Dr Saundby had alluded to the respective value of potatoes and toast for diabetics, but it must be remembered that bread contained 50 per cent. of carbohydrates and 40 per cent of water The effect of toasting was to drive off the water, so that toast was little but carbohydrates while potatoes only contained about 18 per cent. of starch. Before it could be accepted that there was any special value in potatoes for a diabetic, comparison must be made not between toast and potatoes but between equal weights of the carbohydrates in toast and those in potatoes The chief part of Dr Bradford's remarks had been directed to pointing out that probably different cases of diabetes owned a different morbid anatomy and a different pathology With that they would all agree The history of medicine showed that the more diseases were studied the better able were they to see distinctions between what were regarded as the same. Whether Dr Bradford's suggested distinctions would be those ultimately adopted time only could show Every one would agree with Dr Hutchison that clinically one of the most important questions was the distinction between diabetic and non diabetic glycosuria The distinction was not of essential importance when considering treatment, for it was allowed that in all cases, whether examples of diabetes or only examples of alimentary glycosuria, the object of treatment was the same—namely, to diet the patient so that sugar would disappear from the urine. The distinction would be, if it could be made with certainty of essential importance from the point of view of prognosis. Unfortunately, it was rarely possible to be certain whether a patient who was passing sugar in his urine was only suffering from alimentary glycosuria or whether he was suffering from the early stage of diabetes, unless the urine contained oxybutyric acid or its derivatives and the sugar was quickly controlled by diet. The proper treatment of such a case was of the greatest importance, the urine must be examined from time to time, especially after an ordinary meal, and directly that it was found that such a meal led to glycosuria the patient must again be dieted. But if the patient refused all treatment the distinction between alimentary glycosuria, or, as some called it, "alimentary diabetes," and genuine diabetes, or as Dr Pavy called it, "composite diabetes," would usually soon show itself, for, as Dr Hutchison urged the failure to utilise sugar was in the case of genuine or composite diabetes progressive, but this was not so in the alimentary form, or at any rate the failure progressed very slowly A distinction based upon the rate of progress, although of great clinical value, was of little pathological value and he (Dr Hale White) suggested that one pathological distinction between the two conditions lay in the fact that in genuine diabetes, if untreated, the output of sugar in the urine became greater than could be accounted for by that in the food, and, indeed, often there was sugar in the urine when there was none in the food, showing that the sugar had been formed from proteids, while in alimentary diabetes all the sugar in the urine was derived from the carbohydrates in the diet. Probably a further distinction lay in the fact that the genuine diabetic sooner or later excreted oxybutyric acid or its derivatives in his urine in large quantities while this phenomenon was not a characteristic of alimentary glycosuria and lastly, the genuine diabetic might at any time become comatose while the person suffering from alimentary glycosuria had not the tendency to diabetic coma. Patients suffering from genuine or composite diabetes who ascribed their illness to an injury of the nervous system were sometimes met with, but he doubted whether much attention ought to be attached to this unless a number of cases in which the nervous lesion was found after death were published It would be remembered that the subject was threshed out at the Pathological Society of London in 1883, when it was shown that the appearances in the central nervous system which had been thought to be characteristic of diabetes were either normal or due to faulty methods of preparation and it was further shown that there was no special liability of inmates of asylums to diabetes That injuries of the central nervous system would produce transitory glycosuria was quite undoubted but that nervous injury would cause composite diabetes was very doubtful. With regard to hyperglycæmia as a cause for some of the symptoms, there was no doubt that some—i.e., polyuria and pruritus—were due to it, but many were set down to hyperglycæmia upon insufficient evidence. For example, the cases of persons who had cellulitis and did not improve till the sugar had been removed from the blood had been cited The means adopted to remove the sugar led to an increase of weight, a general improvement of health, and if the patient had diabetes to a diminution of oxybutyric acid in the urine. Who could say to which alteration in the patient the healing of the cellulitis was due? If anyone maintained that it was due to the disappearance of the sugar it lay with him to explain why all people with hyperglycæmia did not get cellulitis and to induce cellulitis by the experimental induction of hyperglycæmia. It was better to be content with saying that certain symptoms were perhaps connected with hyperglycæmia than to assert, as some authors did, that they were due to it. He quite agreed with Dr Hutchison as to the advantage of the casein breads and also that if a patient was on a carbohydrate-free diet the addition of even milk to the diet might lead to an increase of sugar in the urine. In some cases, too, sugar free milk, as it had been called, which was suggested by Dr R. T. Williamson, was of advantage, but on the other hand, patients were often too strictly dieted and they appeared to derive benefit from a small amount of carbohydrates and it must be remembered that in the opinion of many too sudden strict dieting led to coma. If in any case it was felt that some carbohydrates should be allowed milk was useful and in actual practice it would be found that the cases in which a little milk might be given with advantage were not few although no doubt in some the lactose in it was harmful. He was also in accord with Dr Hutchison in what he had said about the value of alcohol and fat

LIVERPOOL MEDICAL INSTITUTION

Exhibition of Cases—Defective-minded Children.

A MEETING of this society was held on March 19th, Mr Rushton Parker, the President, being in the chair

Dr Philip Nelson reported a case of Nasal Polypus of Unusual Size, the growth measuring when fresh two and a half inches by one and a half inches It occupied the left nasal passage, the septum being much deflected to the right, and it was readily removed by the snare, the right side was cleared by the use of Mackenzie's forceps The polypi as usual were attached to the ethmoid bone.—Mr J Bark agreed as to the unusual size of the polypus and also as to the use of the snare. In cases where the pedicle was situated in the hiatus semilunaris he found the use of forceps better

Dr. Karl A. Grossmann showed a case of Paralysis of both Third Nerves and of the Left Fifth Nerve The patient, a woman, 38 years of age, had been well up to four years ago, when a heavy cold combined with headaches attacked her The headaches persisted and a year later she noticed numbness on the left side of the face and the left eye became inflamed At present the eyes could not be raised above the horizontal line and could only be moved downwards about 45°, the movement inwards was also limited to about 45° The lids did not droop but the left lid did not open quite as much as the other, otherwise the lids could be opened and closed freely The left cornea showed a large adherent leucoma, the pupil was narrow and adherent posteriorly and there were two opacities under the capsule of the lens. There was anæsthesia of the left side of the face, the cornea, and the conjunctiva, and taste was absent on the left side of the tongue On opening the mouth the jaw and tongue went to the left side. Dr Grossmann thought there was a circumscribed meningitis (gummatous?) on the left side of the pons.—Dr T R Bradshaw said that the symptoms described and the escape of the great occipital and posterior auricular nerves indicated the course of the fifth nerve near the pons rather than the nuclei as the site of the lesion The association with extensive palsy of the third nerves pointed to a lesion extending forwards to the interpeduncular space and he agreed with Dr Grossmann that in all probability the lesion was syphilitic meningitis.

Mr J Douglas Crawford showed a boy, aged 17 years, in whom the Right Inferior Extremity was three inches Longer than the Left. The cause was probably lymphatic obstruction of congenital origin The skin over the tibia and thigh was hyperæsthetic. The subcutaneous tissue in the same regions, as well as over the face, was soft and pulpy Proptosis of the right eyeball was present Whilst in hospital the head of the femur became separated from the neck.—Dr Bradshaw suggested acromegaly as a possible cause of the condition.—Mr R W Murray and Mr Damer Harrisson also spoke

Mr Damer Harrisson read a paper upon Defective-minded Children, illustrating the various types by lantern slides After discussing the features of some individual cases he suggested that in the education of these children muscular coördination must lead the way and the intellectual development be dealt with later In all or most of these cases some physical defect was present and malnutrition was very common, and these conditions must be seen to He thought that congenital cases responded better than those born normal but in whom arrest from one cause or another occurred Finally, Mr Harrisson emphasised the necessity for prolonged after-care and the wisdom of providing colonies for such individuals—Dr Stanley A. Gill thought that a good many of these cases were due to some preventable fault in the ancestry, such as alcoholism and injudicious marriages, he was not quite sure whether injury at birth by midwifery forceps had not a great deal to answer for. Further, the schoolmaster must be reckoned with who through his ignorance of even the elements of physiology, often forced a child's brain beyond what it was capable of bearing and thus brought about an early mental breakdown—Mr W N Clemmey thought that home influences reflected themselves in the career of defective-minded children. He agreed with Mr Harrisson that the care of these children after leaving school demanded attention.—Dr J Lloyd Roberts said that his experience of imbeciles at the Eastern Counties Asylum for Imbeciles was that although most of the cases were capable of a certain amount of improvement, yet in the vast majority this was so slight that throughout their lives the patients would continue to require supervision and protection. The practical utility of the study of these cases lay therefore in the consideration of two points—(1) whether any of the causes were preventable, and (2) what were the best means to be adopted for the care of these cases. He agreed with Mr Harrisson as to the desirability of the formation of colonies. He thought that injuries at birth were less often due to forceps than to delay in using them.—Mr Harrisson replied.

PATHOLOGICAL SOCIETY OF MANCHESTER

Exhibition of Specimens.

A MEETING of this society was held on March 11th, Dr H. A. G Brooke, the President, being in the chair

Mr F A. Southam mentioned a case where a Tumour had been removed from the gluteal region of a male, aged 58 years.—Dr C H. Melland described the tumour as an angio-sarcoma. A great part of the section simply showed a mass of round and oval cells which were in places undergoing degeneration or were the seat of hæmorrhagic infiltration. Other spots showed, however most distinctly the way in which the tumour cells were originating from the connective-tissue cells in the walls of the smaller arteries.

Mr A. H. Burgess exhibited the specimens from a case of Angio-sarcoma originating in connexion with the ilium with metastases in the ribs and right kidney

Dr. Archibald Donald and Dr Melland demonstrated the specimens from a case of Tuberculous Peritonitis

Dr P R. Cooper showed a specimen of Atrophy and Hour glass Contraction of the Stomach following Chronic Ulcer The patient was a female, aged 74 years who had died from exhaustion chiefly owing to her inability to swallow food The symptoms of gastric ulcer had been entirely latent, although, when young 'indigestion had been complained of. The stomach was constricted to a narrow passage near its pyloric end and on each side of the constriction was the circular depressed cicatrix of an old ulcer

Dr Cooper also showed a specimen of Chronic Intestinal Obstruction due to carcinoma of the rectum which had been relieved by colotomy two years previously The growth itself had made comparatively little headway, but, unfortunately, a loop of small intestine which dipped down into the pelvis had become adherent to, and involved in, the growth, causing a secondary and fatal obstruction.

Dr W E FOTHERGILL made a preliminary communication on Congenital Hyperplasia of the Thyroid Gland and showed an example of the condition observed in connexion with maternal eclampsia. Chlorate of potassium had been administered during pregnancy on account of habitual abortion. At the thirty eighth week eclampsia supervened but was tided over by medical treatment which included the administration of thyroid substance. Three days later a living child was born, but succumbed an hour after birth, a hypertrophied thyroid gland together with congestion of the veins of the neck interfering fatally with respiration. The thyroid after removal weighed over 25 grammes On section it was seen to consist of small irregular acini almost without lumen and containing no colloid material. The normal thyroid in the fœtus at term was found to weigh under two grammes and to contain a considerable amount of colloid substance. The condition of the enlarged gland in question appeared to be one of hyperplasia interfering with normal functional development and probably toxic in origin.

Dr A HILL GRIFFITH showed specimens of Ocular Tuberculosis.

GLASGOW NORTHERN MEDICAL SOCIETY

The Mortality from Uterine Cancer and the Medical Profession

IN THE LANCET of March 21st, p 812, we referred briefly to the meeting of the Glasgow Northern Medical Society which was held on March 3rd, the President, Dr J STEEL MUIR, being in the chair A discussion took place, the subject being, Can anything be done by the medical profession to diminish the frequency of, and to lessen the mortality from, cancer of the uterus? The discussion was opened by Dr J K. KELLY in a paper of which the following is an abstract

After referring to the fact that women needed education as to the meaning of amenorrhœa or of other disturbances of the menstrual function, Dr Kelly pointed out that the medical education of the public depended upon the medical profession and if the medical profession could lay down some definite rules as to the causation of cancer and the means of checking the mortality from it, these rules would soon be adopted and acted upon by the public. Cancer of the cervix uteri was a frequent disease because cancer was well known to affect most those parts subject to persistent irritation. The cervix of the child bearing woman was often exposed to irritation at the time of labour and the frequency of cancer of the cervix increased with the number of children One way of lessening injury to the cervix was to allow plenty of time for its dilatation in labour If, in spite of all care, lacerations occurred they must be sutured at once. Other causes of irritation were leucorrhœa and gonorrhœa. Much might be done by careful management of labour and by careful treatment of cervical catarrh, whatever its cause, to lessen the frequency of cancer With regard to whether there were any means of lessening the mortality from cancer the question was mainly one of diagnosis Complete extirpation of the diseased part was the only method at present known for the 'cure' of cancer Complete extirpation, especially in the cervix could only be performed at an early date in the course of the disease. Therefore diagnosis of the disease at an early stage was necessary, but medical men seldom had the chance of recognising cancer at an early stage. Dr Kelly continued Here, I think, the most important rule to follow is to give plenty of time for the dilatation of the cervix during labour Except in deformed pelvis you may lay it down as an axiom that a slow first stage is without danger I have heard that it is a boast with some men that they spend very little time over their confinement cases They rupture the membranes, dilate the cervix manually, and deliver with the forceps. The injury to the cervix in these cases must be incalculably greater than when the equable elastic liquid pressure of the amniotic sac and the uniform tension of the uterine wall bring the act of dilatation to completion without artificial aid. Non interference with the natural dilatation of the cervix will often obviate the occurrence of laceration and so diminish the injury Women are unaware of the significance of hæmorrhage and of pain and it is their carelessness about these symptoms that is the main reason why we have so often no opportunity of recognising cancer at all till it is fairly advanced. Occasionally, however, we have the opportunity and do not seize it How often is it the case that a woman goes to her medical man and says "I am changing too often. Can you not give me something to stop it?" And her medical attendant says "Oh yes, I'll give you some ergot, and after you have used it for a time you must let me know how you are. If you are still losing too much I shall have to examine you" And after a few months she comes back and he examines her—and the opportunity has been lost Why did the medical man not examine her at first? In no other region of the body should we think of treating hæmorrhage with a bottle of ergot without ascertaining the cause of the bleeding But there is a general idea that ergot has a special action on uterine hæmorrhage and that idea is responsible for more harm, perhaps, than all the good that that valuable drug has ever done Perhaps another reason why the patient is not examined is that she looks so well She is possibly stout, well coloured, hearty, and vigorous, without any suggestion of illness in her appearance Far less is there any suggestion of cachexia and it is an idea very prevalent in the profession that we should expect cachexia as one of the symptoms of cancer This is a most dangerous idea. It is not uncommon to find advanced cancer in a woman who looks quite healthy and, as a rule, cachexia develops only at an advanced stage of the disease A patient who is cachetic has reached the hopeless stage and if we wait for cachexia we wait till it is too late. These three facts, then, I would like to insist upon with all the stress in my power When there has been long continued hæmorrhage, when there has been severe pain, and when cachexia has set in, the cancer is beyond the early stage and is probably too late for cure We must not wait for these symptoms, they are not to be regarded as mere warnings of the attacks of the disease. They are rather indications that the attack has been a successful one and the victim is already doomed The three symptoms of cancer of the cervix on which the main importance is generally laid are bleeding, pain, and fœtid discharge. We may briefly consider the place of these symptoms in the diagnosis The bleeding most significant of cancer is that which occurs after the menopause. If a woman has reached middle life and has ceased to menstruate there should never again be a return of hæmorrhage from the vagina. If it does return it indicates cancer in the vast majority of cases In earlier life hæmorrhage more frequently indicates myoma or salpingitis or metritis or retroversion, but even at an early age cancer is not unknown and the cause of the bleeding ought to be ascertained in all cases by physical examination. Pain of a severe kind is often a very late symptom of the disease and I incline to think, when a severe pain occurs early in the course of cancer, that it indicates a rapidly advancing form Fœtid discharge occurs sometimes from other causes than cancer It is often present in endometritis and indicates merely that the discharge has had time to become putrid before escaping from the vagina But the discharge is usually in small quantity A copious offensive discharge even at an early age generally indicates cancer, and cancer too which has passed beyond the early stage These three symptoms are not usually indications of early cancer When they are present the case has advanced beyond the early stage They are rather to be considered as urgent symptoms and indicate the need for immediate search after their cause No woman who attends at the consulting room complaining of one, and still more of all, of these symptoms should be allowed to leave without a vaginal examination being made. But I would like to plead for more than this. When bleeding and pain and fœtor are present the case is very probably an advanced one. We should not wait for the development of these symptoms Any pelvic discomfort whatever should be traced to its cause and this rule should be laid down with especial force in the case of women who are at, or are approaching middle life. So much depends upon early recognition of the disease that we should exercise the greatest circumspection in tracing every pelvic trouble to its source. Wherever there is pelvic trouble an examination of the pelvis should be made It is only when both physician and patient are alive to the importance of this rule that we shall have a fair chance of an early recognition of the disease. What, then are we to expect to find on making an examination? We are not to expect a tumour in early cancer When the cervix forms a large mass, whether this be a smooth nodular tumour or that carious broken growth which has been well named cauliflower excrescence, the disease is already far advanced, probably too far for extirpation. Cases of this kind are again and again sent into hospital as suitable cases for operation when the time for operation is long past and the cases are hopeless. In the early stage cancer occurs either in the form of a small hard patch or of a small ulcer, usually at the edge of the os externum The most common hard patch on the cervix is caused by some cicatrix resulting from a laceration. But the smooth firm linear borders of this can be easily recognised as cicatricial and on examination by the speculum it is easily distinguished by its non vascularity from the mucous membrane which it divides. Another common hard nodule on the cervix is formed by a distended follicle, but these are usually numerous and give the feeling of well-defined, I might say shotty tumours imbedded below the surface. The cancerous nodule, on the other hand, is on the surface, is irregular, shades off towards its borders which are ill-defined, and on examination by the speculum the little nodule is hyperæmic and not pale as compared with the neighbouring mucous membrane. The small hard patch is probably the first stage of cancer, but usually the earliest form with which we meet is the small ulcer There is an idea still prevalent, though fortunately it has not the prevalence that it once had that ulceration of the cervix is not uncommon even apart from cancer, and when men meet with an ulcer of the cervix they are not at first alarmed by it. Another idea is that syphilitic ulcer of the cervix is not uncommon and if there is any suggestion of syphilis in the case, such as frequent abortion, quite apart from any distinct history of syphilitic infection, we are sometimes advised to try anti-syphilitic treatment for a time. My experience, on the other hand is that if we have an actual ulceration of the cervix it is hardly ever anything but cancer. We meet with a tuberculous ulcer on rare occasions, with syphilitic ulcer on still rarer occasions, at least in Glasgow, and I may say that we never meet with any other ulcer of the cervix except the decubitus ulcer of prolapse, and this is easy enough to account for and to heal All other ulcers of the cervix are cancerous. I am convinced that the knowledge of this fact would go a long way in sending cases of cancer to us in an early stage. I must of course guard against misunderstanding here. One of the most common appearances at the os is a red raw looking surface which very closely resembles a granulating ulcer and was, in fact, regarded as an ulcer by the early gynæcologists This, which is now misnamed erosion, is not an ulcer, in many cases it is merely the lining membrane of the canal of the cervix exposed by the gaping of a laceration In other cases it represents an advance of the proper cervical epithelium beyond its normal limits on to the surface covered by the paler squamous epithelium of the vaginal wall. This erosion is one of the evidences of that cervical catarrh which I have already referred to as so common and as probably the main cause of the frequency of cancer in the cervix. The epithelial overgrowth, in fact, which is normal except for its situation may be conceived in cervical catarrh as requiring only a further development of proliferative energy to transform it into a cancerous condition. But even the digital examination of these erosions at once distinguishes them from an ulcer Their smooth, velvety, and rather raised surface is quite different from the excavated and usually harsh surface of an ulcer But if doubt arises—and this is the special point which I wish to reach—the doubt can be solved. If there is the slightest suggestion of ulceration of the cervix either on digital examination or on examination by the speculum, then a part of the suspected cervix should be removed for microscopic examination. There are some men who still express doubt as to the histological proof of cancer They will tell you 'We sent a piece of tissue to a pathologist and he said that it was epithelioma and yet the case got better and is living years after', or We sent a piece to another and he said that there was nothing malignant about it and yet it turned out to be cancer after all.' We may be sure that the men who speak in this way are not themselves pathologists and it is unreasonable to slight the labours that have been spent and the results that have accrued from the investigations on this subject There are, of course, early stages in cancer growth when the difference from normal structure is so slight that no one can say with certainly that cancer is present, but there may be enough to arouse suspicion. And if suspicion be aroused we are already on the way to prevent the progress of the disease. For if the case is suspected it will be watched, and if it is watched the advance of the disease will not be great before we can be certain about it. For when the cancer is beyond what might be called its embryonic stage there can be no doubt whatever about the microscopic examination This, then, is the basis on which we plead for an early histological examination of a suspected cervix. And if we get a cancer thus early we have good ground to expect a cure by operation. Dr A. H N Lewers in his recent book on Cancer of the Uterus puts forward a suggestion to facilitate early diagnosis. This suggestion is that the Cancer Commission or some institution such as the Royal College of Physicians of London or the Royal College of Surgeons of England should print a leaflet mentioning the essential facts which it is desirable that women should know regarding the early indications of cancer and especially regarding hæmorrhage. He thinks that this leaflet might be distributed by medical men to all—matrons, nurses, district visitors, and so on—who could put such knowledge to good purpose. This suggestion of Dr Lewers is so far a good one and would aid us to a certain extent in the early detection of cancer But we need to anticipate the development of pronounced symptoms We must if possible detect the disease before any of its classical indications are present. And for this such a leaflet would be insufficient. The education of our women in the knowledge of disease has hitherto been, and will always naturally be, the unconscious result and, as it were, the bye-product of the work of the physician. When we ourselves realise the important facts in a diagnosis our knowledge gradually filters through to those who are tending our patients and to the patients themselves. If we ourselves, then, would believe that the treatment of cancer is hopeful when we diagnose it early and if we continually strive after such early diagnosis the opportunities for early recognition of the disease will become more frequent. Public opinion, as I said at the beginning will soon come to our aid and we shall have good ground to hope for a lessening of the ravages of this disease.

Dr JOHN RITCHIE asked if the cervix should really be examined in every case in the same way as the perineum in all labours as a matter of routine. He believed that the teaching of most books was against such a thing Still, personally, in many cases he regretted that he had not examined the cervix after labour

Dr. P MCBRYDE, speaking about the age at which cancer appeared in women, said that many thought that it was only after the menopause that the disease occurred Five cases had occurred in his own experience under the age of 32 years.

Dr C. F SPINKS asked if it was always possible to examine the cervix with a speculum without a special light

Dr JAMES TODD agreed with Dr Ritchie in some of his remarks with regard to the examination of the cervix and thought it quite impossible to suture every case, especially among the working classes. Indeed, the medical man who sutured these cases would very likely not have the opportunity of attending these again What was said in the first part of the paper would have very little practical application. The patients were not educated to it.

The PRESIDENT thought that Dr Kelly had done full justice to the general practitioner as regarded the difficulty of early diagnosis, but he was afraid that it was too often assumed by specialists that the general practitioner was to blame for not recognising cases of cancer in the early stages. If so it was not because they failed to see the importance of early diagnosis, as they were fully alive to it. The general practitioner was not wholly responsible for the failure. Many signs or symptoms were not pathognomonic of cancer, but were also common to those benign conditions of catarrh and erosions which the lecturer had been dealing with In other cases where the pathognomonic symptoms of pain, hæmorrhage and cachexia were present it was recognised that the disease was then in the inoperable stage. It was often very difficult to come to a decision because the patient sometimes did not mention the condition at all and also would not allow an examination when it did appear to be necessary In this connexion he instanced the case of a lady who had recurring hæmorrhages from the vagina for a long time and on making an examination a tumour was found which was afterwards removed by Professor Simpson of Edinburgh. On hearing from the lady's own medical adviser later, he was informed that consent to an examination had all along been withheld by the patient, but that whenever a stranger had come forward it was allowed. In another case he had called in a specialist where cancer of the cervix was suspected. There were all the usual symptoms present and the specialist had no difficulty in arriving at a diagnosis and therefore pronounced it cancer of the cervix The patient refused to allow an operation because she felt quite well and she remained so In closing his remarks the President said that he would take advantage of all the information acquired but he would emphasise the fact that cases were often very difficult to diagnose even when an examination was allowed, and that the practitioner was often harassed with doubt when symptoms compatible with the benign disease were present, thus being constrained at times to advise his patient rather to bear the ills she had than to fly to others that she knew not of

Dr J RUTHERFORD wished to know if douching might not do instead of suturing and still prevent lacerations going on to erosions He mentioned another cause of cancer which was apparent to his mind—want of cleanliness In this age of asepticism they must face the question of the introduction of dirty matter during coition The subject had been shirked formerly by medical men. There was often no bath used in the houses and much filth was introduced to the parts and might have something to do with the cause of cancer They were all familiar with chimney sweeper's cancer and why might there not be injurious effects from coition in a similar way?

Dr KELLY after giving thanks to the meeting for attention to his paper proceeded to take up the various criticisms *seriatim*. The fear that the practitioner had of examining the cervix was the fear that some septic material might be introduced. In many cases there was nothing which suggested a laceration of the cervix. There would then be no call for an examination to be made, but when there was much hæmorrhage or the patient had a severe labour they ought to examine the cervix. He explained that it was quite easy to do this. The cervix could be pulled down to the vulva after labour without trouble with volsellum forceps and pressure externally and could then be examined by the eye. If any laceration was seen, it would be even more easily stitched than the perineum. Speaking about the light employed, he thought that the examination would often be unsatisfactory in working men's houses With a candle and speculum, however, they might see fairly well. It was to be remembered that they should rely more upon touch than sight in diagnosis of disease of the cervix He explained that laceration of the cervix had been suggested as a *probable* cause of cancer The resulting ectropium exposed the lining membrane of the cervix to bacteria and acid secretion, the vagina being the receptacle of bacteria of all sorts. There were many cases of cancer under 30 years of age, but it was commonest after 40 years. Dr. Kelly did not want it to be thought that specialists were blaming the practitioner for not diagnosing the cases early enough Regarding the relationship of the specialist and the practitioner, specialists often did make mistakes in diagnosis and should own to it He could never understand men who had made a mistake not recognising their error Douching of the vagina was often quite sufficient to allow the laceration to heal without septic mischief, but the effect of the cicatrix was left Filth in the vagina had probably a great deal to do with the cause of cancer in the cervix. It should be insisted on that the vaginal douche should be in more common use. Women should lie on the back with a bed pan below, not as was usually done when the woman sat over a pan. The latter mode would fail to flush the rugose folds of the vagina.

ROYAL ACADEMY OF MEDICINE IN IRELAND

Section of Pathology

Exhibition of Specimens.

A meeting of this section was held on Feb 27th, Professor E. J McWeeney, the President, being in the chair

Dr Henry Jellett showed, with Professor A. O O'Sullivan, a specimen of Double Adeno-carcinoma of the Ovary It had been removed from a patient, aged about 40 years. At the operation there was no apparent involvement of the pedicle, neither were there any noticeably enlarged glands. The subsequent history of the case was difficult to obtain as the patient refused further treatment The tumours were inclosed in what appeared to be a dense fibrous capsule but proved to be condensed and flattened stroma of the ovary On section the greater part of the growth was white, resembling ovarian tissue in its markings, but firmer In one place there was a large blood extravasation. Through the white substance there were cavities of the size of a pin's head and smaller, and occasionally there were much larger ones forming cysts. The largest of these was filled with a papillary growth and contained a glairy fluid. Under the microscope the tumour was found to consist of a stroma resembling the ovarian stroma, cells with spindle- and rod shaped nuclei, and a very small quantity of intercellular substance Professor O'Sullivan said that the only solid ovarian tumour bearing any resemblance to this of which he had seen an account was a tumour described by von Kahlden in the *Centralblatt für Pathologie*.—The PRESIDENT said that the case was undoubtedly one of true carcinoma of the ovary He had himself observed three cases and in one of them the microscopic appearances were very similar to those seen in this case.—Dr H. O EARL said he had examined several cases of cancer of the ovary, probably some eight or more Both ovaries were affected in each case. In two cases the cancer was in an early stage of mucoid degeneration and in one case at least there were secondary growths in the peritoneum and liver —Dr JELLETT said that he did not consider ovarian cancer to be very rare. He had operated on one other case and had seen at least four in the Rotunda Hospital.

Professor E. H BENNETT showed a series of joints marked by the deposit of a white material closely resembling the urate of sodium seen in true gout, but consisting of calcium carbonate. The deposit was present in the hips, shoulders, sterno-clavicular joints, and was absent from the more distal joints of the limbs.

Professor BENNETT also showed a United Fracture of the Astragalus The fracture had united without deformity by bone. There was no other fracture either in the bones of the foot or of the leg or the thigh The specimen was found in dissection and was without history

Dr THOMPSON described a case of Primary Cancer of the Liver in a girl, aged 21 years —The PRESIDENT said that the liver was much enlarged, its surface was studded with secondary nodules, some of them umbilicated. The colour was dull red with a greenish tinge. The nodules, viewed from without, were white The primary mass was found occupying the centre of the right lobe. It was as large as the closed fist. On cutting into the specimen a most remarkable change took place in its colour, most of the secondary nodules assuming a brilliant grass green hue on contact with the air This green hue subsequently extended to the liver parenchyma after the specimen had been placed in formalin Spectroscopic and other tests showed it to be due to oxidised bile pigment. The cancer was composed of very large epithelial cells closely resembling liver cells, but differently arranged.

North of England Obstetrical and Gynæcological Society —A meeting of this society was held on March 20th, Dr J E Gemmell (Liverpool), the President, being in the chair —Dr J W Martin (Sheffield) showed a married woman, aged 25 years, in whom there was Complete Congenital Absence of the Left Mamma, associated with defective development of the entire left half of the body, and especially of the left hand and arm Lactation was fully performed by the normal right breast —Dr D Lloyd Roberts (Manchester) showed a Fibroma of the size of a walnut removed from the interior of the right Fallopian tube through an incision made in its wall. The growth was discovered during the performance of ovariotomy on a woman, aged 56 years, and microscopically showed the typical characteristics of a fibroma.—Dr E. O Croft (Leeds) suggested that tubal moles might be removed through similar incisions made in the tube instead of sacrificing the whole viscus.—Dr Croft showed a series of Three Polypi of the Uterus which illustrated three different conditions and methods of treatment—namely, (1) a small cervical fibroid polypus, (2) a large necrosing fibroid polypus separated from its attachments by the écraseur and delivered with forceps in obstetric fashion, and (3) an intra uterine submucous fibroid treated by vaginal hysterectomy, the ovaries being preserved.—Dr. A Donald (Manchester) read notes of a case of Idiopathic Endometritis From the age of 21 years the patient had suffered from metrorrhagia and when she came under observation at 32 years of age hæmorrhage had been continuous for seven months The uterus was then anteflexed with a conical cervix, its consistence was normal and there was no question of gonorrhœa or sepsis Curetting was twice performed within a few months and for nearly four years there was no irregular or profuse bleeding Marriage took place, followed by three months' amenorrhœa, which was succeeded by continuous bleeding Decidual débris was removed, but two months later curetting was again requisite. During the following six years the discharge never stopped for more than 14 days at a time. Atmocausis was tried without avail and finally hysterectomy was performed. The uterus was enlarged, very hard, and in a state of fibrosis The case was exceptional in the symptom of excessive hæmorrhage but in other respects was typical of a class of cases not infrequently met with.—The President, Dr S Buckley (Manchester), Dr A. W W Lea (Manchester) and others discussed the case—Dr Buckley described a case of Extra uterine Pregnancy with attempted Abortion and showed the specimen The patient was admitted to a hospital where the case was at once regarded as one of ectopic gestation and the symptoms noted during the period of observation pointed to attempts at tubal abortion, but her friends were opposed to operation Interference became imperative some three weeks after admission by reason of sudden collapse with signs of severe internal hæmorrhage. Laparotomy disclosed a gestation sac in connexion with the left tube which, as adhesions were absent, was easily lifted out and removed, together with about two pints of clot of varying ages The tube itself was unruptured and its fimbriated end was expanded. The fœtus was about three months old. The patient made a good recovery—Dr Roberts and Dr Croft discussed the case.—Dr T B Grimsdale (Liverpool) read notes of a case of Primary Amenorrhœa with Pyosalpinx occurring in a single woman, aged 22 years. About three years previously she had had some chest trouble from which she had completely recovered. There had never been any approach to a menstrual crisis. The sound passed one and a half inches into the uterus and to the right of the latter there was a swelling of the size of an apricot Laparotomy revealed a uterus normal in shape but of small size, the appendages on the left side were normal, the surface of the ovary being smooth like that of an olive. The right ovary showed a similar condition, but the tube was enlarged and adherent to the pelvic brim near the cæcum. The tube was removed and found to contain pus. Both tube and pus were examined but the investigation was entirely negative, no evidence of tubercle being discovered. The virginity of the patient excluded the more frequent cause, and although the tube lay in close proximity to the cæcum and vermiform appendix there was no evidence of disease of the latter The chief point of interest lay in the presence of a pyosalpinx without symptoms and apparently without any explanation of its origin.—Dr Lea and Dr Donald discussed the case.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY—A meeting of this society was held on March 12th, Dr G R Murray being in the chair—Dr G V Miller showed a girl, aged 19 years, the subject of Congenital Aniridia. The iris was almost entirely absent there being only a narrow rim at the upper and outer sides. There was a commencing posterior polar cataract but the fundus was healthy The margins of the lens could be seen distinctly Some hypermetropia was present.—Dr H E Gamlen brought forward a woman who had suffered from Rheumatoid Arthritis affecting the knees, wrists, and elbows for three years. Previously to treatment she was unable to walk except with the aid of a couple of sticks. Now, after six months' treatment with the high frequency current, she was able to get about unaided—Dr H. Smurthwaite exhibited a man suffering from Syphilis of the Larynx.—Mr G G Turner brought forward a man, aged 23 years, whose eyelids, eyeballs, nose and upper lip had been completely destroyed by congenital syphilitic ulceration. The deformity was extreme—Dr A. M Martin showed a man, aged 45 years who contracted syphilis 20 years previously His tongue some years ago became affected with leucoplakia. 15 months previously an ulcer with hard and raised edges made its appearance about the middle of the tongue. As he objected to operative treatment he was treated with the x rays. After a few applications the ulcer healed but broke down again shortly after and was again healed with the x rays. Six or seven months previously it again broke down and rapidly spread The lymphatic glands in the right submaxillary triangle became infected. At the operation ten days previously the infected lymph glands, the right half of the body of the jaw, and the whole of the tongue were removed. For the first day he was fed entirely by the nasal tube Now he was able to swallow from an ordinary feeder and was making a good recovery—Dr Martin also exhibited a man who had tuberculous disease of the right epididymis with secondary infection of the vas and seminal vesicle All these parts had been removed in one piece by means of a combined perineal and inguinal incision—Dr T Oliver brought forward a man who was a bleeder and the subject of a limited neuritis affecting the muscles of the left thigh Dr Oliver could not find a cause for the condition.—Dr Oliver also showed a man, a miner, who through drinking water contaminated with lead had contracted wrist drop Other members of the same family had been affected with abdominal pain, vomiting, and constipation. The water contained free sulphuric acid which would bring into solution the lead from the containing pipe.—Dr Smith, from whose district the patient came, had noticed that lately there had been quite an epidemic of lead poisoning The water came from two springs and had been examined chemically and found to contain free acid, probably sulphuric He had examined the water direct from the spring but had discovered no trace of lead. After, however, taking some water and allowing it to stand with a piece of lead piping introduced in it, a definite lead reaction was found—Mr H B. Angus showed a youth who after having a cerebellar abscess resulting from otitis media opened, developed Lateral Sinus Thrombosis For this condition Mr Angus dissected out the internal jugular vein from the clavicle to the mastoid process. The patient had made a satisfactory recovery—Dr Gamlen showed photographs of three severe cases of Lupus treated by the X Rays and Ultra violet Rays He also showed a Skiagram of a Chest with a Piece of Steel overlying the Pericardium.—Dr R. P R. Lyle exhibited a Myomatous Uterus, Ovarian Cystic Adenoma, and Ectopic Gestation.

BRADFORD MEDICO-CHIRURGICAL SOCIETY—A meeting of this society was held on March 17th, Dr H. J Campbell, the President, being in the chair—Mr C F M Althorp showed a child after radical cure of a large Scrotal Hernia, containing the Vermiform Appendix, Cæcum, and part of the Ascending Colon.—Mr J H Mason read notes on a case of Gangrene of the Foot The patient was an apparently healthy man, 50 years of age, without signs of organic disease. The disease commenced with intermittent pains in the muscles of the calf and thigh There were attacks of blindness lasting for about an hour and then passing off, leaving dimness of vision. Nothing abnormal was seen on examination of the fundus oculi. The pain passed off temporarily and the man returned to work. Two months after the onset the pain became very bad again. The foot was cold up to the ankle and there was loss of sensation. The calf was very tender Pulsation could not be felt in the femoral artery below the groin The pulse rate rose to 121 and the temperature to 102° F The pain was partly relieved by morphia. The patient grew steadily worse, the pulse becoming very irregular and not responding to digitalis or other treatment. The gangrene became more pronounced and death ensued some three weeks after the second onset of the pain. Shortly before death there was an attack of inspiratory dyspnœa followed by hæmoptysis—Dr D Goyder Dr Johnston, Mr Horrocks, Dr Wood, Dr F W Eurich and Dr Adolph Bronner discussed the case.—Mr Althorp read a paper on three cases of Perforated Gastric Ulcer treated by operation. The first patient was a woman aged 23 years, with a history of gastric trouble for seven years. She was operated on 32 hours after perforation. There was a condition of hourglass contraction present, caused by a large ulcer, in the centre of which was a perforation. The perforation was situated near the cardiac end of the stomach much gastric contents had escaped and had formed a perigastric collection This material was mopped out and the cavity was packed with gauze. The patient did well for ten days the packing being changed daily She then developed symptoms of left basal pneumonia and died on the twelfth day At the necropsy a small septic abscess was found in the lower lobe of the left lung with consolidation There was no empyema. The subphrenic space was dry The second patient was a woman, aged 27 years, who had had indigestion for five years. An operation was performed six hours after the perforation, which had occurred six hours after a hearty meal. There was much extravasation of stomach contents. The perforation was found in the middle of the posterior surface of the stomach The patient made a slow recovery The third patient was a man, aged 23 years, who had a typical attack of perforation of the stomach and who was operated on eight hours afterwards. A condition of hour glass stomach, as in the first case, was found, with a perforation in the cardiac portion. The patient made an excellent recovery

INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this society was held on March 13th, Dr J Spottiswoode Cameron, the President, being in the chair —Dr J Mitchell Wilson read a paper on the Regulations under the Dairies, Cowsheds, and Milkshops Orders. He gave a *résumé* of the various orders made under the Contagious Diseases (Animals) Acts and of the model regulations issued by the Local Government Board With regard to the lighting of cowsheds he suggested that windows in the walls might be supplemented by a number of glass tiles placed over every stall and described a recently erected cowshed along the whole length of the tiled roof of which there had been placed three rows deep of strong glass tiles, the lighting was thus exceptionally good and was distributed in every corner of the shed. Dr Wilson was of opinion that where definite and adequate means of ventilation were provided 600 cubic feet of air space per cow was a reasonable amount to insist upon where the cows were turned out for a portion of each day and stated that regulations requiring this amount had been sanctioned for the burghs of Dufftown and Grantown by the Local Government Board for Scotland. A supply of clean and wholesome water, not only for consumption by the cows but for cleansing purposes, was insisted upon and after stating that the temperature of the water was the chief reason why the cows preferred water which the sun's rays have warmed in the open air, be it dirty or clean, to that drawn from a deep well, Dr Wilson advised that a suitable receptacle might be kept filled in the open air so that warmed pure water might be provided for the cows. Every endeavour, he thought, should be made to bring home to the farmer or cowkeeper as the seller as well as to the public as the purchaser the knowledge that all the regulations for every part of the milk trade were based upon advice of those actually carrying on the trade and that the lodging of animals under conditions conducive to their health and well being was just the condition with which the public and sanitary officials would be best satisfied. In the course of the discussion which followed the reading of the paper, several speakers urged the necessity for providing not only a sufficiency of air space but for securing that the air should be pure and deprecated the huge accumulations of manure which were so often found surrounding cowsheds in rural districts —Dr H Meredith Richards and Dr A. Newsholme advocated a bacterioscopic standard of milk and Dr H. R. Kenwood insisted upon the thorough cleansing of the cows' teats and bellies.—Mr C B Davies, a Cheshire farmer and the secretary of the Cheshire Chamber of Agriculture, who was present as a visitor, agreed with nearly all Dr Wilson's proposals and spoke very strongly of the absolute necessity for providing an ample water supply

WIMBLEDON AND DISTRICT MEDICAL SOCIETY — The annual clinical evening of this society was held on March 13th, Dr S R Collier, the President, being in the chair —The President showed—1. A specimen of Fœtus Papyraceus, one of a twin pregnancy, the other fœtus being normal, the causation of the condition was discussed. 2 The tube from a case of Ruptured Tubal Pregnancy The patient was operated upon within six or seven hours of the onset of the acute symptoms. The rupture was found close to the uterine end of the tube. The patient was about six weeks pregnant Recovery was uninterrupted.—Dr J E Bates read notes on a case of Ectopic Gestation upon which he had operated at about the eighth month A living fœtus was removed from a cyst above and to the right of the uterus The fœtus survived a short time. The patient made a good recovery —Mr D A. Bellio read notes on a case of Acute Phlegmonous Cholecystitis simulating Acute Intestinal Obstruction —Dr J E C Bradley read notes on a case of Perforating Gastric Ulcer The patient had never presented any symptoms of gastric trouble until perforation occurred Operation was performed and the patient made a good recovery —Dr J Harvey read notes on a case of Patent Urachus and Pyonephrosis in an infant. The child lived five weeks There was marked evidence of syphilis on the side of the father The necropsy showed the urachus patent at the umbilicus and communicating with the apex of the bladder Both kidneys were distended with pus The bladder was greatly hypertrophied —Dr Bates suggested septic infection through the umbilicus by means of the patent urachus.—Mr E A Purcell showed a case of Congenital Absence of both Patellæ in a girl aged 15 years. The condition gave the patient little or no inconvenience —Dr Martin Randall read notes on three cases of Perforated Appendicitis due in each case to concretion and showed the appendices which he had removed. All the patients recovered, though in one convalescence was retarded owing to the presence of a large abscess in connexion with the appendix Ultimate recovery was good. Dr Randall also showed some stones which he had removed by nephrotomy —Mr P B Spurgin read notes of, and showed the specimen from, a case of Spontaneous Rupture of the Heart. The patient was a woman, aged 70 years. On the day before death the patient suffered great thoracic pain and vomited greenish sour fluid at intervals The skin became sallow and the urine was bile-stained. At the necropsy a large single gall stone, weighing one ounce, was found in the gall bladder A ragged tear was found in the posterior wall of the left ventricle. All the internal organs were congested The heart muscle and arteries showed marked signs of degeneration —Mr G Walker read notes on a case of Agoraphobia.

Reviews and Notices of Books.

Nothnagel's Encyclopædia of Practical Medicine - Diseases of the Bronchi, Lungs, and Pleura By Dr FRIEDRICH A. HOFFMANN, Professor of Medicine in the University of Leipsic, Professor O ROSENBACH, of the University of Breslau, and Dr E AUFRECHT, Chief of Clinical Medicine in the Magdeburg Altstadt City Hospital. Edited with additions by Dr J W MUSSER, Professor of Clinical Medicine in the University of Pennsylvania. Authorised translation from the German, under the editorial supervision of Dr ALFRED STENGEL, Professor of Clinical Medicine in the University of Pennsylvania Philadelphia and London W B Saunders and Co 1903. Pp 1029 Price 21*s* net

THIS volume is divided into three sections, each containing an elaborate monograph on a special subject. The first is concerned with Diseases of the Bronchi and is written by Professor F A. Hoffmann, the second deals with Inflammations of the Lungs, the author being Dr E Aufrecht, whilst the third is devoted to Diseases of the Pleura and is written by Professor O Rosenbach The editor, Professor J W Musser, has carried out his onerous duties in a most praiseworthy manner and has made additions to the text where necessary, so that the results of the most modern researches are included in the work.

Professor Hoffmann commences his account of the diseases of the bronchi with an excellent description of the anatomy and physiology of the bronchial tubes The investigations of Professor Aeby have been hitherto accepted as the most accurate record of the course and distribution of the bronchi and Professor Hoffmann does not refute his statements In the passages introduced by Professor Musser, however, the researches of Dr G S Huntingdon are referred to, which show that certain of Professor Aeby's hypotheses are incorrect. Dr J M Blake's observations on the same subject are also mentioned. This observer has performed useful service by working out with the aid of the Roentgen rays the relations of the trachea and bronchi to the thoracic walls. The account given by Professor Hoffmann of foreign bodies in the bronchi is most complete. Tables are inserted giving abstracts of a large number of cases of this nature. The sex and age of the patients in each instance are stated, together with the nature and location of the foreign body, the symptoms that presented themselves, the treatment that was adopted, and the result. The source from which the information was obtained is also noted. This record forms very interesting reading and will prove very valuable material for reference. The statistics derived from these cases are also worthy of attention, more particularly when treatment is considered. It is shown that undoubtedly efforts should always be made to remove the foreign body The "expectant treatment"—namely, to wait and to leave the course of events to nature—is not usually followed by satisfactory results. In considering the etiology of bronchitis some interesting remarks are made on ' catching cold " Professor Hoffmann says The injurious influence of moist cold air when the temperature changes suddenly through several degrees and the change is accompanied by a strong wind is a matter of such universal experience that it must be accepted as a fact. The question is no longer whether cold can injure but in what manner it works the injury " He suggests that the action of cold in causing bronchitis is brought about by loosening of the epithelium of the bronchi, with the development of "small thin places" in the lining membrane. As a result, dust particles and micro-organisms penetrate into these thinner places and cause a desquamation of the superficial layers of the epithelial covering The action of cold in causing inflammation of internal organs has been the subject of much discussion and the pathology of ' catching cold" has not been definitely determined. Professor Hoffmann's theory is in our opinion, not altogether convincing We certainly think that an explanation is to be found by a reference to the relationship of the "seed and the soil —that is to say, that chill brings about certain changes in the mucous lining of the bronchial tract which render it open to the attacks of micro organisms which are otherwise unable to exert any malignant influence. But we doubt whether those changes consist of minute wounds of the epithelium. Unfortunately we are not able to offer an alternative theory, we are not aware whether any decisive investigations have been made as to the effect of vaso-motor changes in the mucous membrane in encouraging or otherwise bacterial growth. Professor Hoffmann s remarks on asthma are also worthy of attention. He finds some difficulty in defining what the term "asthma ' really implies. After referring to the confusion which has arisen as to the exact pathological basis upon which asthma rests he finally says ' By asthma we understand a neurosis in the distribution of the respiratory nerves, which leads to attacks of dyspnœa, with a peculiar secretion and distension of the lungs.' The author therefore inclines to the neurotic origin of asthma and follows the teaching of Leyden Curschmann and Fraenkel in insisting upon the production of a specific secretion as the essential symptom of the disease. He also speaks in no uncertain terms as to the treatment of asthma by operative procedures on the nose. Certain authorities have strongly advocated searching for asthma points in the nose and destroying them by means of the cautery and some amount of success has been obtained. He remarks It is certain that we must think of treating the nose, but it is equally certain that we must not expect too much from nasal treatment and that asthmatics may suffer and have already suffered, much harm at the hands of too energetic nasal therapeutists Much mischief can be done with the galvano-cautery " We believe that these words will be indorsed by most physicians. We can find in this article no reference to the treatment of asthma by compressed air baths This therapeutic measure has been productive of good results and should have found a place in such a good account of the disease as is here given. Professor Hoffmann likewise contributes some valuable remarks on emphysema and atelectasis He gives the results of an exhaustive study which he has made as to the action of the muscles engaged in inspiration and expiration. He holds views which have not been generally accepted but which he explains with much clearness and force. In most text-books it is stated that the diaphragm can be depressed to such a point that the convexity is directed downward and that the diaphragm during contraction acts as an expiratory muscle. He believes this to be purely a theoretical conclusion and he goes so far as to say that life cannot continue if the diaphragm loses its power of acting as an inspiratory muscle. He supports his contentions by observations on numerous emphysematous subjects with the Roentgen rays and states that he has always found the dome of the diaphragm more or less distinctly flattened, but he has never seen a perfectly flat diaphragm, far less one with its convexity directed downwards. In connexion with this subject the Hunterian Lectures recently delivered by Dr Arthur Keith before the Royal College of Surgeons of England and published in THE LANCET[1] are of interest. He shows how variable is the position of the diaphragm

Dr Aufrecht commences the section on Inflammations of the Lungs with an elaborate account of croupous pneumonia. He upholds the view that this disease is a general and not a local one, that the inflammation of the lung is only the principal symptom, and that the clinical phenomena cannot be explained by the local affection In accordance with most modern authorities he maintains that croupous pneumonia belongs to the group of infectious diseases. An extended account is given of the investigations which have been made in regard to the bacteriology of the disease and the conclusion is arrived at that the pathogenic organism is the diplococcus discovered by Professor Fraenkel and Professor Weichselbaum. It is suggested by the editor that a clearer conception of pneumonia would be obtained if the changes in the lung were considered to be one of many manifestations of a pneumococcus infection We agree that by adopting this view the clinical course, the complications, and the sequelæ would be more clearly understood. In his description of the treatment of pneumonia Dr Aufrecht recommends measures which have not been generally adopted in this country and decries others which have been found to yield excellent results. Venesection he totally disapproves of, in certain cases, however, when the right side of the heart is embarrassed we believe that this measure may be adopted with great benefit to the patient The treatment by large doses of tartar emetic, at one time so largely practised, he rightly condemns. He also comments at length on the use of digitalis and again expresses his opinion in no uncertain terms He states that he no longer uses this drug in pneumonia "and would not even now be induced to use digitalis in the hospital, as especially in the last years I have been enabled to obtain very satisfactory results by less severe methods ' As a routine treatment the use of digitalis is but rarely made use of, but when there are indications of cardiac failure it is a most valuable drug Dr Aufrecht s remarks on the use of stimulants in pneumonia are not convincing He describes how some physicians have recommended certain quantities of " mild good red wine and wines of the South, Hungarian wine, ' but, strangely enough, he does not discuss the employment of brandy or whisky Most English physicians are agreed that when there are evidences of cardiac failure stimulants (especially the spirits just mentioned) are amongst the most valuable means which we possess to combat this dangerous complication. Dr Aufrecht states that according to his experience quinine, when properly administered, is the most suitable remedy in and died on the twelfth day At the necropsy a small septic abscess was found in the lower lobe of the left lung with consolidation There was no empyema. The subphrenic space was dry The second patient was a woman, aged 27 years, who had had indigestion for five years. An operation was performed six hours after the perforation, which had occurred six hours after a hearty meal. There was much extravasation of stomach contents. The perforation was found in the middle of the posterior surface of the stomach The patient made a slow recovery The third patient was a man, aged 23 years, who had a typical attack of perforation of the stomach and who was operated on eight hours afterwards A condition of hour glass stomach, as in the first case, was found, with a perforation in the cardiac portion. The patient made an excellent recovery

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[1] THE LANCET March 7th (p 631) and 14th (p 709) 1903.

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THIS volume is divided into three sections, each containing an elaborate monograph on a special subject. The first is concerned with Diseases of the Bronchi and is written by Professor F A. Hoffmann, the second deals with Inflammations of the Lungs, the author being Dr E. Aufrecht, whilst the third is devoted to Diseases of the Pleura and is written by Professor O Rosenbach The editor, Professor J W Musser has carried out his onerous duties in a most praiseworthy manner and has made additions to the text where necessary, so that the results of the most modern researches are included in the work.

Professor Hoffmann commences his account of the diseases of the bronchi with an excellent description of the anatomy and physiology of the bronchial tubes The investigations of Professor Aeby have been hitherto accepted as the most accurate record of the course and distribution of the bronchi and Professor Hoffmann does not refute his statements In the passages introduced by Professor Musser, however, the researches of Dr G S Huntingdon are referred to which show that certain of Professor Aeby's hypotheses are in correct. Dr J M Blake's observations on the same subject are also mentioned. This observer has performed useful service by working out with the aid of the Roentgen rays the relations of the trachea and bronchi to the thoracic walls. The account given by Professor Hoffmann of foreign bodies in the bronchi is most complete Tables are inserted giving must necessarily have a knowledge of chemical analysis. The view of the writer is that "no class of men is better fitted to fill this office than are pharmacists." Of course, the pharmacist is nearer at hand, as a rule, than the analyst, but the office is clearly more within the province of the latter than of the former We wonder whether pharmacists have studied the cryoscopic method of examining urine, it is not referred to in this book.

The Purin Bodies of Food Stuffs their Estimation, Action, and Significance By I WALKER HALL, M.D, Assistant Lecturer and Demonstrator in Pathology, the Owens College. Manchester Sherratt and Hughes. 1902 Pp 108. Price 2s.—This *brochure* forms the subject of an interesting investigation upon the estimation of the purin bodies and the study of their specific effects upon the metabolic processes. Of the known purin bodies hypoxanthin, xanthin, adenin, guanin, and caffeine and theobromine are found in foodstuffs and uric acid and traces of xanthins and methyl xanthins are met with in the urine. The author has worked out a trustworthy process for their estimation and he finds considerable quantities of purin bodies in meat and in certain vegetable foods and in beer and porter, their presence perhaps accounting for the harmful influence of malt liquors in gout The importance of determining endogenous purins in many diseases, either by the use of purin free food or by the aid of tables giving the percentages of purins in foodstuffs, is emphasised. To help in this direction an instrument known as the purinometer is proposed. There is no doubt that the purin bodies exert a marked influence upon metabolism The author has contributed a very important and interesting essay on the subject

Notes on Essential Oils By T H. W IDRIS F C S Second edition. London Idris and Co Pp 234—In dealing with the first edition of this little volume we remarked how useful it was to possess in handy form a volume devoted exclusively to the composition and chemical and physical constants of the essential oils The book is obviously valuable for reference on the subject, saving much time in searching through large works on chemistry in which the information required is commonly widely scattered.

Wireless Telegraphy a Popular Exposition. By G W DE TUNZELMANN, B.Sc. London The Office of *Knowledge* 1902. Pp. 104 Price 1s 6d—Wireless telegraphy is very much in evidence now and the author of this little work has done a service in presenting the subject in a popular style. The chapters are based upon a series of papers on wireless telegraphy which were published in *Knowledge* in 1900 But even since that time it has advanced and not many days ago the newspapers were full of Marconi's latest achievement across the Atlantic The author deals with the historical development in the practical working of electric telegraphy and his account is most interesting and his illustrations are clear There is no doubt that in a short time the present methods will undergo rapid development until the system will be perfected for common usage. Meantime an excellent idea of the situation as it now stands is to be gained from a study of this little book.

Food and Drugs By CHARLES JAMES HIGGINSON, of the Inner Temple, Barrister at-Law Second edition revised and enlarged. London Effingham Wilson. 1902. Pp. 203. Price 3s. 6d—This is a handy book of reference on the laws relating to the adulteration of foods and drugs and as to the construction put upon those laws according to the decisions given in certain cases The present edition contains in the appendix the regulations of the Board of Agriculture as regards water in milk and skimmed and separated milk. We hope soon that the author will be able to add in a new edition regulations in regard to the control of water in butter as well as to restrictions as to the use of preservatives in food. The book helps analysts, solicitors, and other professional men to be conversant with the legal aspect of cases of adulteration.

Practical Sanitary Engineering By FRANCIS WOOD, A.M Inst C E., F G S. With numerous illustrations London Charles Griffin and Co, Limited 1902. Pp 304. Price 8s 6d—This is an eminently practical work dealing with that branch of sanitation which is of first importance—namely, the construction and maintenance of sewers and drains The author is at his best when dealing with structural details though he shows a sound acquaintance with the modern methods of sewage disposal. Sanitary engineering is a rapidly developing science, opening a wide field for study and inviting special attention to the application of scientific principles. This work is written with an evident attempt to bring the many aspects of the science within the purview of a manual and such a collection of facts and material is of obvious utility to those studying the subject It should find interested readers amongst medical officers of health, engineering students, and sanitary inspectors.

HOSPITAL MAGAZINES

Charing Cross Hospital Gazette for February quotes from THE LANCET of March 26th, 1836, an account of an indictment at Lincoln Assizes for body stealing, being the first conviction which took place under the Anatomy Act of 1832. *Apropos* of this subject, the following epitaph from a tombstone in a New Hampshire graveyard appears in the columns of an American contemporary —

Ruth Sprague dau. of Gibson and Elizabeth Sprague. Died Jan 11, 1816 aged 9 years 1 mo 3 days.

She was stolen from the grave by Rodrick R. Clow and dissected at Dr P M. Armstrong's Office in Hoosick Falls from which place her mutilated remains were obtained and deposited here

Her body dissected by fiendish men
Her bones anatomized
Her soul we trust has risen to God,
A place where few physicians rise-

St. George's Hospital Gazette for February contains quotations from various authors addressed to members of the staff of the hospital and others as valentines. The winner of the King's Sanatorium Prize is hailed as follows —

Ye come from Arthur ...
Victor his men report him

Belgravia is rallied upon its grudging pecuniary support of the institution in Shakespeare's words —

Money by me? Heart and goodwill you might
But surely master not a rag of money

Dr Norman G Bennett contributes a paper on the Causes and Consequences of Oral Sepsis. He incidentally remarks that "the neglect of children's teeth, especially among the poorer classes, is so seriously detrimental to the proper nutrition of the child at an important age as to be a matter of national importance as affecting the physique of the race."

Middlesex Hospital Journal for February publishes the report of a paper read before the medical society of the hospital by Dr Voelcker entitled "Peeps into old Pages." Dr Voelcker has made himself familiar with Joannes Baptista Porta's Phytognomonica, Vesalius's Anatomy, a work on Surgery edited by le Clerc and Mangetus and published in 1685, and the Armamentarium of Scultetus From these and other writers of bygone times Dr Voelcker extracts amusement and instruction. A double-page sheet of illustrations accompanies the paper, a drawing of micro-organisms from Leeuwenhoek's Arcana Naturæ is particularly interesting ' Moments in a Military Riding School ' is an amusing description of the author's experiences when seated for the first time on what he calls the "giddy altitude of a horse's back."

St. Thomas's Hospital Gazette for February contains a brief note on Egyptian Midwifery illustrated by a picture representing an Egyptian woman on a midwifery chair with the treatment of pneumonia, and he maintains that its value is due less to its antipyretic action than to its specific action on the causes of the disease or their products. He prefers the neutral tannate of quinine to any other preparation. He also uses the hydrochloride subcutaneously. A very complete account is given of catarrhal pneumonia and the various views as regards the etiology and pathology of this condition are fully discussed. Dr. Aufrecht maintains that a catarrhal inflammation of the mucous membrane of the finest bronchi is an absolute condition upon which catarrhal pneumonia depends. If this view is upheld a new classification of the causes of this disease would be necessary. "Deglutition pneumonia" is usually included under this head, but in this process the turgescence of the bronchial vessels is not present and, therefore, according to Dr. Aufrecht, this form of pneumonia must be excluded as one of the varieties of catarrhal pneumonia. He also gives good descriptions of chronic pneumonia, syphilitic pneumonia, "pneumonokoniosis," carcinoma of the lung, embolism, thrombosis and infarct of the lung, and gangrene of the lung.

Professor Rosenbach's monograph on Diseases of the Pleura is not only scientific but also essentially practical. The remarks on the etiology of pleurisy show a thorough study of the work which has already been accomplished by various observers and also exhibit great skill in classifying and sifting the results of the many investigators which have been recorded in medical literature. One of the conclusions arrived at is that bacteriology has failed to explain the most important problems in the etiology of pleuritic effusion. "The presence of specific micro-organisms, streptococci and staphylococci of various forms, is not necessary for the conversion of a serous into a purulent exudate and the necessary conditions for the formation of pus are as much hidden from our knowledge to-day as are the various causes of inflammation of the pleura." It is shown, however, that inflammation of the pleura is usually due to the tubercle bacillus, to the diplococcus lanceolatus, or to the streptococcus, but there are also other organisms which may cause the lesion, and mixed infections are not uncommon. The frequency with which so-called "simple pleurisy" ultimately proves to be of a tuberculous nature is now generally acknowledged. The symptomatology of pleurisy is fully and clearly described, due stress being laid on the various types of breath sounds which may be heard over pleural effusions and which so frequently give rise to doubts in diagnosis. The remarks on treatment will also repay study.

Taking the volume as a whole we regard it as a most excellent and valuable publication and one well worthy of the distinguished physicians whose names are connected with it.

The Practical Details of Cataract Extraction. By H. Herbert, F.R.C.S. Eng., Major I.M.S., Professor of Ophthalmic Medicine and Surgery, Grant Medical College, in charge of the Sir Cowasjee Jehangir Ophthalmic Hospital, Bombay. London: Baillière, Tindall, and Cox. 1903. Pp. viii. and 109, with four plates. Crown 8vo. Price 4s. net.

No surgeons are better qualified to speak with authority on the subject of cataract than those who practise in India. The number of cases on which they operate is prodigious and the success which they obtain is remarkable. What European surgeon could speak with the experience that has fallen to the lot of Major Herbert, derived from 1484 extractions performed in less than two years? and who could, like him, furnish statistics of 497 extractions completely exempt from grave infection? It is natural that the minutest details of these proceedings should be carefully considered. No doubt the spare habit of body, the simple diet, and the absence of constitutional taint are points in favour of the Indian native as compared with the ordinary inhabitant of London or of one of our large towns, but these circumstances will scarcely explain the difference that unquestionably exists in results. It is remarkable that whilst great attention is paid in India to the topical purification of the eyes the surroundings are comparatively neglected. Major Herbert informs us that at the Sir Cowasjee Jehangir Hospital there is no operating theatre. "The operations are performed in a room just cleared of the daily crowd of out-patients. The windows of the room are widely open." "The patients themselves are far from clean, and no extraordinary effort is made on admission to clean even their eyelids, which may never have known the application of soap." "Our attention is concentrated upon the conjunctiva and upon abnormal secretion from the Meibomian glands, or rarely from the lacrymal sac, as the sole sources of the infective bacteria that may, in a fairly well guarded and correctly performed operation, possibly find their way into the wound." To destroy these the conjunctival sac is thoroughly washed out with perchloride of mercury lotion containing one part of perchloride in 3000 parts of water. Cocaine is employed as an anæsthetic; the instruments in common use are carefully rendered aseptic and all with the exception of the knife are passed through the flame of a spirit lamp. As a preliminary measure the eyelids are squeezed together with their conjunctival surfaces in contact and any Meibomian secretion that exudes is removed by an assistant with lint dipped in perchloride. An unusual recommendation is that after the insertion of the speculum the outer eyelashes of the upper lid beyond the blade of the speculum should be cut off with scissors. Major Herbert's reason for this is that it is impossible to sterilise either them or the margins of the lid and that there is danger if the blade of the knife, the forceps, cystotome or vectis be allowed to come into contact with them. The details of the operation for extraction as given by Major Herbert do not differ in essentials from those in common use in this country. He seems to have in general practised the operation termed extraction with iridectomy, believing that the preservation of a round pupil is a gain too slight to justify any large risks or sacrifices. In the "after treatment" little is done except to apply a bandage for five days, taking care to remove it daily and to cleanse the lids from any secretion that may have accumulated. Major Herbert's work, although contained in brief compass, is deserving of study and may be read with advantage by every operator. It is the result of much careful observation and the account given is not encumbered with unnecessary detail.

LIBRARY TABLE

The Sanitary Inspector's Guide. By Henry Lemmoin-Cannon. London: P. S. King and Son. 1902. Pp. 257. Price 3s. 6d.—This is a very helpful treatise for the sanitary inspector for it affords him not only a knowledge of the numerous sections of the Public Health Acts but will assist him to understand the extent and meaning of the sections. It is, in fact, the kind of book which the sanitary inspector would do well to make his friend.

Practical Methods of Urine Analysis. For Chemists and Druggists. Second and enlarged edition. London: The Offices of the *Chemist and Druggist.* 1902. Pp. 88. Price 2s. 6d.—This edition is a decided advance on the first edition (*vide* The Lancet, June 3rd, 1899, p. 1498) so that the book now forms an excellent little guide on the subject of urine analysis, care having been taken to include just those methods which give trustworthy results and which are an aid to medical diagnosis. Urine analysis however, seems to us in the wrong place in the hands of the druggists, although, of course, the druggist is an educated man who

THE LANCET.

LONDON SATURDAY, MARCH 28, 1903

The Medical Man, the Coroner, and the Pathologist

WE publish in another column a paper by Dr H. H LITTLEJOHN, which criticises the system under which inquests are held and discusses at some length the question of the efficient performance of post-mortem examinations made by order of the coroner No one contends that the inquiries antecedent to the holding of an inquest are made by such persons or in such a manner as to insure the holding of inquests in all cases where inquests are ordered by the law, and the majority of our readers will assent to the proposition that the cause of death should always be established by a medical man before the burial of the body is permitted. We hold the view that a post-mortem examination should be made in all cases where doubt exists which cannot otherwise be resolved, but we are not in accord with Dr LITTLEJOHN when he discusses the competency of medical practitioners in general to conduct the necropsies which the coroner may deem it necessary to order The writer's position and experience give weight to his opinions and being anxious to see all the aspects of the question ventilated we have pleasure in affording to his paper the hospitality of our columns. We are not, however, able to accept as matters of universal experience, in England at any rate, all the facts with which his individual observation has supplied him and from which he draws his conclusions.

The views which we have ourselves expressed upon the provisions of the Coroners Act of 1887 for the calling of medical witnesses and the holding of post-mortem examinations for the purposes of that Act do not imply any opinion on our part that the sections in question are perfect or that they might not after due consideration be improved We have, however, pointed out what those sections lay down and have urged that any alteration in the practice prescribed should be brought about by Act of Parliament, after discussion in both Houses and after the advice of the leading members of the medical profession has been heard, and that radical changes should not be made by coroners or by local bodies influencing the action of coroners. The action of individual coroners some of whom are medical men and some of whom are lawyers, and all of whom are subject to the influence of their own opinions cannot produce the certainty and consistency which are to be desired in such matters. Under the existing law provision is made in terms which we need not repeat for the making of post-mortem examinations by local medical men who in ordinary circumstances will be general practitioners admittedly of varying qualifications and ability Provision is also made for the obtaining of further expert assistance should the cause of death appear not to have been ascertained fully by those primarily ordered to be employed. Dr LITTLEJOHN appears to consider that the incapacity of general medical practitioners as a body is such that they should never be intrusted by coroners with post-mortem examinations, and we lay his statements of fact with his deductions before our readers. Like ourselves they may fail to recognise as typical of the medical practitioner "an excellent physician" who "has never made a post mortem in his life," and may question the accuracy of the assertion that "very few" students when they obtain their qualification "have personally performed a post-mortem examination." With regard to this, moreover, we submit that if medical men having obtained their right to enrolment upon the Medical Register are not qualified to make ordinary post-mortem examinations with efficiency a defect has been exposed in the course of training adopted in medical schools which is not beyond remedy and which should be made good.

In the course of his paper it will be observed that Dr LITTLEJOHN gives instances of actual necropsies and their results Some of these support the propositions with which for the moment he is dealing but hardly lend force to others of which he treats elsewhere We may be, for example, in accord with him when he says that "the external inspection of a body can seldom give a true indication of the cause of death in cases where persons are found dead", but we should hardly select the case which he cites of carbolic acid poisoning to support the contention that a specially qualified and appointed pathologist is necessary in order that post-mortem examinations may be efficiently held. In such instances as these the coroner would fail in his duty if he neglected to hold an inquest and thus to establish the cause of death, and the nearest medical practitioner would deserve all that Dr LITTLEJOHN says of him if he failed to supply the necessary information after making the examination intrusted to him If in cases so simple, or in others of greater complexity, the medical man does not express himself with certainty before the coroner's jury it is for the jury to ask for further assistance We are not aware that medical men are in the habit of expressing themselves as sure when they are not sure or when they have no good cause to be sure, and we do not admit, as Dr LITTLEJOHN would have us do, that "the majority of medical men engaged in general practice are not fitted to conduct medico legal post-mortem examinations." We admit, however, on the one hand, that in certain cases an expert is necessary, while on the other we maintain that in the great majority of cases which come under the notice of the coroner the medical practitioner who attended the deceased during life is the one who should perform the necropsy His knowledge of the previous history of the case will lead him especially to investigate certain points which an expert not possessing a full acquaintance with the clinical features observed during life might pass over We see no analogy between this and the patent absurdity suggested by Dr LITTLEJOHN as a parallel—namely ' that the physician who attends a patient during the onset of an attack of appendicitis is the best an Egyptian midwife sitting in an expectant attitude before the supposed patient. We say "supposed" because, as the author of the note points out, it is obvious that the woman is not in labour neither is she quite in the correct position Examples of the amusing and curious letters that reach the hospital from time to time are given in this number of the *Gazette* One correspondent wishes to know whether the hospital has the necessary appliances for testing the specific gravity of a child The correspondent's reason for asking this question is that the child is about to be put upon a "mixed (meat, &c.)" diet after having been brought up as a "*strict* vegetarian."

Westminster Hospital Gazette for February —In this issue, which seems to have been produced under a new editor, there is an amusing parody on the "House that Jack Built' which has for its theme a certain state of things relating to the office of coroner and medical men. We regret to see the pages of this magazine disfigured by the use of an epithet usually applied to Ananias That the word is indorsed by the editor is evident from the fact that in one place it appears with the letters (Ed) placed after it

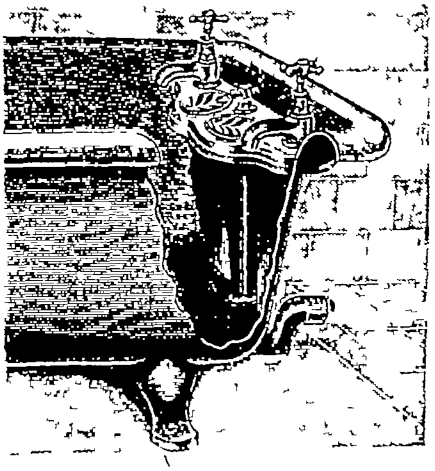
Manchester Medical Students' Gazette for March —The most interesting paper in this issue is "Days of My Youth," by Dr Frederick Melland, who gives reminiscences dating from the coronation of George IV Speaking of the surgery of the medical man to whom he was apprenticed Dr Melland says "Our surgery with its multitudinous array of drawers, jars, and bottles (large and small) had served several generations of surgeons, and contained medicines that had not been used for at least 150 years, such as prepared bear lice, amber, crab s eyes, coral, robs or the inspissated juice of different fruits and herbs."

New Inventions.

A PURE ENAMEL FOR BATHS FOR MEDICAL AND DOMESTIC USE, AND FOR SINKS, URINALS, OR VESSELS LIABLE TO CONTAIN CORROSIVE FLUIDS

IT must be admitted that a pure white enamel for baths for medical and domestic use, hospital sinks, &c, is a desideratum and many attempts have been made to produce such an article which would supplant expensive porcelain We have recently examined a number of model iron baths and basins submitted to us by, and enamelled by the process of, the Pure Enamel Bath Co, Limited, of the Imperial Works, Bromley by Bow, E., and we are bound to say that as far as our experiments have gone the results are very satisfactory It is well known that hitherto there has been great difficulty in making a glaze which will not "craze" or crack and which at the same time will resist the action of certain medicated fluids that are extensively employed in special balneological practice Certain strong saline natural mineral waters, for example, have sooner or later a powerful action upon the ordinary enamels in use. The knowledge of these facts has suggested the institution of a series of experiments upon the new enamel with such agents dissolved in water as corrosive sublimate, carbolic acid, iodine, sulphuretted hydrogen, sulphurous acid, calcium chloride, carbonate of soda, common salt, salts of iron, and a mixture of bicarbonate of soda and hydrochloric acid, which forms the artificial Nauheim bath. Experiments on these lines were ultimately made and with the single exception of sulphurous acid no action upon the surface of the enamel was exhibited, and in this case the acid was in decided excess. With iron salts rust readily deposited upon the enamel which however, was completely removed by rubbing with moist silver sand without injury to the glaze In the Nauheim bath it is important to use the bicarbonate of soda in excess, as otherwise the acid is likely to have a corrosive effect upon the enamel. When tablets were used for the production of an effervescent bath there was no action upon the glaze. A so-called sulphur bath (H_2S) had no effect whatever upon the enamel, it preserved a pure white shining surface. It is obvious from this satisfactory result that the enamel is free from lead, as otherwise it would sooner or later show signs of blackening As a matter of fact, the glaze is entirely free from poisonous metals, and it is important to add that the process of glazing thus involves no injury to the health of the operatives and therefore special regulations which apply to those working with lead glazes have no application Soap or washing soda is without the slightest deteriorating effect upon the enamel and therefore it is calculated to withstand all domestic usage. Carbolic acid and mercuric chloride are also without any visible effect. Throughout the experiments no sign of "crazing" was observed. The enamel, in fact, does not readily chip owing to the way in which it is welded to the iron The process of welding the enamel involves a great heat, so that the iron approaches its softening point—the enamel so to speak enters into the iron and the iron into the enamel Sections of the iron show that this is so—it does not seem possible to detach the enamel or to splinter it, it is practically indestructible.

We are informed that ordinary domestic iron baths may be enamelled by this process within a few hours, so that not more than two days need elapse from the time the bath has been taken away from the house to the time it is returned, finished with a white and brilliant glaze. The method seems to be applicable to a very large number of useful and sanitary purposes The soap tray of the bath may be of cast iron enamelled white by this process, so that it is not distinguishable from solid porcelain, and the tray is so formed and attached, as shown in the accompanying illustration, as to allow of the parts being kept thoroughly clean and to obviate the accumulation of the soapy matter which is often a source of trouble and unsightliness In special cases the pure white enamel may be replaced by an exactly similar process with an enamel of a pea green tinge which, according to our experiments, is proof against either concentrated boiling acids or alkalies. We found that not the slightest action was evidenced when even concentrated sulphuric acid or caustic soda was boiled in vessels prepared with this greenish enamel It is therefore acid and alkali proof. Fresh urine as well as urine in a state of decomposition also had no effect upon it Moreover, the enamel appeared to be proof against "crazing" The unenamelled face of a piece of cast iron was attacked by sulphuric acid but the enamelled side was not acted upon. It would therefore appear that this acid- and alkali proof glaze will be of great value for sanitary ware, the sinks in operating theatres, for example, urinals, flushing pans, wash basins, and, in fact, an infinite number of applications are suggested in which a receptacle with an acid or alkali proof surface is required. The appearance of the white enamel is quite brilliant and equal to highly glazed porcelain, while the greenish enamel has the same brilliance but from the point of view merely of appearance it is slightly inferior Its property, however, of resisting the action of the corrosive fluids mentioned is certainly remarkable.



in regard to the feeding, housing, physical training, and personal hygiene of the classes whence they spring We have already dwelt however, upon this aspect of the case in connexion with what General Sir FREDERICK MAURICE has written thereon and there is no need to discuss it again. We do not, as our readers know, think that the Government adopts the best means or makes the best use of available methods for improving recruiting The most powerful incentives to enlistment, except in time of war, are, we regret to say, want of food and want of work. Once in the army it is marvellous what brave, good, unselfish men our soldiers show themselves. After all is said and done, it must be remembered that the regulars did the hard marching and the hard fighting of the late war in South Africa. We have no sympathy whatever with those who seek to belittle them, their work, or the sacrifices which they are called upon to make—and always do make—nobly and cheerfully

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Rex v Klosowski

ON March 19th SEVERINO KLOSOWSKI, alias GEORGE CHAPMAN, was after a four days' trial convicted and sentenced to death at the Central Criminal Court for feloniously killing MAUDE MARSH, a young woman with whom he had cohabited The history of the particular crime and its associated circumstances render it one of considerable interest whether considered in its medico-legal or purely forensic aspects KLOSOWSKI came to England in 1888. He married a Polish woman whom he afterwards left. In 1895 he induced a young woman named ANNIE CHAPMAN to live with him, her he abandoned after betrayal. Probably it was his liaison with CHAPMAN that led him to assume her name, by which he was known until the case of MAUDE MARSH came to be investigated. In 1897 he resided at Hastings with a married woman named ISABELLA SPINK who passed as his wife. In 1898 SPINK died. Whilst at Hastings KLOSOWSKI purchased from a druggist an ounce of tartar emetic. The label of the packet was found at the prisoner's house after the death of MAUDE MARSH. After SPINK'S death he was supposed to have gone through a form of marriage with BESSIE TAYLOR. She, too, sickened and died. It is noteworthy that the symptoms exhibited by SPINK and TAYLOR were of practically the same character, but poisoning was not suspected, for the death in one case was certified as phthisis whilst in the other obstruction of the bowels was assigned as the cause. The certificates clearly referred to the predominant or ultimate symptoms—persistent vomiting and exhaustion.

In February 1901, BESSIE TAYLOR was attended in her fatal illness by Mr J M STOKER. Rendered callous, no doubt, by his previous fortune in escaping detection, KLOSOWSKI called in Mr STOKER to minister to his last victim MAUDE MARSH It is not necessary to narrate the tortuous record of the murderer He was proved to have compassed the deaths of three women by chronic antimonial poisoning. He abandoned his own wife, ruined the life of one of his paramours, and when tardy justice overtook him at last was seeking to possess himself of yet another woman Counsel for the defence pleaded the absence of probable motive, but this was effectively met by the Solicitor General who pointed to the one dominating feature of KLOSOWSKI'S character, ' cruel, pitiless lust." It is not too much of a refinement to assert that although lust was the prime agent in directing his actions the prisoner was probably endowed with a peculiar form of perverted sexualism, for even if his unbridled passion may have driven him to sore straits a further explanation is required to account for his ruthless sacrifice of human life. Intellectually, no doubt, he was sane, but morally, in a partial degree, he must be accounted so far removed from the base-line of sanity as to verge on alienism. We do not for one moment argue criminal irresponsibility in his case, for this would carry us far beyond what is warranted either by empiricism or experience on medical grounds, whilst it would be subversive of justice. As the law exists death is the *only fitting requital for such merciless deeds*. Apart from considerations of KLOSOWSKI'S mental and moral state the most interesting feature of the terrible story from a medico-legal point of view was the condition in which the body of one of his alleged previous victims was found Although it had lain in the grave for something like four years it was preserved from decomposition in a marvellous degree. This, of course, was attributable to the effects of antimony A similar state of the organs was found in the case of ANN PALMER, the wife of the Rugeley murderer. Here after 15 months interment antimony was detected even in the ovaries and uterine walls. Anyone would think that from the considerable knowledge of the properties of drugs possessed by KLOSOWSKI he would have lived in mortal dread that his sins—if he had any consciousness of the quality of sin—though hidden in the grave, were being kept for his undoing by the very agent which he had used to destroy life.

We must take exception to some criticisms upon the medical profession passed by Mr Justice GRANTHAM who tried the case under consideration It is not the first time that Sir WILLIAM GRANTHAM has delivered himself of uncomplimentary opinions of the medical profession. No doubt his legal mind was disquieted by the fact that antimonial poisoning may be so easily mistaken for natural disease. It does seem strange at first sight that the result of the action of antimony on the animal system should so closely simulate the evidence of natural illness that even a skilled observer may not have his suspicions aroused, but so it is. Moreover, a medical man does not approach his patient in the *guise of a criminal detective* This is not the first occasion on which several people have died at short intervals from antimonial poisoning without the fact having been brought to light save after a protracted period and then, so to speak, only by an accidental occurrence which pointed to certain possibilities In REG v WINSLOW, tried at the Liverpool autumn assizes in 1860 it appeared that three members of a family had died and had been buried in suspicious circumstances On exhumation antimony in small quantities was found in their bodies, but scientific evidence was not prepared to vouch that the antimony caused death. The symptoms of a disease are not seldom anomalous and those induced by antimonial poisoning may vary considerably In THE LANCET of May 22nd, 1847, p. 535, is recorded a case where a young man swallowed two drachms person to operate when surgical interference becomes necessary" The whole matter is one which deserves full discussion and the careful consideration of the facts and arguments put forward on both sides For this reason we welcome Dr LITTLEJOHN's able exposition of views from which we differ

The Recent Debates on the Navy and Army Estimates

THE attention of the House of Commons and of the country has been much absorbed of late with naval and military matters in general and with the navy and army estimates in particular The national expenditure has reached enormous dimensions, as everybody knows, and it is to be feared that so long as foreign Governments show no signs of exhaustion but are pressing forward in these directions so long shall we be compelled for the security of this Empire to do the same What we have to look forward to in the future is, let us hope, the realisation of a strong Empire every part of which is organised to take care of itself All political parties are agreed on the supreme necessity of keeping up a large, preponderating, and highly efficient navy and are prepared to vote ungrudgingly any sum of money that may be necessary for this purpose. The nation seems to be generally satisfied, on the whole, with the way in which the money is spent in this direction, with the system of training of the officers and men, and with what is being done towards still further developing the efficiency of the senior service. With the army, however, the case is different. Although we do not believe that there is in reality an unwillingness on the part of the nation to bear any financial burden that can be shown to be absolutely necessary, many people seem doubtful, amid so many conflicting views, whether the measures proposed to be taken by the Government are the wisest and best that can be devised Happily these are matters, in their broad conception, for the consideration of statesmen and quite outside the province of a medical journal. There are points, however, which invite the attention of THE LANCET

The debates in Parliament during the present month started on a motion relating to the training of officers and men. Mr BRODRICK, in reply to Colonel LONG and Mr LEE, gave a sketch of his new system for the entrance and training of officers for the army Recourse will still be had to the channels through which these have been hitherto supplied—namely, the usual competitive examinations, the militia, and the universities—but the present system will undergo some radical modifications An Advisory Board is to be constituted which is to say the final word in regard to military examinations and some entirely fresh proposals are made with the object of attracting a largely increased number of university candidates into the army We have nothing to say against the appointment of a director general of military education or as to the representatives who are to constitute the proposed Advisory Board. But Mr BRODRICK seems to be quite enamoured with the idea of examination being an effective test and with a system of doing things by councils, committees, and advisory boards. Everything connected with army administration is apparently to be carried out in future through their instrumentality and little or nothing is to be left to the responsibility of heads of departments It would seem to us that this almost exclusive method of transacting public business is rather a sign of official weakness than an indication of strength and directness of aim and purpose While we recognise that, as regards the Army Medical Service, for example, an advisory board strengthens the hands of the Director General rather than otherwise, Mr BRODRICK appears to intend that the functions of the Advisory Board should leave little, if anything, to be done by the responsible head of the Army Medical Service

The proposals for raising the educational standard with a view to improve the quality of those seeking to serve in the commissioned ranks of the army form a large and difficult subject. As regards university candidates the proposals strike us as excellent in their way We question, however, whether these proposals, including the taking of an honours degree in military subjects, will practically prove largely successful in attracting university graduates The intention is, we presume, that the army is henceforth to be taken seriously as a profession like any other profession, but no prospect is held out for any increase in the present rate of an officer s pay The army, consequently, as a career can only prove attractive to those who have a decided taste for military life and adventure and are possessed independent means To all such it will, no doubt, always hold out great attractions, as it has done in the past. But whether it can be made to offer inducements to the man who is before all things a scholar we feel doubtful And with such candidates for commissions the passing of a medical examination may occasionally introduce a difficulty which will have to be carefully provided against A course of hard reading for an examination does not always prove conducive to good health or perfect eyesight And although it goes without saying that intellectual training counts for much in the army as elsewhere it is not everything In the making of great and successful generals there is a rare combination of qualities —of character, courage, and temperament, as well as of mind and knowledge, great generals are usually born not made.

With regard to the men forming the rank and file of the army it is contended that with the present arms and modern modes of warfare the soldier is called upon to exercise his judgment and intelligence far more than he was in the past or under military systems of automatic training such as have more or less obtained since the days of FREDERICK THE GREAT Hence we want to improve the quality of the men who enlist and here we have a chronic difficulty There cannot be an army without soldiers any more than a river without water, and how the desired number of recruits of the requisite standard of health and physique for soldiers is to be obtained is puzzling all military experts who recognise the difficulties of conscription in this country We have only to take note of the large number of recruits rejected on medical inspection and of the number of would be soldiers who are prematurely discharged as medically unfit for the service—a fact to which attention was recently called in the House of Lords—to see that there is something radically wrong in regard to the feeding, clothing, physical training, and personal hygiene of the classes whence they spring. We have already dwelt, however, upon this aspect of the case in connexion with what General Sir FREDERICK MAURICE has written thereon and there is no need to discuss it again. We do not, as our readers know, think that the Government adopts the best means or makes the best use of available methods for improving recruiting. The most powerful incentives to enlistment, except in time of war, are, we regret to say, want of food and want of work. Once in the army it is marvellous what sturdy, good, reliable men our soldiers show themselves. After all is said and done, it must be remembered that the regulars did the long marching and the hard fighting of the late war in South Africa. We have no sympathy whatever with those who seek to belittle them, their work, or the sacrifices which they are called upon to make—and always do make—nobly and cheerfully.

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Rex v. Klosowski.

ON March 19th SEVERINO KLOSOWSKI, alias GEORGE CHAPMAN, was after a four days' trial convicted and sentenced to death at the Central Criminal Court for feloniously killing MAUD MARSH, a young woman with whom he had cohabited. The history of the prisoner's crime and its associated circumstances renders it one of considerable interest whether considered in its medico-legal or purely forensic aspects. KLOSOWSKI came to England in 1888. He married a Polish woman whom he afterwards left. In 1895 he induced a young woman named ANNIE CHAPMAN to live with him, but she abandoned him after betrayal. Probably it was his liaison with CHAPMAN that led him to assume her name, by which he was known until the case of MAUD MARSH came to be investigated. In 1897 he resided at Hastings with a married woman named ISABELLA SPINK who passed as his wife. In 1898 SPINK died. While at Hastings KLOSOWSKI purchased from a druggist an ounce of tartar emetic. The label of the packet was found at the prisoner's house after the death of MAUD MARSH. After SPINK's death he was supposed to have gone through a form of marriage with BESSIE TAYLOR. She, too, sickened and died. It is noteworthy that the symptoms exhibited by SPINK and TAYLOR were of practically the same character, but poisoning was not suspected, for the death in one case was certified as phthisis whilst in the other obstruction of the bowels was assigned as the cause. The certificates clearly referred to the predominant or chronic symptoms—persistent vomiting and emaciation.

In February, 1901, BESSIE TAYLOR was attended in her final illness by Mr. J. M. STOKER. Rendered callous, no doubt, by his previous success in escaping detection, KLOSOWSKI called in Mr. STOKER to minister to his last victim, MAUD MARSH. It is not necessary to narrate the atrocious record of the murderer. He was proved to have compassed the deaths of three women by chronic antimonial poisoning. He abandoned his own wife, ruined the life of one of his paramours, and when satiety overtook him at last was seeking to possess himself of yet another woman. Counsel for the defence pleaded the absence of probable motive, but this was effectively met by the Solicitor-General, who pointed to the one dominating feature of KLOSOWSKI's character, "cruel, pitiless lust." It is not too much of a refinement to assert that although lust was the prime agent in directing his actions the prisoner was probably endowed with a peculiar form of perverted sensualism, for even if his unbridled passion may have driven him to his crimes a further explanation is required to account for his ruthless sacrifice of human life. Intellectually, no doubt, he was sane, but morally, in a partial degree, he must be accounted so far removed from the borderline of sanity as to verge on insanity. We do not for one moment argue criminal irresponsibility in his case, for this would carry us far beyond what is warranted either by empiricism or experience on medical grounds, whilst it would be subversive of justice. As the law exists death is the only fitting reprisal for such merciless deeds. Apart from considerations of KLOSOWSKI's mental and moral state the most interesting feature of the terrible story from a medico-legal point of view was the condition in which the body of one of his alleged previous victims was found. Although it had lain in the grave for something like four years it was preserved from decomposition in a marvellous degree. This, of course, was attributable to the effects of antimony. A similar state of the organs was found in the case of ANN PALMER, the wife of the Rugeley murderer. Here after 15 months' interment antimony was detected even in the ovaries and uterine walls. Anyone would think that from the considerable knowledge of the properties of drugs possessed by KLOSOWSKI he would have lived in mortal dread that his sins—if he had any consciousness of the quality of sin—though hidden in the grave, were being kept for his undoing by the very agent which he had used to destroy life.

We must take exception to some criticisms upon the medical profession passed by Mr. Justice GRANTHAM who tried the case under consideration. It is not the first time that Sir WILLIAM GRANTHAM has delivered himself of uncomplimentary opinions of the medical profession. No doubt his legal mind was disquieted by the fact that antimonial poisoning may be so easily mistaken for natural disease. It does seem strange at first sight that the results of the action of antimony on the animal system should so closely simulate the evidence of natural illness that even a skilled observer may not have his suspicions aroused, but so it is. Moreover, a medical man does not approach his patient in the guise of a criminal detective. This is not the first occasion on which several people have died at short intervals from antimonial poisoning without the fact having been brought to light save after a protracted period and then, so to speak, only by an accidental occurrence which pointed to certain possibilities. In REG. v. WINSLOW, tried at the Liverpool autumn assizes in 1860, it appeared that three members of a family had died and had been buried in suspicious circumstances. On exhumation antimony in small quantities was found in their bodies, but scientific evidence was not prepared to vouch that the antimony caused death. The symptoms of a disease are not seldom anomalous and those induced by antimonial poisoning may vary considerably. In THE LANCET of May 22nd, 1847, p. 555, is recorded a case where a young man swallowed two drachms of tartar emetic in mistake for Epsom salts. Half an hour later he vomited once Mustard was required to bring on emesis and gradually the symptoms abated and the patient recovered. In the case of poisons producing such capricious results it must be very difficult to detect their use with certainty One remark made by Mr Justice GRANTHAM was timely in view of the report of the committee appointed to consider and to draft regulations for officially permitted cremation.[1] Had the bodies of ISABELLA SPINK and BESSIE TAYLOR been cremated the real cause of death and KLOSOWSKI's participation in it would never have been revealed. It is questionable, however, if those bodies would have been reduced to ashes had the safeguards now recommended been in force and of these safeguards Mr Justice GRANTHAM appears to be in ignorance We propose to deal more exhaustively with this question at an early date

We cannot close this notice without expressing our congratulations to Dr T STEVENSON on having accomplished a masterpiece of toxicological investigation and to the medical men through whose instrumentality the murders came to light

Annotations.

"Ne quid nimis."

A NATIONAL TRAINING SCHOOL FOR MIDWIVES

IN a letter to the *Times* of March 17th, signed by Lady George Hamilton and Miss Gregory, a proposal is made to establish a general hospital with a maternity annexe in one of the densely populated outlying districts of London as a national training school for midwives In this institution, it is suggested, educated gentlewomen should receive an eighteen months' course of instruction in general and monthly nursing and then a six months' course of midwifery in the hospital and district Having passed their examinations they would be drafted out as midwives to wherever they might be required, and they would return to the hospital every third year for re-instruction and re-examination. The scheme is put forward because, as the writers of the letter contend, the country has, in virtue of the Midwives Act, "undertaken to remove by degrees a highly responsible and scientific profession from the hands of uneducated women." They do not think that the country should rest satisfied in returning the work to the same class of women after they have received a minimum of training We are in entire agreement with the view that midwives should receive some training in general nursing besides the special training which they receive in lying in hospitals, and we hope that the new Midwives Board may find it possible to lay stress upon this point. It is also important that no difficulties should be placed in the way of any women who may intend to become midwives under the new Act obtaining the necessary instruction and training under the best conditions It is possible that the present lying in hospitals and training schools may not be able to deal adequately with the increasing number of persons who may be expected under the new Act to enter for a course of training as midwives It is, however, of importance that this should be clearly shown before any measures to add to the already excessive number of small hospitals in London are carried out or, indeed, initiated. We must confess to some doubts as to whether any great number of educated gentlewomen will be found to take up an occupation which, in existing circumstances, must be but poorly paid and in which there are but few opportunities of their reaching such positions as are open to the ordinary general nurse. It would be little short of a calamity if the scheme led to the formation of a class of superior midwives who would tend to enter into competition with the medical men in the poorer districts and who would be inclined in view of their better and no doubt more expensive training to charge fees approaching those charged by duly qualified medical practitioners. With the object of the two signatories of the letter in their endeavour to improve the training of midwives we are in entire sympathy, and if educated gentlewomen can be persuaded to take up the occupation so much the better for all concerned, but if the scheme is to lead to the formation of a class of nurses who will consider themselves something more than ordinary midwives, and who must be something considerably less than duly qualified medical practitioners, then it cannot fail to do harm It would be interesting to hear what in the opinion of Lady George Hamilton and Miss Gregory is "an adequate fee for adequate attendance" which they say the majority "of those requiring the services of midwives who are not paupers but the wives of self respecting artisans and labourers are thankful to pay" By all means let us strive to improve the status of the midwife, but let us always remember that the most highly trained midwife must be immeasurably inferior in her amount of knowledge to the qualified medical man. It is to be hoped if any such scheme is adopted that it will be carried out with the consent of the council of King Edward's Hospital Fund for London and with the concurrence and advice of the new Midwives Board.

SIR E CASSEL'S GIFT FOR THE RELIEF OF OPHTHALMIA IN EGYPT

AS has already been announced in our columns, a meeting was held recently at the office of the Egyptian Sanitary Administration at Cairo to consider the question of the disposal of Sir Ernest Cassel's gift of £40,000 for the relief of ophthalmia in Egypt At this meeting a scheme was formulated by Sir Horace Pinching, the head of the department, for the institution of an 'Ambulatory Dispensary' It is understood that the annual income from Sir Ernest Cassel's splendid gift will be about £1760 With this money Sir Horace Pinching proposes to create an additional post of inspector and to engage an officer for a short term of three years or so to give special attention to diseases of the eye and to travel round the provinces with a tent, so that the patients would not have to travel any distance to be treated. The inspector is to work for two months in the provinces and then to be for one month in Cairo, alternating his systematic visits to the provinces with a sojourn in the capital Sir Horace Pinching's scheme is only tentative, it will require the sanction of Lord Cromer and, we presume, the approval of Sir Ernest Cassel before it is put into action We think, therefore, that it will be well to state now that serious objections have been formulated to the scheme A letter, a copy of which has been sent to us, has been addressed to Sir Ernest Cassel from a prominent member of the medical profession who considers that the scheme is a practically useless one and who gives his reasons for his critical attitude. 'All they propose doing," he says, speaking of the sanitary administration, "is to purchase and equip one tent which, with its maintenance and salaries, leaves a wide margin on the interest derived from the sum. It is to work solely in the provinces and not to touch the towns. The tent of itself is sufficient to nullify utterly any possibility of good result, as it is a most unsuitable erection only justifiable in the stress of war, and any research work or other work of value is quite impossible in it." We doubt whether this criticism is wholly accurate, as the writer has apparently overlooked the fact that the inspector is to be for one month in Cairo and for two months on tour in the provinces. Whether he is to live and to work in the tent while in Cairo, or is to carry on ophthalmic work in some suitable building, or be attached to some hospital, or is to have every third month as a holiday we do not know, but we think our readers will agree with us that the scheme, from the point of view of modern ophthalmology seems to leave much to be desired. A tent is not a suitable place in which to perform operations upon the eye and a migratory out-patient department is not the ideal of the modern ophthalmic hospital. The sum given is a large one and should in our view be used rather as the nucleus of a scheme for an ophthalmic hospital in Cairo Cases of disease of the eye are there to be found in abundance and such a hospital might easily, and would, we believe, speedily, become an invaluable centre of clinical research An inspector travelling in the desert can be of little use to any mass of sufferers from diseases of the eye, while his services to the cause of science will be *nil* For two months out of every three it seems to us that he is to turn his back upon the congregated cases of diseases of the eye and to go a-travelling in search of sporadic examples, which when he meets them on his wanderings, he will not be able to treat with scientific precision or to watch in any way so as to be able to record useful clinical experiences We trust that the Sanitary Administration of Egypt will think again before it places before Sir Ernest Cassel a scheme which seems to us to be of little use to anybody—except to the travelling inspector or to the department.

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[1] See THE LANCET March 17th p. 673

THE UNCONTROLLED SALE OF POTABLE SPIRITS

WE have received in connexion with the articles on the above subject in THE LANCET of Feb. 21st, p 542, and of March 21st, p 820 some interesting communications from certain well-known representatives of the trade, both wholesale and retail, for which we have no space owing to the claims on our columns of more strictly medical matters. We are glad, however, to find that our views are very widely indorsed. The well known firm of Messrs. W and A. Gilbey, for instance, write, in regard to the statement sometimes made that the public prefer a blended article, that we must confess to being somewhat incredulous on the point at any rate so far as our experience goes, while, as you remark, there can be no justification whatever for the substitution of grain or of a mixture of the two for all malt spirits unless the consumer is made aware of the character of the article he is purchasing" Again, "we fully endorse what you state to be in your view the remedy for the present state of things—namely, that it should be insisted upon that upon the label of the bottle of all spirits there should be printed a clear statement of the nature of the contents, whether the spirit be an all malt whisky or partly malt and partly grain spirit, or an all grape brandy or partly grape and partly grain spirit, and so forth. One thing is quite certain, that were this plan enforced it would put a stop to the importation of many of the articles now shipped from certain countries and which, to put it mildly have no pretension to the designations under which they are sold to the consumer." Messrs. H. S. Persse, Limited, the well-known Irish whisky distillers, also write to the effect that the refusal of the Commissioners of the Inland Revenue to incur any responsibility as regards guarantees of age on bottled whiskies amounts to their connivance at the practice of substitution and the false labeling of whisky in bond under their officials' eyes Mr. Walter Long, we note, has made a reply to similar representations on this subject and is reported to have made the astounding statement that the Sale of Food and Drugs Act is sufficient to deal with the question. As was pointed out in the report of THE LANCET Special Analytical Commission on Brandy in THE LANCET of Nov 29th, 1902, p. 1503, the Sale of Food and Drugs Act controls the sale of spirits only so far as their alcoholic strength is concerned and only provides against the extreme dilution of spirits and not against substitution, and thus a public analyst may report any spirit, whether it is described as brandy whisky gin, or rum as genuine so long as it conforms to a certain strength of alcohol. We are convinced that if greater attention were given to the determination of the normal chemical characteristics of all classes of spirits a system of analysis could be established which would enable an opinion to be given as to whether the spirit was pure, unmixed, or not. As a reference to our analytical columns will show, it is already possible to make very fair deductions on this point, that is if the analysis be made comprehensive and directed specially to the estimation of the secondary products.

THE PREVALENCE OF SMALL-POX

THE Local Government Board for Scotland intimates that during the period from March 1st to 15th inclusive 1 case of small pox has been notified to it—viz. from the burgh of Dundee. The small-pox hospital ships will shortly be removed from the river as a new small pox hospital has been erected on the Kentish shore of the Thames near Long Reach. As regards Braunton, we mentioned in THE LANCET of March 14th that six cases had occurred in one family in that village. One of these patients has died from the disease. That the outbreak has apparently been confined to the house in which it started is mainly due to the exertions of the medical officer of health, Mr W J Harper, and we are glad to see that at the meeting of the Barnstaple rural council which was held on March 13th Mr Harper's services were appreciated at their due value by the council. In London during the fortnight ended March 19th there were admitted to the hospitals of the Metropolitan Asylums Board four cases of small pox. There are still sporadic cases of small pox in several towns in the north of England, Durham, South Shields Warrington, Leeds and Birmingham, all being affected, while an outbreak has also occurred in Dublin

SEMI-TEETOTALISM

MOST of our readers will by now be familiar with the aims of the 'Semi teetotal Pledge Association, a body the object of which is to stop all drinking of alcoholic beverages between meals To medical men who are confronted daily with the ravages upon health and happiness that are made by alcohol taken in excess the object of this association is sure to appeal, and we cordially invite practitioners to further its efforts wherever they find appropriate ground. Large numbers of men damage themselves irretrievably by promiscuous drinking without ever becoming drunk. It is in averting this damage that the association may be of such signal service. In many lines of commercial activity the occasional drink, repeated often an incredible number of times during the 24 hours, is the customary precursor or accompaniment of the trans action of business It needs an exceptionally strong minded man to depart from the usual method in dealing with his fellows. It needs a still more exceptional physical constitution to pass unharmed through the daily dosing with alcohol that such practices necessitate. The Semi teetotal Pledge Association wishes to interfere in no possible way with the propaganda of total abstinence Probably, in fact, the instigators of the association regard total abstinence as the ideal which is to be aimed at and regard the immediate aim of their own body as a stepping-stone towards the *summum bonum*. It is not at all unlikely that a greater measure of success may attend the comparatively moderate requirements of "semi teetotalism" than has yet met the efforts of the instigators to total abstinence. The consumption of alcohol in Great Britain shows no marked signs of decreasing The evils wrought by alcoholic excess remain a serious menace to our national welfare and a cause of vice and disease probably unequalled in this country by any other one thing Any system that may tend to free the country from this widely prevalent and destructive influence must be welcomed by all who have the good of the nation at heart and to the notice of medical men in particular we would recommend for support the "Semi-Teetotal Pledge Association." which has the patronage of Lord Roberts and Lord Alverstone.

"A CORONER S COMMENTS"

IN an annotation which we published recently under this heading[1] we remarked upon the proceedings at an inquest held at Bournemouth where an investigation into the cause of death had been undertaken by the medical men in attendance immediately after the death of the patient. We appear to have received a piece of incorrect information or to have derived a wrong impression, as we understood that the patient, who died during the administration of an anæsthetic, had already an abdominal wound, the commencement of an operation, which wound, with the permission of the parents, was afterwards enlarged. The coroner asks us to state that no abdominal wound existed at the time of death and that the abdominal incision was made entirely after death.

THE CLINICAL VALUE OF MEASURING THE BLOOD PRESSURE

IT is only within recent years that measurement of the blood pressure with the sphygmometer has begun to take the place of vague estimation with the finger, an advance analogous to measuring the temperature with the thermometer instead of estimating it by the hand. In the Boston *Medical and Surgical Journal* of Feb 26th Dr J M Jackson has published a number of interesting observations made with Gaertner s sphygmometer which show the value of measuring the blood pressure He finds that the blood pressure in young healthy men ranges from 100 to 130 millimetres of mercury but may be as high as 150 millimetres and that in young women it ranges from 90 to 110 millimetres Elderly persons have, in consequence of arterial changes, almost always a high blood pressure. Thus in a person aged 50 years a pressure of 175 millimetres need not cause disquietude Low pressures are uncommon and are found principally in cases of shock and collapse Pressures of 200 millimetres are not infrequent and should be regarded as dangerous, while pressures of 250 millimetres are very dangerous. In the last year five of Dr Jackson's patients with pressures of over 190 millimetres have died from apoplexy Hence he makes it a rule to warn the family in such cases. In kidney disease he has sometimes found very high pressures. Thus a girl complained of headache and dimness of vision. Considerable enlargement of the heart was noticed and there was incipient retinitis The urine did not contain albumin or casts and there was no dropsy The sphygmometer registered 250 millimetres, the highest pressure that could be measured. As he was puzzled by the case he admitted the patient to hospital. For a few days nothing more was found until slight hæmaturia occurred. A week after admission she died suddenly The necropsy showed a tuberculous kidney with occluded ureter and the other kidney hypertrophied. In this case the blood pressure was the only "danger signal." In another case a woman, aged about 60 years, with marked arterio-sclerosis and interstitial nephritis, had been under treatment for some time. The blood pressure ranged up to about 210 millimetres. One day she complained of headache and the pressure was higher than the sphygmometer registered (250 millimetres) While Dr Jackson was making a third attempt to take the pressure, in order to be sure that he was correct, she fell on the floor unconscious Death from cerebral hæmorrhage occurred in a few minutes

THE WATER-SUPPLIES OF GLAMORGAN

WE have received a copy of a report by Dr W Williams, the medical officer of health of the Glamorgan county council, dealing with the water supplies of that county The report appears to us to be very complete and presents a good deal of information that will be valuable in regard to existing supplies and possible new sources. It is shown that an enormous increase is taking place in the population of Glamorgan owing to the rapid growth of its industrial centres, and that is a fact which justifies giving the subject careful attention. Dr Williams deals with this question of the increase of population and then, after a section devoted to the physical aspects of the county, refers to rainfall, water sheds, sources of the water supplies, and concludes with the results of the examination of the public water supplies based upon chemical analyses undertaken by Dr W G Savage and Mr J H Sugden, B Sc., F I.C Appended to the report are four interesting and instructive maps dealing with (1) the existing and prospective waterworks, gathering grounds and pumping stations and their relation to the South Wales coal field, (2) the physical configuration of Glamorgan and the adjacent counties , (3) the rivers of Glamorgan and adjacent counties , and (4) the rainfall for the year 1901 in Glamorgan and the adjacent counties. We congratulate the Glamorgan county council on the possession of such an admirable report. It is certainly desirable that the county councils and other authorities throughout the country should take steps to gain similarly complete information as to the character and extent of the water supplies of their own districts.

ACUTE LEUKÆMIA WITH HUGE HÆMATOMA

AT the meeting of the Société Médicale des Hôpitaux of Paris on Feb 20th M Ernest Barié and M Salmon related a case of acute leukæmia in which the rare complication of a huge hæmatoma of rapid formation was observed. A man, aged 35 years, who had been ill for six weeks came under observation He was extremely pale and complained of weakness, visual troubles, epistaxis, and diarrhœa The lower limbs were œdematous, the spleen was enormous, and the liver was enlarged The lymphatic glands were not affected The blood was pale and watery The red corpuscles amounted to 2,015,000 per cubic millimetre and were of unequal sizes and deformed. The leucocytes were greatly increased in number, being in the proportion of one to every two red corpuscles, and varied much in size, small leucocytes and very large ones being found. Arsenic was given. Some days after admission subcutaneous ecchymoses were found on the arms, legs, and abdomen and a tumour of the size of a walnut appeared below the inferior angle of the right scapula. It was painless and fluctuated. In the evening of the same day it had increased to the size of a Tangerine orange. On the following day it was larger than a fist and on the third day it was of the size of the head of a newly born infant As extension could not be checked either by compression or by hæmostatics and the patient was rapidly becoming worse the tumour was opened in order to find the source of hæmorrhage. It contained one litre and 300 grammes of pale watery blood scarcely coagulated in several places. The source of hæmorrhage could not be found. The cavity was stuffed with iodoform gauze and a compress of cotton wool was applied In the evening the tumour began to reappear and on the following day it was quite a third larger than before, and in spite of the tight sutures blood was constantly oozing from the wound. The patient became weaker and died comatose on the next day The necropsy showed a spleen weighing 2200 grammes, violaceous, and spotted with greyish infarcts of the size of grains of rice. The liver weighed 3700 grammes and looked very fatty The lymphatic glands were normal. The case, except for the hæmatoma, was typical of acute leukæmia. The profound alteration in the blood and its feeble power of coagulation were no doubt factors in the production of the hæmatoma.

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[1] THE LANCET, Dec. 27th, 1902 p 1797

THE DISTRIBUTION OF PLAGUE

As regards the Mauritius, a telegram from the Governor received at the Colonial Office on March 20th states that for the week ending March 19th there had been 1 case of plague which had proved fatal. As regards the Cape Colony the medical officer of health of the colony states that for the week ending Feb 21st 4 cases of plague were discovered at Port Elizabeth—namely, 1 European male and 3 native males, the European male and 1 native male being found dead. The cases were discovered on the following dates 2 on the 15th, 1 on the 17th, and 1 on the 18th. At the end of the week 2 cases remained under treatment at the plague hospital, Port Elizabeth Plague-infected rats continued to be found in the town of Port Elizabeth during the week. Plague-infected rats were also discovered at Graaff Reinet during the week ending Feb 21st. For the week ending Feb 28th 18 cases of plague were discovered at Port Elizabeth—namely, of Europeans 2 males, of coloured, 8 males and 6 females (of these, 1 male and 1 female were found dead), and of natives, 2 males The cases were discovered on the following dates 2 on the 22nd, 4 on the 23rd, 4 on the 24th, 2 on the 25th, 3 on the 26th, and 3 on the 27th. At the plague hospital, Port Elizabeth, 2 coloured male patients died during the week, leaving 16 cases under treatment at the end of the week. Plague-infected rats continued to be found at Graaff Reinet during the week ended Feb 28th. As regards Hong Kong, a telegram from the Governor received at the Colonial Office on March 23rd states that for the week ending March 21st there were 28 cases of plague and 28 deaths from the disease.

THE GLASGOW AND WEST OF SCOTLAND COÖPERATION OF TRAINED NURSES

THE calling of a nurse has nowadays assumed such importance to the medical profession that it has become necessary for the safety of the public that all nurses should be under some kind of rule—that is, they should be either sent out by a well known hospital or else they should be members of a coöperation or a sisterhood or of some other responsible body Such a body is the Glasgow and West of Scotland Coöperation. It will be seen from Dr David Newman's letter in another column that recently the constitution of the coöperation has been revised. This revision has given rise to a good deal of criticism in certain journals, but from a perusal of the constitution which now lies before us we are unable to see that there is any reason for all the pother which has been made. It has been argued that the nurses will under the new constitution be the servants of the coöperation. This argument is founded upon section 2, clause (*o*), of the laws defining the objects of the *constitution* 'To formulate and circulate among the nurses of the coöperation such by laws and regulations as may be deemed expedient for defining the duties, professional qualifications, or otherwise, of any nurse being a member, or servant of the coöperation" The objectors to this clause seem to have missed the comma after the word "member" The executive committee includes some of the best-known medical men in Glasgow and the coöperation, judging from a perusal of a report of the tenth annual meeting, would seem to be doing excellent work.

JAPANESE CATTLE AND THEIR ALLEGED IMMUNITY FROM TUBERCULOSIS

SIR HUGH R. BEEVOR has recently addressed a communication to the Veterinary Department of the College of Agriculture of the Imperial University of Japan and has received through the Japanese Embassy the following interesting reply to his questions from Professor Katushima —

Veterinary Department, College of Agriculture, Imperial
University Komaba, Tokio Japan
Feb 5th 1903.

DEAR SIR—In reply to your inquiries contained in the note of Nov 3rd, 1902, *we have the honour to answer as follows*:—

1. Whether indigenous cattle of Japan are immune from tuberculosis?—We dare not say that our native cattle are immune from tuberculosis but according to the report of the slaughter-house inspectors none of the indigenous cattle has ever shown any sign of tuberculosis, while this disease is very commonly met with among crossbred cattle and those imported from Europe and America.

2. Are the cattle housed and are houses of cattle well ventilated?—Our native cattle are either housed or grazed. The construction of cattle stables is here very simple so that a natural ventilation is fairly going on Furthermore, cattle are kept isolated from one another—that is to say every farmer keeps mostly one or two seldom more cattle in his yard. It is very rare for them to keep a large number of cattle in one stable together except dairies whose stock consists almost exclusively of foreign breeds or of those crossed with them.

3. Are cattle and milking sheds kept clean more than in Europe?—We do not find any difference.

Yours respectfully
Professor KATUSHIMA.

Owing to the courtesy of the Japanese Embassy and Professor Katushima the interesting question of immunity from tuberculosis among the native cattle of Japan can be considered and the intricacies of this question are manifest. Sir Hugh Beevor points out that it remains doubtful whether immunity is innate or acquired. If the latter several factors of environment—viz., good ventilation, absence of excessive milking, and isolation—may exert singly or together such influence as secures immunity

"RUN DOWN ANOTHER INTERPRETATION

IN THE LANCET of March 7th, p 673 we alluded to this commonly used phrase as one which, though quite descriptive of a well recognised mental and physical condition conveys no meaning as regards pathogenesis. In the same article we drew attention to the question of monotony of occupation as productive of fatigue being the probable or possible cause of the condition A correspondent, in suggesting contributive causes, calls attention to the fact that accumulation of waste products is the undoubted cause of tissue fatigue and suggests that it probably does not much matter whether these waste products are our own or other people's, whether the material giving rise to the sensation of fatigue is derived from our own tissues by internal respiration or from the tissues of others taken in with re-breathed air by external respiration, that it is possible that the school child may be quite as readily fatigued by inspiring the waste products of his fellows as by carrying on his own not often too pronounced mental efforts, and that the business man is more liable than the agricultural labourer to become run down, not so much because he works harder or more monotonously, and therefore personally manufactures more waste products, but because his tissues are more liable to become saturated with the waste products of himself and others derived from the confined atmosphere which he habitually breathes. We all know how tiring to most of us is a long railway journey, more especially if the compartment is crowded and the windows are closed Our correspondent remarks that it seems unlikely that such fatigue should be caused by the muscular exertion of sitting on the fairly comfortable seat usually provided or even by the mental effort of reading the usual magazine, and considers that the effect is due to the saturation of the tissues with waste products taken in through the lungs. He suggests that the pallor and blueness observable in most persons after exposure to an atmosphere highly charged with the products of respiration are due to contraction of arterioles and dilatation of venules, and that this condition is the essential factor in the production of what he calls "waste product poisoning"—that this condition must necessarily imply lessened metabolism and consequently lowered vitality and increased susceptibility to the attacks of the microbe—in short, a state which might be described by the phrase "run down." We think that there may be something worthy of consideration in this view of the matter

THE CORPORATION OF LONDON AND TUBERCULOUS MEAT

The Corporation of London has for many years instituted legal proceedings (resulting in many instances in the infliction of heavy fines or terms of imprisonment) against farmers, butchers, and other persons for sending diseased meat into the City markets or for exposing the same for sale The corporation has been advised that in some cases such offence may have been due not so much to wicked greed or to gross carelessness as to ignorance of the symptoms of disease in the living animal and of the appearance of unsound carcasses after slaughter With this idea the corporation has published a notice embodying the indications of tuberculosis, both in the carcass and in the living animal, drawn up by Dr W Collingridge, the medical officer of health of the City, and Mr King, veterinary inspector of the orporation The notice will act as a guide for the use of all salesmen and dealers and is consequently couched in popular language, but it is admirably clear and should leave no farmer or butcher the right for the future to plead ignorance in excuse for the wicked act of purveying diseased food.

THE CRUSADE AGAINST MEASLES.

In The Lancet of March 21st, p 826, we referred to the action taken by the health authorities in the city of Norwich and in the administrative county of London in regard to the prevention of, or to the lessening of the number of, cases of measles. We must call our readers attention to the fact that so far as concerns London measles is now no more a notifiable disease than it was before the publication of the order of the London County Council. The order applies certain provisions of the Public Health (London) Act, 1891, and has nothing to do with medical men as such, but only in their capacity as ordinary citizens. There is no question of notification, but the order deals with regulations for the prevention of infection by clothing, rubbish, bedding, and the like. We lay stress upon these points for there appears to be an impression abroad that measles is now a notifiable disease under the Infectious Diseases Notification Act, 1889 This is not the case. We have now received the report on measles of the medical officer of health of Huddersfield—a report which was accepted by the borough council. Notification with isolation has been adopted, that is to say, "all appropriate cases" are to be removed for isolation during inter-epidemic periods. During an epidemic period only such cases are to be removed as special circumstances may indicate. Susceptible "contacts" are to be kept under observation It is thus hoped that epidemics, if not prevented, may be at least postponed. We think that the results of these experiments will be of great value Measles is, of course, a most difficult disease to deal with from the prophylactic point of view, but that is no reason for not trying to lessen both its spread and the mortality therefrom

HUNTERIAN SOCIETY

The Hunterian Society has decided to hold a discussion upon the present methods of treating pulmonary tuberculosis The subject will be divided into sections, the discussions on which will be opened by recognised authorities The meeting will take place at the London Institute, Finsbury-circus, on Wednesday, April 8th, at 8 30 P M, and all members of the medical profession are invited to attend and to take part in the discussions There will be an exhibition of plans of sanatoriums and members of the profession willing to lend plans are requested to communicate with the senior secretary, 1, Victoria square, S W, as early as possible.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY

A wish has been expressed by many members of the London and Counties Medical Protection Society that Mr Jonathan Hutchinson, F R S, who has for so many years presided over the interests of the society, should be invited to meet the members on his return from India In accordance with this expressed wish a committee has been appointed to arrange for a dinner in the first week of May next and it would greatly facilitate the arrangements for the dinner if those members of the society who intend to be present would send in their names to the honorary general secretary, Dr Hugh Woods, at the earliest date possible, together with the names of those whom they may wish to invite as guests. The price of the dinner tickets, including wine, will be 21s

EMERGENCY INSTRUMENTS

A surgeon is often compelled to operate without some appliances which at first sight may seem essential for success, but inventiveness and ingenuity will often succeed in adapting to his need some article of household use A year or two ago we published a case in which a surgeon—far from surgical instrument makers—wished to perform a suprapubic cystotomy He desired to distend the rectum by the inflation of a Petersen's bag, but, although, alas, no such thing could be obtained, yet an effective substitute was readily devised. He took a portion of the inner tube of a bicycle tyre and, fastening to it a valve, he obtained a bag which was easily inflated and served to render the bladder more accessible. Last year we printed an account of the varied uses to which a surgeon could put a hairpin, an article generally obtained with readiness. It served for more purposes than can readily be remembered However, it is to the armamentarium of the carpenter or engineer that the surgeon most naturally turns when in need Many of the surgeon's instruments are but modifications of the carpenter s, and chisels, pincers, saws, awls, and gimlets have all in their turn proved useful to the surgeon. Fortunately we have in boiling a ready and easy method of rendering these tools aseptic and the results obtained from the employment of these tools need not fall short of those resulting from the use of instruments specially designed for surgery We print in this number of The Lancet (p 883) a very good instance of the adaptability of the surgeon in emergencies. Dr F M. Morris of Ceres, Cape Colony, in consultation with Dr Munnik diagnosed extradural meningeal hæmorrhage in a case of coma after injury The patient was rapidly growing worse and no trephine was obtainable. A brace-bit was borrowed from a carpenter and by its means a piece of bone was removed by Dr Munnik and a blood-clot was found. The wound was enlarged, the bleeding vessel was tied and the patient recovered. We congratulate the operators on the case Although in this country the trephine is practically the only instrument employed for removing a portion of the skull, on the continent of Europe an older form is still extensively used which bears a close resemblance to the "brace and bits" of the carpenter Great are the achievements of surgery in well appointed hospitals and with all imaginable instruments, but still greater credit is due to the surgeon who with few instruments is able by the adaptation of existing appliances to achieve a successful result

RADIUM AND THE TRANSMUTATION OF ENERGY AND MATTER

As our readers know, we have for the past few years expressed the opinion that the researches on radio-activity which were being carried out in France and in this country would lead to remarkable developments and it must be admitted that as the nature of this phenomenon has been more fully studied the results have become more than ever wonderful and fascinating There seems little doubt that radium is a separate entity, that it is a distinct element which has hitherto escaped human observation, and certainly it possesses properties of an infinitely more remarkable character than any other chemical element in the chemical hierarchy We can to some extent understand the action of platinum black which sets fire to hydrogen by bringing it into intimate contact with oxygen within its substance resulting in the union of these elements with the formation of water, and we can understand the respiratory action of the plant in assimilating carbon from the carbonic acid gas of the air and returning oxygen, and we can understand the respiratory action of the animal in which carbon is given up and oxygen is absorbed—these are analytical and synthetical processes, but it is decidedly less easy to comprehend how it is that an element is able to go on indefinitely giving off etheric vibrations while there is no apparent chemical change Some have even thought that we are dealing with perpetual motion and an anomaly at first sight appears when we come to consider the great law of the conservation of energy It is appalling to think what enormous potentialities must exist in radium which never ceases to give off etheric vibrations But surely *ex nihilo nihil fit* must still be true It would seem that in the physical and possibly in the chemical sense also radium is the philosopher's stone In a word, this element has the power of transmuting energy—picking up, so to speak, certain energies around it in space and presenting them in new shapes in what we know as heat and light. As long as there are forces accessible to it so long will this wonderful work of transmutation go on. But what is the nature of this translation and how is the change affected? This is the crux upon which physicists and chemists alike are turning the full force of their reasoning faculties, and perhaps after all, the phenomenon may be beyond defining much in the same way as is electricity at the present time. It is, of course, a matter of speculation as to whether these wonderful properties will ever be turned to practical account. They certainly suggest a number of useful applications We may be, for instance, on the verge of utilising new sources of heat and light, and if that be so there can hardly be any limit to possibilities Obviously, however, an element possessing such potentialities must be dangerous, it blisters the skin, for example, and when kept in the waistcoat pocket it is said to have burned a hole in the flesh. Radium is of course a rare material and difficult to isolate in a state of purity and possibly therefore its price will always be prohibitive of any extensive utility If the view is correct that radium acts by reason of its power to translate one kind of energy into another the result may be, after all, the transmutation of metals or matter, for in the phenomenon of radiant matter or in the conduct of electrons matter and force seem to merge in one another

ROYAL INSTITUTE OF PUBLIC HEALTH CONGRESS AT LIVERPOOL

THE Royal Institute of Public Health has accepted an invitation from the corporation of Liverpool to hold its next annual congress in that city on July 15th to 21st The business of the congress will be transacted at the University College and its scope is sufficiently indicated by the following sections into which the work may be conveniently arranged, but these will be so grouped as to facilitate discussion of the subjects comprised under each section (*a*) Preventive Medicine and Vital Statistics, (*b*) Municipal Engineering, (*c*) Child Study and School Health, (*d*) Sanitation of Congested Areas and Re housing the Dispossessed, (*e*) Tropical Sanitation, (*f*) Bacteriology and Comparative Pathology, (*g*) Port Sanitary Administration, and (*h*) Municipal and Parliamentary Hygiene Full opportunities will be given to delegates to inspect and to investigate the various sanitary operations and municipal undertakings carried on in Liverpool, including lighting and locomotion, water supply, measures taken to re house the working classes, the public baths and washhouses, the sterilised milk depôts, hospitals, sanatoriums for consumptive patients, and the like Delegates will be furnished with a well illustrated descriptive handbook. Previous congresses of the Royal Institute of Public Health have been largely attended and important results have followed upon their deliberations. The fact that distinguished men have already intimated their intention of being present affords reason to believe that the Liverpool Congress will be in no way less interesting than previous ones A subscription of one guinea will entitle each delegate not only to published copies of the transactions of the congress, but will also entitle him to receive the monthly publications of the Royal Institute of Public Health throughout the ensuing 12 months Apart from the actual business of the congress arrangements will be made which, it is hoped, will insure the comfort and convenience of delegates Dr E W Hope (the medical officer of health of Liverpool) has been appointed the honorary secretary of the congress The president of the congress will be the Earl of Derby, K.G

THE PREVENTION OF MALARIA

THE directors of Akrokerri (Ashanti) Mines, Limited, have had submitted to them recently by their medical officer, Mr W Barclay Dick, a report for the past 18 months which contains some passages of considerable interest. "On August 1st," says Mr Dick, "the camp consisted of one compound for the staff, three compounds for the miners, and the native labourers' village. The primitive condition of their surroundings and the lives of the natives necessitated much reform which has now happily been effected. It was decided to select a site for a new village, as the straggling huts placed at every angle rendered proper drainage impossible, the consequent numerous pools alive with the larvæ of anopheles being an ever present menace to health. A clearing was accordingly made half a mile away from the present camp and here the building of the village was begun in March, 1902, and completed the following July The streets were laid out 15 feet wide, and between each house a space of five feet was allowed. The village is well drained, at a considerable distance away and on either side clearings have been made with convenient paths leading to them where refuse is thrown, so that the village now stands ridded of its two worst evils, and is in every respect clean and healthy The old village has been destroyed, and wherever found all breeding places of anopheles have been filled in " Mr Dick's report, after giving information concerning the general health, accommodation, and water and food supply of the miners, concludes with these remarks "In August, 1901, prior to the introduction of reforms, 55 per cent of the staff were on the sick list due to malaria, of whom one had to be invalided In September 35 per cent. were sick, in October 25 per cent., of whom two were invalided. In striking contrast stands out the fact that since the camp was placed on a working sanitary basis only one case of malarial fever was contracted, its duration being but one day During the entire period of 18 months the death rate was for Europeans *nil* and for natives two per 1000 The use of the mosquito curtain is strictly enforced and in the prevention of malaria the daily dose of quinine finds a place "

THE QUESTION OF MOVING ST GEORGE'S HOSPITAL

AT their meeting on March 20th the governors of St. George's Hospital passed a resolution to the effect that if a suitable offer were forthcoming and a suitable site were to be obtained they would be willing to consider the removal of the hospital from its present position In the meantime a committee has been appointed to consider the question carefully and to discover presumably what offers are actually available The question arose through an offer being made to the hospital by a reputable firm of £300,000 for that portion of the site which is the property of the hospital This is one third of the ground covered by the present institution. We are pleased to see that the resolution passed at the meeting was of a very non committal character It is quite obvious that some of the best judges in the matter of hospital distribution in London are not at all convinced that St. George's Hospital should be removed from its present site and the same view is certainly held by some who have had long experience at, and intimate acquaintance with the work of, St. George's Hospital We may mention in particular Mr Timothy Holmes who took the chair at the meeting on the express understanding that he might nevertheless be allowed to state his views These views, we gather from the report, were strongly opposed to moving St. George's Hospital, at any rate, on any basis that is yet put forward. Obviously if an ideal site were provided within the area now mainly benefited by the hospital and if a huge sum were offered, one so large that a perfect new establishment could be not only built but helped in its permanent maintenance, then St. George's Hospital would be unwise not to avail itself of the opportunity These conditions at present, however, have not made themselves manifest and, so far as we can see, the arguments brought forward in favour of a move are no more cogent than those in favour of the present position One thing seems clear—namely, that the present *hospital is, mainly through lack of space, not in all respects* efficient

THE annual general meeting of the governors of the Royal Dental Hospital of London will be held at the hospital on Tuesday, March 31st, at 5 30 P M, with Lord Kinnaird in the chair, to receive the annual report and to elect the committee of management, treasurer, and auditors for the ensuing year

THE Edinburgh University Union which since its commencement in 1889 has done so much to improve the social and academic life of the university, has greatly increased in membership and it has been decided to extend the present buildings. The total amount of money required for this purpose is estimated at £20,000, of which sum £5000 only have as yet been subscribed There should be little difficulty in getting the £15,000 still required if graduates and those interested in Edinburgh University, while financially helping the extension committee, would at the same time make the matter more widely known among their friends Subscriptions should be sent to Mr James Walker, C A., the treasurer of the union, and on application to the secretary full particulars of the extension movement will be forwarded.

SEVERAL daily papers credit Lieutenant-General Phelps, President of the National Anti-Vaccination League, with having asserted at the recent annual meeting of that league that "the successful candidate at Rye, like Mr W Crooks, was an avowed anti vaccinist." Dr C F Hutchinson the new Member of Parliament for the Rye Division of Sussex, has been seriously misrepresented by Lieutenant-General Phelps He is in no sense an opponent to vaccination, though, like ourselves, he does not think much of the existing legislation. Lieutenant-General Phelps ought to explain his statement, whatever it was, so as to remove the stigma that he has put upon Dr Hutchinson, but probably Dr Hutchinson will not think it worth while to ask him to do so

THE British Balneological and Climatological Society desires to induce as many non members as possible to take part in the tour to the northern spas, as it is anxious to dispel what it considers to be the very prevalent notion that none of our home stations is properly equipped for special means of treatment. A full account of the tour will be found in THE LANCET of March 21st, p 845, but the society particularly wishes to emphasise that it will cordially welcome all non members who care to join the party and to see for themselves that the home resorts to be visited are as well worthy of support as their foreign rivals

WE regret to announce the death of Dr T J Maclagan which took place on Friday, March 20th. Dr Maclagan was the pioneer of the treatment of rheumatism by salicylates, general attention being drawn to the matter by an article by him which appeared in our columns on March 4th (p 342) and 11th (p 383), 1876

THE annual general meeting of the Medical Graduates' College and Polyclinic is to be held on Tuesday next, March 31st, at 5 30 P M, when the chair will be taken by the President Sir William Broadbent, Bart

THE Medical Register for 1903 has now been published and shows a net increase in the registered number of the medical profession of 320 Other features in the Register will be noticed by us in a detailed review

LORD SELBORNE, First Lord of the Admiralty, will distribute the prizes in connexion with the Naval Medical School at Haslar on Tuesday next.

ROYAL EYE HOSPITAL, SOUTHWARK —The annual meeting of the subscribers to this institution was held on March 18th when Mr W Moresby Chinnery, the President, occupied the chair Mr Malcolm M. McHardy, the senior surgeon to the hospital, in presenting the report said that during the year nearly 20 000 poor patients had been assisted at an expenditure of £3319 Morality in hospital finance was too often discouraged. The Royal Eye Hospital kept itself free from debt, yet King Edward's Hospital Fund as a seal of approbation gave the hospital a grant of £100, while it awarded 25 times as much to an analogous charity which with three times the expenditure could not claim to administer twice the amount of charity among the poorer districts of all London The work of the hospital had trebled in the last 20 years and was now seven times what it was 30 years ago The buildings had been extended to meet the growing requirements of the neighbourhood The report was adopted

TEMPORARY HOSPITAL BUILDINGS

THE deplorable disaster at Colney Hatch in which 51 unfortunate patients perished, provides a terrible object lesson which is not being disregarded by those responsible for the erection of these temporary structures. The one question that engrosses the mind of every interested person is, How can the risk of such an occurrence be prevented in the future? Temporary buildings exist similar in the main features of their construction in many places, both as asylums and isolation hospitals, some of very considerable extent. The temporary buildings at Colney Hatch covered one and a half acres and those at Banstead cover three and a half acres, the bulk of which are identical in structure with those at Colney Hatch, but in some metallic lathing finished with plaster has been used in place of wood, as is also the case at Hanwell and Epsom. There are some extensive wood framed or wood lined buildings at other county asylums, while similar buildings exist in the infection hospitals at South Tottenham, Tooting, Dartford, Gore Farm, and elsewhere. Indeed, there are few of our large hospitals which have not had recourse to some of them. Should a fire occur, say, in a ward full of surgical cases not easily moved, a similar or worse disaster might befall.

The necessity for these temporary buildings in connexion with existing county asylums has arisen owing partly to the greater advantage taken of the asylums by the Poor law guardians and by the public who evince much less aversion to consigning the care of relatives to these institutions than was formerly the case. This within the last 30 years has produced an apparent increase in the number of the insane in a proportion far greater than the rate of increase in the population would suggest. Every wretched imbecile or demented old woman who at one time might be seen in the streets of all towns persecuted by an attendant gang of urchins now finds a haven of rest in the county asylum. The result of this is that calls are made upon the asylums greatly exceeding the contemplated increase of cases which formed the basis upon which they were built. The over burdened ratepayer is also an object of solicitude on the part of the county authorities, therefore, patients are crammed into existing institutions until the long suffering medical superintendent will no longer be responsible for the effects of overcrowding. At this point it would be useless to seek immediate relief by permanent additions to the existing buildings, as some three years must elapse before the wards would be ready to receive their inmates, thus, temporary buildings are resorted to. Now nearly all these large institutions maintain a clerk of works and a staff of mechanics to keep the building in repair and this staff is augmented by such of the patients as are capable craftsmen, hence, in some cases many of the additions of a temporary character are carried out by their means, supplemented by any assistance that may be required from outside sources. Temporary buildings have been carried out in this way at a cost of some £15 per bed (exclusive of internal fittings), a very low figure as compared with similar structures in other well known instances. Wisdom after the event is a commodity never in much demand, yet it may be well to consider some of the details in connexion with the recent fire in order that the mistakes made at Colney Hatch may be avoided. Many of our readers are in their medical capacity closely connected with such buildings and must have much more than a passing interest in the question. It is therefore well within the province of THE LANCET to offer a few practical details showing how such buildings may be rendered less liable to disaster and how others may be erected in the future at a moderate cost and of comparatively fire proof construction.

The following particulars are not intended for the instruction of the professional architect, to whom they must, of course, be familiar, but, as has been seen, numbers of these places have been built in the erection of which an architect has not been employed. The incomprehensible thing is how the experts who advise the Home Office, the London County Council, and the Lunacy Commissioners could possibly have permitted such palpably risky structures to have been passed. It is to be feared that the misleading title of "temporary" has had much to do with this lamentable error also the fact of their being almost level with the ground may have given a false idea of security. It would indeed, be difficult to conceive buildings more capable of rapid consumption by fire or more conducive to disaster than some of those under consideration. The internal lining of dry resinous pine coated with oil varnish, with abundant air space within and around the wood framed walls, roof, and floor, contains every element for feeding a fire. The tarred felt lining to which the air is conducted through the corrugations of the external iron would lend additional aid, with the added terror of suffocating smoke. When fire has once gained a hold of such a structure the rapidity with which it spreads is prodigious. The long shallow space under the building between the ground and the wood floor often lightly boarded in at the sides or, as at Colney Hatch, inclosed with brickwork, acts as a flue through which the flames leap and roar, gaining ready access to the hollow walls on either side and, as was the case at Colney Hatch, the building soon becomes a veritable furnace. The evidence at the inquest showed that the heat and flames came through the floor.

Nothing can be more terrible than the account given by eye witnesses of this fire. The enormous volumes of dense black smoke formed the chief impediment to successful action in the first instance, afterwards, when the flames had thoroughly obtained a hold, human efforts were powerless. The discipline displayed by the staff is worthy of all praise, for in addition to the inmates of the doomed buildings 600 patients had to be moved from one of the threatened permanent wings. While it is satisfactory to know that those in authority have their attention directed to the necessity of remodelling these buildings, as is shown by the inquiries on all sides as to the best means of improving them too much reliance must not be placed upon the simple substitution of plaster for wood on the walls. Efforts should also be directed to render the floors and the lower part of the partition walls less combustible by filling in the spaces between the floor joists and the partition framing with concrete or some other fire resisting material.

At Colney Hatch there were three blocks, each some 170 feet by 38 feet, built in parallel lines, having a considerable space between each block. A long corridor cut through the centre of these and divided the day from the night wards of each, connecting all into practically one building. The boiler house formed a terminal at the lower end of this corridor, while the quarters of the medical officers did the same at the upper end. In addition there were two smaller L-shaped blocks, X 1 and X 2, on one side at the lower end used as sick wards. On the opposite side of the corridor to No X 2 and at right angles to it was another corridor leading to the main building the general plan being vertebrated, with a boiler house and officers quarters as head and tail. Beneath the floor line of these buildings, including the corridor, were brick walls forming the foundations upon which the partition walls rested. Owing to the unevenness of the ground there was a considerable space between the ground and the floors. In fact, the space beneath the corridor formed a flue up which the fire (which started in a small room adjoining one of the end blocks) rushed and gained a hold upon each succeeding block. It was the construction of this corridor that proved to be another fatal mistake.

The introduction of some form of baffle screen midway between each block (see illustration) would have been of great service in checking the fire if in addition some safe exit had been provided for the heat and smoke in each section, such as an open corridor. These corridors in isolation hospitals are open at the sides being little more than covered ways but in the asylums they are completely inclosed. How the fire originated at Colney Hatch will probably never be known. It would seem desirable that all gas lights should in future be inclosed in lanterns with locked doors in place of the wire guards in common use. The use of gas stoves and independent slow-combustion iron stoves with flue-pipes is to be condemned in such buildings, not alone on the grounds of safety, but also of health.

The question of exits, under the inevitable conditions that pertain to asylums, is one of considerable difficulty, abundant provision should be made in all cases. The number available at Colney Hatch might have been sufficient had it not been for the dense smoke and had there been no confusion with the keys. Had the fireman possessed a key many precious minutes might have been saved. The nurses off duty roused from sleep, would probably be without keys as they hurried to render assistance. It did not appear from the reported evidence that either Nurse Hayling or Nurse

Lambert unlocked any doors, though the former vainly endeavoured to pass some patients through the burning corridor The patients, either excited by the fire or stupefied with terror, would in all cases prove a serious impediment to prompt action by the attendants Some simple and secret method by which the locks might be released, if only available at night, would conceivably be an advantage

The evidence given at the inquest, as published in the daily press, was not very convincing as to the adequacy of the provisions made against an outbreak of fire. The reservoir stood at a low elevation only sufficient to give a constant pressure of three pounds to the inch, there was, however, in the reservoir an abundant supply Stationary pumps were fixed in the engine-house where steam was kept up day and night. The night fireman received the alarm within a minute or two of the fire being discovered and the pumps were instantly set to work, affording abundant pressure to the hydrants which the nurses were then using, but from which they were quickly driven by the smoke, they then directing their efforts to removing the patients It was owing to these hydrants being abandoned whilst still running that the pressure of the water was reduced so as to render the external hydrants useless. It was not until the mains could be cut off and plugged outside that the external hydrants could be got to work. There being plenty of water in the reservoir does not condone the fact that water was not available at the point required, necessitating as it did the engines using a makeshift supply from an adjacent water course Pressure augmenters and pumping into a main, while compensating for any defect in pressure from lack of head, cannot make up for a limited supply due to the smallness of a main and loss of flow from friction

Two lessons may be derived from this disaster 1 That the size of the main (three inches) was quite inadequate to supply the number of hydrants connected to it. One witness stated that there were 13 hydrants in the annexe 2 That stop-valves should be placed in each branch main accessible from the outside so that the supply to any internal hydrant could instantly be cut off under similar conditions. The mains have been described as having melted, but this was incorrect. The iron pipes that melted were those connected with the hot-water apparatus running under the floors of the corridor and in no way influenced the pressure in the main The presence of hydrants, hose pipes, and red buckets may have a moral effect, but unless accompanied by sufficient water supply those who rely upon them do but dwell in a "fool's paradise." It should be remembered that the action of water in extinguishing fire is twofold. One is the mechanical action of knocking out the fire by the simple force of the stream and the other is the reduction of the temperature of the burning mass to a point below that of combustion and evaporation The defects in the provision against fire had been partially recognised by the London County Councils Asylums Committee in this instance as in its last annual report it suggested the laying of new mains and the provision of a pump for pumping directly into them In this connexion the extracts reprinted from the report of The Lancet Special Commission on Water supply and Disposal of Sewage in 1896 given at the end of this article may be of interest.

Methods in Common Use for rendering Buildings Fire resisting

Before dealing with the construction of new buildings a glance at certain points to be borne in mind when providing against fire and an endeavour to see how far they can be applied to certain existing buildings will be of guidance. The use of non inflammable materials is of course the first essential in order to limit the amount of smoke and fire. The use of iron, unless encased in some fire resisting material, is a delusion and a snare, as it becomes soft and unstable upon the application of heat. Inclosing with concrete is not a sufficient protection for iron against fire. The prevention of the free circulation of air round any inflammable material, especially in the case of wood floors and framed partitions, is to be aimed at. The use of cement or plaster on metal lathing for ceilings and wall linings is essential also the substitution of cement in place of wood for skirtings, door and window architraves. Iron may well be used for the windows, while the use of *rock* asphalte or cement for the surface of the floors of corridors and for covering external flats is important as reducing the risk from fire Heating by means of hot water is to be considered preferable to the use of close stoves and flues. The use of fire resisting paints, or distemper, are to be preferred in place of oil paints and varnish, but care in this respect must be exercised as zinc chloride enters largely into many fire-resisting paints, the fumes of which are insupportable by human beings. The wood must be thoroughly dry before any paint is applied or it will flake off when heated Stone is a risky material to use unless solidly bedded owing to its rapid extension by heat, especially on staircases where the ends are pinned into one wall which prevents its expansion throughout and thus causes fracture Solid door and window frames are preferable to the usual box sash frames and door linings, teak or oak being more suitable than deal. The insulation of each building or of each compartment one from the other so far as is possible is to be aimed at. Fibrous plaster has been found to resist intense heat for some 20 minutes or longer, but afterwards on application of water it crumbles away The provision of an exit for smoke and heat in the event of a fire affords a better immediate chance of escape to the inmates of the building and to the adjacent property, but it is not altogether an unmixed blessing It acts as a flue and causes a draught to one point, thus drawing the fire. One of the means resorted to at a fire by firemen is to break the windows and to admit air from all sides, thus checking the draught This acts in the same way as removing a blower from an open fireplace.

Treatment of Existing Temporary Buildings.

Floors —In order to reduce the fire risk in existing buildings of wooden construction in the first instance the floor should have the spaces between the joists filled in with some non combustible substance such as concrete or hollow plaster slabs

Partitions —The lower part of the partitions at least should also be treated in the same way, as wood partitions when filled in with brickwork throughout (called technically brick nogging) and plastered, are practically fire-resisting In the case of most temporary buildings the floors will be found to be raised from the ground, the joists being carried upon brick piers. This is done partly to avoid the uneven surface of the site and also to afford ventilation All internal wood lining must be removed and plaster slabs on metal lathing substituted, in cases where the spaces between the wood framing are not filled in as suggested the plaster slabs should have a backing of silicate cotton as a protection against both cold and fire.

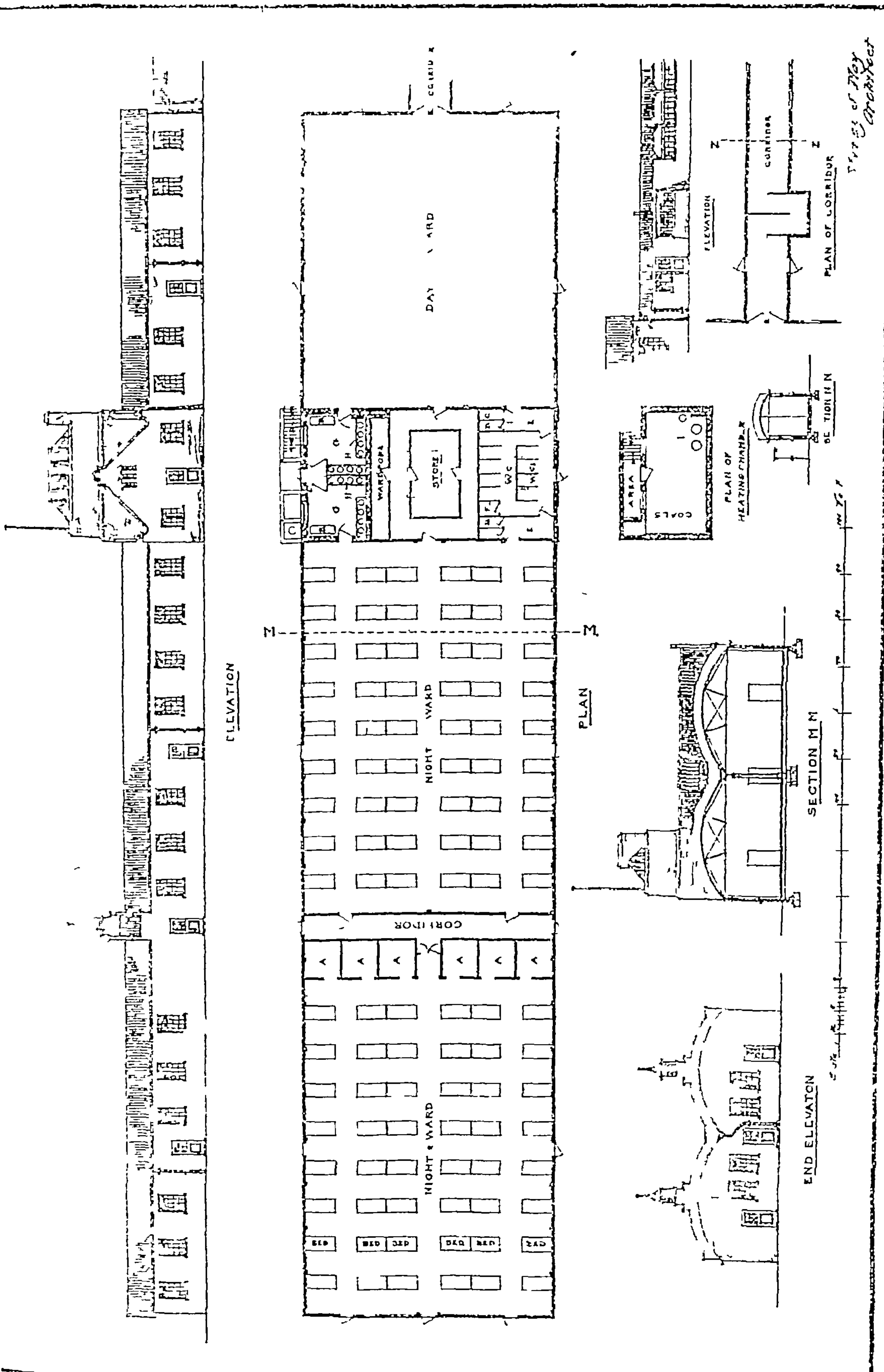
Ceilings —The wood linings should be removed and fibrous plaster slabs on metal lining substituted. All exposed iron work or wood tie beams and collars should be encased in some fire resisting materials such as asbestos

Lighting —All gas lights in asylums should be inclosed in locked lanterns

Heating —Gas stoves should stand upon a solid stone base and any adjacent woodwork should be protected by an intervening piece of very fine mesh iron gauze This will be found a better non conductor of heat than the sheet iron in common use. Slow combustion iron stoves, gill stoves, and independent gas stoves with flue pipes are open to objection. If used care should be exercised as to over heating and special attention is required to see that the flue pipes are properly insulated where they pass through the roof or wall. The pipes at this point have a tendency to perish quickly They should here pass through a second larger tube with a free air space between them and the outer tube should be packed with silicate cotton between it and the framing of the roof or wall. Where it passes through the roof this air space may be utilised for extracting the vitiated air by extending the outer tube a few feet above the roof as is often done in the case of steamships for ventilating the lower decks by means of an outer casing to the funnel Many years ago this system was successfully applied to the Hospital for Sick Children in Great Ormond street by a Mr Knight Heating by hot water is certainly safer, cleaner, and more healthy It is much more expensive in the first instance, but more economical in maintenance A portion of the pipe should pass through a water chamber to prevent undue dryness in the air

General Description of the Accompanying Plan

The drawings suggest the general treatment for a temporary asylum or hospital giving accommodation for from 100 to 167 patients, according to the purpose for which it is intended. The building consists of four distinct principal compartments—viz., the day ward, the central block, and two night wards. The day ward would be



A, Cubicles. B, Baths C, Cupboards D, Sinks E, Ventilating lobby F, Attendants water-closet G, Lavatories H Lavatory ranges I, Boilers connected by means of a corridor to any existing permanent or other buildings The central block—which contains on the basement floor the boiler house and fuel store—is divided on the ground floor into three distinct compartments, the one over the boiler house consisting of the two lavatories and bathrooms, the middle one being the general store and ward robe, while the water-closets, sinks, and broom closets are placed in the third. It will be noticed that these offices are equally accessible from either the day or the night wards. The two night wards are divided by a passage, the walls of which are carried up well above the roof line, forming a protection in the event of fire. The division of this ward may be con sidered by some unnecessary or even undesirable, but it may here serve to illustrate a possible means of insulating one building from another The general scheme supposes the existence of an adjacent permanent building, otherwise accommodation would be required for the general medical officers and staff and also for the kitchen and other administrative offices In a case where a number of blocks are required the better plan would be for them all to radiate from one common centre by means of short corridors, the boiler house and administrative buildings being the central point. A considerable addition to the cost is entailed by the central brick water tower, which would be unnecessary in cases where a sufficient water supply existed. This tower contains in the basement two boilers for the heating of the buildings by hot water and a boiler for the supply of hot water for lavatories, baths, and sinks Overhead is a tank room fitted with cisterns capable of storing 7500 gallons of water, which in case of fire would afford a supply of 200 gallons per minute for some 35 minutes at a pressure of 10 pounds to the inch.

Principal features of the plan.—The leading idea is the incombustible character of the building, a brief account of its constructive details will follow under that heading, but in addition there are two or three points first to be noticed—viz., ventilation, insulation, and means of exit.

Ventilation.—The floor space provided for each bed is some 82 square feet, which is an unnecessary amount for a patient enjoying good health. The air space per bed is 960 cubic feet, not taking account of the space above the springing of the roof, which is considerable and which may be set against the space occupied by beds and furniture Provision is made for ventilating each of these wards by means of two large flues near the ceiling line measuring three feet six inches by two feet, built with iron framing lined with fire tiles, an upward current of air being induced by a coil of hot water pipes fixed in the upper part of each flue. Through these flues in the event of a fire much of the smoke and heat possible in a building as here shown would escape, but no flue would carry off the smoke from buildings such as those at Colney Hatch. Fresh air is admitted through cast-iron upright hot-water radiators, or shafts upon Tobin s principle might be used, in each of which would be fixed a small radiator, the air thus warmed rises and assists the exit of the vitiated air through the ventilators, when cold air is admitted at a high level it lowers the temperature of the warmer upper air already fouled by the emanations from the lungs and skin, causing it to fall and to be inspired again by the occupants of the rooms Outlet tubes where not artificially warmed should be placed against an internal wall, the joints should be air tight, and a smooth internal surface is desirable, otherwise the current of air passing through will be sluggish. Very long shafts are to be avoided as the friction in them tends to check the draught The size of these may be taken as fixed by the Barracks Commission—viz one square inch of surface of inlets and outlets for every 50 cubic feet of air space, so that 20 square inches would be equal to 1000 cubic feet. This, it is presumed, would change the air in the room three times per hour, in ordinary circumstances, where the inlets and outlets are properly placed. Any one inlet larger than 12 square inches is undesirable. The windows are also provided with long fanlights to open for use in warm weather, when the difference between the internal and external temperature is not great.

Insulation in case of fire—The doors communicating between the wards open directly opposite a fire-resisting partition and are each removed some distance one from the other, thus forming a check to the progress of the flames In this situation fire-resisting doors might more readily be closed in the event of an outbreak if their use was deemed necessary, though in the present scheme they have not been provided. Doors made of teak with solid frames are onl provided for in the estimate within the building, all externa doors being of deal When folding doors are shown the are fitted with automatic latch bolts in the frame ove the doors, so that one door being unlocked and opene the other is released. Each of the fire-resisting partition between the wards is carried up some distance above th roof The ventilating lobbies between the day and nigh wards and the water closets are covered in overhead wit fire resisting material and fitted with teak doors. The partitions inclosing the store room are carried up to the roo and the store is provided with a skylight and ventilated wit louvres. The floor being solid fire cannot be communicate by it to other buildings, as is the case where there is an ai space beneath.

Exits—The number of exits provided is another feature, there being no less than six in each ward, of course, in a emergency only those on the side furthest removed from th point at which the fire originated would be available. Th main corridor is provided with fire-resisting sides for a distance of 16 feet from its point of intersection with th building, after which the construction is light and open i character, midway between each block, however, is a baffl or fire-resisting screen intersecting the corridor and rising u above the roof, exits on each side of this screen are provide in the corridor

CONSTRUCTION DETAILS.

It is not intended to burden the reader with a mass of technical details, a brief outline being all that is necessary for the present purpose. The estimates have been carefully prepared and they will be found a fair approximation of the cost of such a building which may, of course, vary according to local conditions and requirements It is, however, satisfactory to find that such a building can be erected suitable for the requirements of a hospital or asylum at a cost not exceeding that expended upon some of the most costly temporary buildings upon the old unsatisfactory plan

Selecting a site—A level site is best, if possible one with the ground falling away on either side. If on the slope of a hill a well drained road must be made between the building and the rising ground at a slightly lower level than the building It is well to have a wide well drained path all round.

Excavator—Provision is made in the estimate for excavating for the boiler house and the footing of the several walls and partitions, together with the usual foundations for same. Six inches of cement concrete are to be laid over the entire site and rendered in Portland cement. Splayed wood fillets are taken to be imbedded flush with the top of this floor upon which the wood floor is to be nailed

Walls and partitions—The whole of the external and the internal partition walls (except the brick built tower in the centre of the building) are formed of H iron framing of suitable sections. In the outer walls these are placed at intervals of 10 feet and are 12 feet in height from the floor to the springing of the roof, the intervening spaces being filled with hollow plaster slabs four inches thick either coated on the outside with Portland cement or covered with corrugated iron sheeting The inside is plastered throughout with asbestic plaster The iron uprights are also encased in the same material The several internal partitions are filled in between the uprights with expanded metal lathing and are finished on both faces with asbestic plaster The cubicles in the night ward are seven feet high and of the same construction.

Roof—The whole of the roof is formed with H iron ribs, placed 10 feet apart and springing from an L shaped iron plate, bolted to the top of the uprights, forming an outer wall. In the centre of the building, supported upon light cast-iron columns, is a girder running the entire length to receive the iron trough gutter and inside ends of the roof ribs The spaces between the roof ribs are filled in at regular intervals with wood purlins, these and the H iron ribs are covered on the under side with one inch patent combined silicate cotton and plaster slabs finished to form the ceiling The outside is covered with galvanised corrugated iron. The iron columns, centre gutter, &c., are protected by expanded metal lathing and asbestic plaster, the exposed roof framing and tie rods being covered with asbestos The external gutters and rain-water pipes are of iron.

Ventilating turrets—The ventilating turrets shown on the elevation are to be made of iron framing lined inside with fire tiles made in sections and plastered externally, the cross flues are formed in the same way The ventilator to the day ward adjoining the lavatory is connected with a brick flue carried up beside the flues of the boilers.

Water-closets.—The division between these and the inclosures to the ventilating lobbies are formed of light iron framing and expanded metal lathing, both sides of which are covered with asbestic plaster These divisions to the water closets are seven feet high and are kept six inches from the floor for their better ventilation and cleanliness

Windows—The windows are made with solid deal frames with fixed sashes in the lower part but with long fanlights above to open inwards

Doors—All internal doors are taken to be of teak, with solid frames, and the doors are two inches thick with solid panels. The external doors are of deal, the upper part being fitted with glass, the frames are solid.

Floors—The floors in the night wards and day room are of one and a quarter inch yellow deal nailed on to wood fillets embedded in the concrete. The floors of the passages between the night wards, also those of the lavatories, water closets, and store room are finished in Portland cement, as are also those of the boiler house and cistern room

Brick tower—This is taken as being of 18-inch work built upon proper footings, above the level of the cistern room floor the walls are to be 14 inches thick only Two separate flues are built up from the boiler house together with a larger one for ventilating the day ward.

Boiler house—The boiler house in the basement is reached by a flight of stone steps in the area. The boilers are in duplicate and one or both can be used as required They are connected into brick flues A smaller boiler is provided for the supply to the lavatories, baths, and sinks.

Lavatory—The floor is formed of rolled steel joists filled in between with expanded metal sheeting and concrete, as is also the floor of the cistern room over the same.

Cistern room—8000 gallon (nominal) galvanised iron tanks are to be provided in this upper chamber capable of holding actually 7500 gallons of water Access to these would be gained through an external trap-door A two and a half inch iron service pipe leads from these tanks to supply six hydrants—one in each division. These hydrants will be of the pattern described in the notes at the end of this article The supply of water to the lavatories, sinks, and baths will be from these cisterns, disconnecting cisterns being provided for the water-closets

In the estimate the plumbing work has been allowed for in conformity with the general principles as to trapping ventilators, and other details laid down by THE LANCET Special Commission upon Plumbers' Work, as is also the system of drainage which in this instance is made to terminate in a disconnecting chamber outside the building The roof of the tower is of similar construction to that of the main building, if this tower were roofed with red tiles upon wood rafters an improved appearance would be gained without adding to the cost. From its position this would not be open to any objection on account of fire risk.

The hot-water system.—The circulating pipes from the boilers will pass in channels below the floor line and here great care must be exercised in order to prevent these channels acting as flues capable of communicating fire from one compartment to another Where the pipes pass through any partition the opening should be as small as possible and the pipes packed round with silicate cotton or asbestic plaster to fill in any interstices. A similar screen should be fixed round the pipes completely blocking the trench in which they are laid at intervals of 10 feet. These trenches being open at the top would if thus treated be free from draught The pipes after leaving the boiler would run down the centre of the building feeding the radiators placed near the column and returning right and left by the side walls to feed those connected with the fresh air inlets

Painting—The ceilings and walls are taken to have two coats of washable distemper and the whole of the internal wood and other work usually painted is allowed four coats of fire resisting paint. The external wood work, iron, and other work usually done are taken to be painted with four coats of oil paint.

ALTERNATIVE PLAN

In some respects a more substantial structure and one that in many ways commends itself to favourable consideration is one built entirely of expanded metal. It is not more expensive than the plan just discussed, but it is a form of construction adopted already to a greater or less extent in very many public buildings—hospitals, asylums, factories, and theatres.

Outer walls.—The outer walls would be hollow formed by two faces of this expanded metal lathing attached to angle iron studs placed at intervals of 12 inches along the line of wall, it is plastered on both sides Such walls are damp-proof, sound proof, and non inflammable, while being hollow they afford good protection against extremes of heat and cold.

Roof—The construction of the roof and, in fact, the building, is in all other respects the same as is described in the last example, or in order to reduce the cost and avoid the use of wood the roof might be formed with fewer principals but with ribs added at more frequent intervals to carry the metal lathing which is suspended from them, to this lathing the plaster is fixed Above the ribs the corrugated iron roofing is laid This leaves an air space of some two inches between the two faces In all other respects the details are the same as in the last example.

There are so many firms now supplying fire resisting materials that it is difficult among goods of almost equal merit to make a selection, but in order to form an estimate it has been necessary to do so The hollow plaster specified was first used in Germany where it originated. It has within the last few years been most extensively used in England in hospitals, theatres, and public buildings where protection against fire is essential Made in slabs of varying thicknesses, measuring 12 inches wide by 6 feet long, it can be sawn and fitted like a board There are several kinds of metal framing or metal lathing in general use besides the one specified, which, however, is very far from being the worst. The only possible objection to the use of iron or steel as a base for plaster walls is the liability of the metal to rust. When the metal is plastered on both sides there can be but little risk on this account, provided the plaster is not greatly impregnated with acid as is found to be the case with some of the many new patent plasters on the market. It is feasible that with hollow partitions subject to frequent and sudden changes of temperature condensation might injuriously affect the metal where incompletely coated with plaster and this fact should be borne in mind in executing the work and provided for by well painting the lathing before use

CONCLUSIONS.

The Commissioners in Lunacy regulate the number of patients in a given area by measurement of floor space and air space—viz., 50 square feet floor space for each bed in an ordinary dormitory and 600 cubic feet of air space. In an infirmary the allowance is 66 square feet of floor space and 800 cubic feet of air space per bed. The total cost of the Colney Hatch temporary buildings, which were exceptionally well finished and fitted, is generally understood to have been about £75 per bed This included lavatories, baths, fire hydrants, and all internal fittings, and they were put up under pressure in a few months, which no doubt added to the cost somewhat The air space in the dormitories was rather in excess of the requirements being 765 cubic feet in the night wards and 919 in the infirmary wards, which also tends to make them appear high in price when compared with others. The cost would rather indicate that they were one of the early efforts of the building staff of the London County Council, though of this we have no exact knowledge. Similar buildings were erected at Banstead Asylum but on a less elaborate plan than those at Colney Hatch, these we believe cost some £48 per bed Contractors give from £20 to £25 per bed as the cost of temporary buildings, this, of course, without any internal fitting plumbers work, lighting or heating appliances, unless of the most simple character

The present plan shows 102 beds with a floor space for each of 83 square feet and with 960 cubic feet of air space per bed. This, though in excess of official requirements for asylums, is probably less than obtains in isolation hospitals. The total cost of the proposed building is £6200 This includes a sum of £400 for plumbers work and lighting by gas, also a provision of £700 for the supply of hot water and heating apparatus with £250 for the tanks and fire hydrants The cost per bed, based upon having 102 beds as shown in the plan, would be £61 exclusive of furniture, as an infirmary with 162 beds, £49 4*s*, as ordinary dormitories, with 167 beds £37 3*s*

It is difficult to arrive at a just comparison between the cost of the Colney Hatch buildings and the building here proposed, and in so doing the following facts must be considered. The number of patients occupying the destroyed wards is variously given, but it will be within the mark if the number is taken as 328, which multiplied by £75, the cost per bed, equals £24,600 The Colney Hatch Asylum authorities were, however, entitled to have more beds according to the rules laid down by the Commissioners in Lunacy —viz., 290 in the dormitories and 115 in the sick wards, making 405 in all. This would, by increasing the number of beds, reduce the cost to £60 14*s* 9*d* per head. The deduction, say, of £10 per head for furniture (an ample allowance), which it is presumed is included in the £75 figure but not in our example, gives a comparative cost for the Colney Hatch building of £50 14*s* 9*d* per bed Upon the same basis, taking one-third of the 167 patients in our example to belong to the infirmary class, we get a reduced number, giving an average of 150 beds, costing £41 7*s* Taking the lowest form of building at £20 per bed and adding £10 for furniture and a probable £6 per bed for heating lighting, and lavatories, we arrive at a figure of £36 per bed for the lowest estimate at all approaching the accommodation here proposed.

The result of our inquiries has, to tell the truth somewhat startled us We were prepared to find that the cost of building a temporary hospital with any pretensions to being fire resisting was almost prohibitive. In view however, of the money expended in some instances upon buildings of the inflammable type, exceeding the amount now found necessary for one of a fire-resisting nature, the reason for their continued use must be sought elsewhere The error has been in a defective principle of construction While our county councils have been very properly framing rules for the removal of constructive motes in the eyes of others they have failed to observe the inflammable beams in their own buildings. The name "temporary" has indeed become so identified with this particular class of building that the idea of any new departure has with very few exceptions never occurred to the able men who preside over the public welfare in those matters, notwithstanding the many improvements now in daily use. Will it be too much to hope that recent events will do more than cause some temporary excitement and that no other buildings of a like nature will be put up or be permitted to remain in their present condition in this land where all things are forgotten?

REPRINT FROM THE REPORT OF THE LANCET SPECIAL COMMISSION ON WATER SUPPLY AND DISPOSAL OF SEWAGE IN COUNTRY HOUSES.

Fire hydrants—It frequently happens that a house is dependent more or less for a supply of water in the event of a fire upon a lake or stream situated at a lower level, in this case the suction pipes should be laid to the most convenient points at which an engine could work so as to save the delay and confusion likely to arise in laying a hose from a distance In reference to these pipes the question of friction must not be overlooked In all cases where the water reaches the hydrants by gravity it is of paramount importance that the valves should be of the simplest construction and unlikely to become set fast through neglect. The means of connecting the hose should also be of such a character that a novice however agitated, cannot become involved in any difficulty In the event of a fire everything depends on the promptitude with which the first supply of water is brought to bear upon the outbreak Every minute is of the greatest value. Wheel valves are liable to become set when not in frequent use, and when this is so some confusion may occur, the operator being uncertain as to which way the wheel should be turned Time is also lost in turning the wheel before the valve can be completely opened With a full way lever cock with a long handle this is obviated. The hose connexion is also much better adapted for private use than the regulation screw pattern Being a spring connexion it only requires to be pushed into the socket provided in the valve with one hand whilst with the other the lever of the valve is pulled down. The valves and connexions should be fitted in addition with screw threads of a pattern to fit the hose in use in the local fire brigade Besides the hose connexion shown, which is largely used, there is another patent of very similar construction but it has a slight disadvantage as the coupling cannot be so readily undone by one man and the latch joint is not quite so complete In addition to the constant supply to the hydrants which should be fixed both inside and outside the house a supplemental one is sometimes obtained by pumping directly into the hydrant mains, in which case some provision may be necessary to prevent the water from being forced back into the supply tank or by the use of a pressure augmenter

Hydrant reservoir—Where a reservoir is essential for a domestic supply it is, of course, a great saving of expense to use the same for the fire hydrants. The objection to this arrangement, however, is that the pressure requisite for the hydrants is very undesirable for the fittings for the domestic supply necessitating additional strength in the pipes and brass work and frequently causing much noise and vibration when taps are turned off As to the quantity necessary to be retained for this last purpose it must depend not only upon the size of the house or farm buildings but also upon the facilities that exist for replenishing the reservoir in the event of an outbreak Where a reservoir is used for the dual purpose the domestic supply should be taken in a separate pipe connected with the reservoir some distance from the bottom, by this means a reserve will always remain in case of fire. The probable quantity required in case of fire is generally taken at 300 gallons per minute for two hours, which would require 36,000 gallons but this must depend upon the extent of the premises. The height at which the reservoir is fixed and its distance from the house will greatly influence the size of the hydrant mains, the friction in mains of varying diameters and lengths greatly affecting jets of water from the same head This very obvious fact is one frequently lost sight of and is the cause of much disappointment and useless expense If dependent upon rainfall the reservoir should be able to hold about one-third of the annual supply It should not be forgotten that a slight loss of head is caused by every bend in proportion as it is more or less acute. In deciding the size and thickness of iron mains the following points have to be taken into consideration

1 The quantity of water required per minute. 2. The height of head 3 The length of main for friction. 4 The height to which a jet of water is required to be thrown for fire hydrants. This last is greatly influenced by the size and shape of the nozzle used, the same head of water giving a jet greatly varying in height with different sized nozzles. It is impossible to offer in a few lines any general rule for guidance, as the several factors vary in almost every instance With a little care by the help of a few good hydraulic tables the difficulty can be surmounted. The enormous loss of pressure by friction in long lengths of small pipes is a point too often lost sight of

Looking Back.

FROM

THE LANCET, *SATURDAY*, MARCH 26, 1828

FOREIGN DEPARTMENT

ANALYSIS OF FOREIGN MEDICAL JOURNALS.

REVUE MEDICALE—JAN

Observations on the Hypertrophy of the Brain, by Professor HUFELAND

On examination of the bodies of those persons who had presented the symptoms of acute hydrocephalus, when little serosity was found in the ventricles, the author observed that the brain had acquired a great increase in volume, that it appeared to fill completely the cavity of the cranium, and that it suffered considerable pressure. Dr Hufeland inferred from this appearance, that the brain, particularly in children might be the seat of a too active nutrition, as well as other organs, and therefore acquire a greater developement than ordinary If in this state the cranium be not prepared for it, in consequence of ossification having advanced too far, this developement of size must necessarily be attended with considerable pressure, and give rise to all the symptoms usually attending acute hydrocephalus He goes farther than this, and imagines that the serous effusion in the brain is the result of this compression of the organ and consequently that the increase of the brain itself is often the cause of the hydrocephalus. He considers these observations worthy the attention of medical men, and that they show the importance of attending to the physical as well as the moral education of children, in avoiding everything that might tend to the too prompt developement of the cerebral mass, as the premature exercise of the intellectual functions, the use of spirituous drinks, of high seasoned food, &c , and, on the other hand, that the increase of the muscular action should be encouraged , that cold lotions should be frequently laid upon the head, and that, according to ancient usage, mild aperients should occasionally be given —*Journal der Practischen Heilkunde*

Perhaps the Doctor's advice may be useful in Germany, but we believe it would be a difficult thing to find out a case of hydrocephalus occasioned by precocity of intellect on this side of the channel The stomachs of the dear little ones are more frequently crammed than their brains

Public Health and Poor Law.

LOCAL GOVERNMENT BOARD

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD

On the Prevalence of Diphtheria in the Risborough Registration Sub district, forming part of the Wycombe Rural District, by Dr E P MANBY [1]—This report deals mainly with the prevalence of diphtheria during two years, 1900–02, in the villages of Princes Risborough and Monks Risborough in Buckinghamshire. During this period there were only two months in which no cases of diphtheria were notified from the Risborough registration sub-district , in all, 69 cases of the disease occurred among a population of some 6000. Dr Manby pays special attention to the influence of school attendance in fostering diphtheria This was particularly evident in connexion with the Monks Risborough school, and it is noteworthy that in June, 1902, when the prevalence of diphtheria had practically came to an end, the children at this school showed an unusually high proportion of 'unhealthy throats" when compared with those at other schools in the neighbourhood. Dr Manby gives the following table showing the conditions of the throat observed by him —

Name of school.	Number of children present and examined	Throats unhealthy	Throats doubtful.	Throats healthy
Monks Risborough School	56	21	15	20
Princes Risborough National School..	69	10	13	46
Princes Risborough British School	74	11	7	56

All these schools, and Monks Risborough school in particular, were much in need of improvement as regards ventilation Samples of dust taken from the bare brick walls were examined, but no evidence of the presence of the diphtheria bacillus was found. Disinfection of the school buildings appears to have been very inadequately performed and in this and numerous other matters Dr Manby found the sanitary administration by the Wycombe rural district council extremely unsatisfactory The inspector of nuisances "had no book on sanitation or sanitary law to show me of more recent date than 1873—two years before the present Public Health Act was passed." The district council appears to pay little heed to the advice given to it by its medical officer of health, Dr J D Dickson who for many years has done his best, in face of persistent discouragement and of a salary which seems quite inadequate, to obtain improvement in the many insanitary conditions of the district It is to be hoped that the publication of this report will effect a much needed change for the better

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS

IN 76 of the largest English towns 8501 births and 4905 deaths were registered during the week ending March 21st. The annual rate of mortality in these towns which had been 16 6, 16 6, and 17 2 per 1000 in the three preceding weeks, declined again last week to 17 0 per 1000 In London the death rate was 17 2 per 1000, while it averaged 16 9 per 1000 in the 75 other large towns. The lowest death rates in these towns were 9 0 in Kings Norton, 9 3 in Hornsey, 10 7 in Wallasey, 11 0 in Stockton on-Tees, 11 3 in Devonport, 11 4 in Tottenham, and 11 8 in Walthamstow, Warrington, and Rotherham , the highest rates were 21 0 in Wolverhampton and in Preston, 21 4 in Salford, 21 5 in Bootle, 22 2 in Smethwick, 23 1 in Burnley, 24 7 in Merthyr Tydfil, 25 7 in St Helens, and 28 5 in Wigan. The 4905 deaths in these towns last week included 492 which were referred to the principal infectious diseases against 453, 501, and 483 in the three preceding weeks , of these 492 deaths 163 resulted from measles, 111 from whooping cough, 72 from diphtheria, 66 from diarrhœa, 42 from scarlet fever, 26 from "fever" (principally enteric), and 12 from small pox. No death from any of these diseases was registered last week in Hastings, Bournemouth, Devonport, Burton on Trent, King's Norton, Barrow-in Furness, Halifax, York, or Newport (Mon) , while the highest death rates from the principal infectious diseases were recorded in Willesden, Tottenham, East Ham, West Bromwich, Grimsby Wigan, Rhondda, and Swansea The greatest proportional mortality from measles occurred in Croydon, Tottenham, East Ham, Leyton, Walthamstow, Wolverhampton, Wigan Manchester, Salford, and Swansea , from scarlet fever in Great Yarmouth and Rochdale , from diphtheria in Hornsey, West Bromwich, and Middlesbrough , from whooping cough in Croydon, Willesden, West Ham, Leyton, Southampton, Grimsby, Stockport, and St Helens , from "fever' in Huddersfield , and from diarrhœa in West Bromwich and Grimsby Six fatal cases of small pox were registered in Liverpool, three in Birmingham and one each in Aston Manor, Wallasey and Hull, but not one in any other of the 76 large towns The number of small pox cases under treatment in the Metropolitan Asylums hospitals, which had been five, six, and seven in the three preceding Saturdays, was again seven on Saturday, the 21st inst. , two new cases were admitted during the week, against two in each of the two preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital at the end of last week was 1789, against 1851, 1790, and 1798 at the end of the three preceding wseks , 133 new cases were admitted during the week, against 197, 193 and 231 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London which had been 271, 251, and 258 in the three preceding weeks, further rose last week to 282, but were 236 below the corrected average number The causes of 45, or 0 9 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner All the causes of death were duly certified in Bristol, Nottingham, Manchester, Salford, Leeds, Newcastle-on Tyne, and in 49 other smaller towns , the largest proportions of uncertified deaths were registered in Portsmouth, Birmingham, Liverpool, St Helens, Preston, and Sunderland

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 17 7, 18 5 and 19 7 per 1000 in the three preceding weeks further rose to 20 1 per 1000 during the week ending March 21st, and showed an excess of 3 1 per 1000 over the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 14 9 in Aberdeen and 18 3 in Paisley, to 21 6 in Leith and 21 7 in Perth The 657 deaths in these towns included 32 which were referred to whooping cough, 14 to diarrhœa, eight to measles, six to scarlet fever, five to "fever," and three to diphtheria In all 68 deaths resulted from these principal infectious diseases last week, against 59, 75, and 67 in the three preceding weeks These 68 deaths were equal to an annual rate of 2 1 per 1000 which was 0 4 per 1000 above the mean rate last week from the same diseases in the 76 large English towns The fatal cases of whooping cough which had been 32 and 28 in the two preceding weeks, rose again last week to 32, of which 19 occurred in Glasgow, seven in Edinburgh and two in Leith. The deaths from diarrhœa, which had been 21 and 12 in the two preceding weeks, rose again to 14 last week, and included seven in Glasgow, three in Edinburgh, and two in Paisley The fatal cases of measles, which had been 15 in each of the two preceding weeks, declined last week to eight, of which three were registered in Edinburgh, two in Glasgow, and two in Aberdeen The deaths from scarlet fever, which had been four in each of the two preceding weeks increased to six last week and included four in Edinburgh. The fatal cases of "fever," which had been two, two, and three in the three preceding weeks, further rose last week to five, of which four occurred in Glasgow The deaths referred to diseases of the respiratory organs in these towns, which had been 92 97, and 117 in the three preceding weeks, further increased last week to 134, but were 83 below the number in the corresponding period of the preceding year The causes of 20, or more than 3 per cent., of the deaths registered in these eight towns last week were not certified.

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[1] London : Eyre and Spottiswoode, East Harding street Edinburgh : Oliver and Boyd Dublin E Ponsonby Price 3d

HEALTH OF DUBLIN

The death rate in Dublin, which had been 25 9, 27 8, and 26 6 per 1000 in the three preceding weeks, rose again to 27 7 per 1000 during the week ending March 21st. During the past four weeks the death rate has averaged 27 0 per 1000, the rates during the same period being 16 6 in London and 19 6 in Edinburgh. The 201 deaths of persons registered during the week under notice were eight in excess of the number in the preceding week and included eight which were referred to the principal infectious diseases, against 14, nine, and 10 in the three preceding weeks, of these, three resulted from diphtheria, two from whooping-cough, two from "fever," one from diarrhœa, and not one from small pox, from measles, or from scarlet fever These eight deaths were equal to an annual rate of 1 1 per 1000, the death rates last week from the same diseases being 1 9 in London and 2 7 in Edinburgh The fatal cases of diphtheria, which had been one and two in the two preceding weeks, further rose last week to three. The mortality from whooping cough, from ' fever," and from diarrhœa corresponded in each case with that recorded in the preceding week. The 201 deaths in Dublin last week included 37 of children under one year of age and 63 of persons aged 60 years and upwards, the deaths both of infants and of elderly persons considerably exceeded the numbers recorded in the preceding week. Six inquest cases and three deaths from violence were registered, and 68 or more than a third, of the deaths occurred in public institutions The causes of 13 or more than 6 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES

Royal Navy Medical Service.

THE following appointments are notified —Staff Surgeon N L Richards to the *Duke of Wellington* for the *Nelson*. Surgeons S H. Birt to Haslar Hospital, J H. Fergusson to the *Duke of Wellington* for Portsmouth Dockyard, W J Stitt to the *Bulwark*, W M Keith to the *Diana*, F J A. Dalton to the *Vernon*, and H. W G Green to the *Hibernia* for Malta yard, and P L Crosbie for the *Dryad*

Volunteer Corps.

Royal Garrison Artillery (Volunteers) 1st Edinburgh (City) Alexander Morrison McIntosh to be Surgeon-Lieutenant. Dated March 21st, 1903. 6th Lancashire Surgeon Lieutenant W T Blackledge to be Surgeon Captain. Dated March 21st, 1903

Rifle 1st London Surgeon Lieutenant H B T Morgan to be Surgeon Captain Dated March 10th, 1903

The Navy Estimates for 1903–04

The navy estimates, which are over £35,000,000 and show an excess of expenditure of £3,000,000 over those of last year, were last week introduced into the House of Commons by Mr Arnold Forster in a clear and very comprehensive speech. The Secretary of the Admiralty, alluding regretfully to the increased and unproductive expenditure, dwelt forcibly upon its having been occasioned by the rivalry and keen competition of other nations. The estimates show an increase in *personnel* of 4600 men over last year Vote 3 (p 50) is for medical establishments and services—an estimated cost of £259,000, a net increase for all heads of expenditure of £12,500 The details showing the distribution of the sum estimated for occupy some ten pages From the statement explanatory of the navy estimates published by the First Lord of the Admiralty at page 11 of that document under the heading of "Personnel" we glean the following points of interest —

> Steps have been taken to organise an improved system of physical training for the men and boys of the fleet, the "masts and yards" training which has served the navy so well in the past having become no longer available The details of the new exercises and methods of instruction to be employed under the new scheme have been carefully considered and the revised handbook will shortly be issued to the fleet. Amended regulations for the entry of surgeons have been published. The chief alterations are the improved scale of pay for medical officers, charge pay for inspectors general in charge of hospitals, and also of medical officers in charge of hospital ships rearrangement of the subjects of examination both for entry and for promotion increased powers of admitting candidates by nomination of medical schools colonial universities &c. earlier promotion to those who have held appointments of house surgeons and the payment of the fees of medical officers for civil hospital courses The number of candidates at the competitive examination has improved since the new regulations have been in force and the number of medical officers now on the active list is greater than at any time during the last quarter of a century A consultative board of eminent medical men has been formed with the Medical Director-General as president to decide on the best method of dealing with special questions appertaining to the Medical Department. Amended regulations for the employment of temporary surgeons in case of war or emergency by which the pay has been materially raised and an equipment allowance granted have attracted a satisfactory number of candidates A course of training has been instituted at Plymouth Hospital for sick berth staff probationers and a course of training in massage at Haslar with extra pay for those qualified on appointment to a hospital Revised medicine chests new field service valise emergency surgical dressings Roentgen ray apparatus to ships as well as shore establishments new metal aseptic operation tables microscopes and bacteriological outfits to H.M. ships have been supplied and the trial of various forms of stretchers on board ship have been and are being carried out. Steps are being taken to provide an auxiliary sick berth staff from volunteers of the St. John Ambulance Brigade and the St. Andrew's Ambulance Association Corps of Scotland

The Army Estimates for 1903–04

From the remarks on Vote 2—Medical Services—in the explanatory memorandum of the Secretary of State accompanying the army estimates for 1903–04 we find that there is a gross decrease in the vote for the medical services (Vote 2) of £495,000, but an increase on normal services of £25 000 due to provision for additions to the medical and nursing services of the army The total of the army estimates amounts to £34,245,000, which, although less than that of last year, is still some millions in excess of the normal estimate, but this was only to be expected in the circumstances. The number of men to be voted is 235,761, exclusive of the Indian establishment, reserves, yeomanry, militia, and volunteers. The estimated pay of the army medical service (p 39) for 1903–04 is £345,000, being a decrease of £15,500 on last year's estimate. The pay of civilian medical practitioners is £42,000, which shows a decrease of £224,100 on 1902-03, and on the cost of medicines, &c., there is a saving of £135 000 Provision is also made in Vote 2 for the medical services of the China Expeditionary Force and the Somaliland Expeditionary Force. There is an addition of 40 officers to the Royal Army Medical Corps and of 112 nurses to the nursing service, and the number of non commissioned officers and men of the Royal Army Medical Corps has been considerably increased. On p 40 of the estimates setting forth the home, colonial, and Indian medical establishments, we notice that the sum of £2500 is estimated as the amount required for payments to dentists in London and elsewhere and for the civilian members and clerical staff of the Advisory Board At p 86 and 87 details of the estimated amounts required for the Army Medical School, Netley and for the Medical Staff College are given, amounting to £7670 for the former and £9200 for the latter The estimate for the Army Sanitary Committee now only amounts to £105 At p 160 *et seq* (Appendix 6) will be found a detailed statement of the medical establishments for army corps, military commands, and districts.

The Russian Army Medical Department

In 1901 the number of trained soldiers in Russia available for service in the various arms was authoritatively estimated at 4 566,000, inclusive of officers, 1,414 000 men constituting the regular army and the remaining 3,152 000 the militia and reserve. The number of recruits incorporated during the year was 308,440, or about one-third of the available youths, of whom no fewer than 603,131 were medically examined. The minimum height allowed in the infantry was five feet, while the period of service with the colours, although nominally five years, was practically not more than four years. After his liberation from the active list the Russian soldier has to serve in the reserve until he is 43 years of age but apparently his training during this long stage is limited two periods of six weeks each as a maximum The cers of the medical department of the army are separated to two distinct categories, combatants and non combatants, e former being drifted from the general list, while the tter comprise medical men, apothecaries, and veterinary rgeons. Relative rank is strictly defined in accordance ith a hierarchical scheme known as the "Tchin" The ief medical officer of the army ranks as a lieutenant-neral and also as a privy councillor but his professional tle is "inspector general." Occupants of the next grade low rank as major generals and also as councillors of ate, their technical description being "inspectors of dis-cts" In all official documents a medical officer s civil esignation is invariably cited—as, for example, 'District pector, Councillor of State, Dr X. Y Z. is appointed, c." The grade of inspector entitles the holder to rank as a oble as well as to be addressed as 'Excellency" On ppointment a young medical officer enters the ninth lass of the Tchin with the relative rank of cap-ain, his corresponding civil nomenclature being 'titular ouncillor Four fifths of the medical recruits come from he Academy of Military Medicine at St. Petersburg, the alance being obtained from the other state faculties A youth enters the academy at the age of 17 and after two years devoted to the general sciences spends three more in medical study Then, provided he can pass for his medical degree, he becomes eligible for the army, but although given the position of a captain his pay and allowances are those of a subaltern until he has served for four years The seven most meritorious army candidates passing out of the academy are allowed to prolong their studies for three years when those who have made good use of their opportunities are granted the means of completing their education in foreign schools during a further triennial period. On their return these industrious young men are rewarded with the best posts in the department. The pay of a Russian medical officer on appointment is £85 per annum After four years he receives £120 and when promoted major £280 As colonel the emoluments come to about £450 yearly, and in the inspectorial rank to between £630 and £800 Only about half of the academy students enter the army the number varying annually from 60 to 80 Evidently this contingent is totally inadequate for the medical requirements of such a gigantic army as the Russian, nor does it appear that in war time the number of medical officers could be effectually supplemented from among the civil practitioners of the vast empire whose strength is said to be inferior to 15 000 It was with a view to meet the difficulty that the Russian army authorities decided to organise schools where *feldschers* or medical subordinates could be trained to act as assistant surgeons There are at present five of these establishments where boys aged from 13 to 17 years receive medical instruction during four years. For the most part they are the sons of soldiers and on all sides the testimony as to their intelligence and efficiency is highly satisfactory In time of war it is calculated that no fewer than 10,000 of these *feldschers* would be required We are indebted for the foregoing interesting notes to an article in the *Archives de Médecine et de Pharmacie Militaires* by Professor Frédéric Antony who concludes his exhaustive paper in the following suggestive terms "The medical inquiry which followed the war in the Balkans seems to have proved clearly that the systematic exclusion of medical officers from administrative matters created numerous mis understandings, that their advice was not always listened to especially at the base and in zones remote from the directing authority, and that many times the vexatious results of an incompetent hospital administration were attributed by their authors to the medical men whose recommendations had been neglected."

BAD TEETH AMONG ARMY RECRUITS.

In the House of Commons on March 18th Mr Weir asked the Secretary of State for War, in view of a statement con tained in the recently issued report of the inspector general of recruiting to the effect that in the reports from manufacturing districts, stress was laid upon the number of men rejected for bad teeth, whether he would state the percentage of men who were rejected for this cause during the year under review Mr Brodrick replied that the number of men rejected for bad teeth in 1902 was 4558 and the ratio per 1000 inspected was 52 03. This number is nearly double the figures for 1901.

Correspondence.

"Audi alteram partem."

A THEORETICAL VIEW OF THE CAUSATION OF CANCER.

To the Editors of THE LANCET

SIRS —The object of the present letter is to point out what seems to me the logical and scientific conclusion to be drawn from recent research as to the direction in which the solution of the grave problem of the etiology of cancer is to be found and to do this as briefly and as simply as possible A careful consideration of all the known causes of disease has hitherto failed to establish any one of them as the specific and undoubted cause of cancer, and as the result of the great mass of detail embodied in the researches of those who have been working at the problem only two views can be said to have at the present moment much claim upon scientific attention. Perhaps it would be more correct to say that only one view is attracting much notice—namely, the existence of a parasite or micro-organism which is the specific cause of the malignant epithelial growths known as cancerous. The other recent theory—that of Dr John Beard of Edinburgh University, which he communicated to the pages of THE LANCET a few months ago[1]—has met with a singularly cold reception and has provoked practically no criticism Nevertheless, there can be no doubt that Dr Beard's theory is one that will have to be faced and inquired into further, though there can be few persons indeed who have the necessary abilities and embryological knowledge to undertake such a formidable task

Briefly, then, the present position is this The whole list of the known factors in the production of morbid conditions has been scrutinised in vain to find any particular agency which can be said to be the specific cause of cancers or other tumours From the mass of facts known to clinicians and pathologists some few factors there are which evidently have some bearing upon the problem. Amongst these are the following (*a*) the occurrence of cancer at certain special periods of life, (*b*) the influence of sex in determining the parts of the body affected, (*c*) the occurrence of cancer in glands fully developed physiologically, (*d*) the frequent occurrence of cancer in some families, (*e*) the influence of long standing local irritation, (*f*) the effect of previous disease or local injury, (*g*) the effect of particular diets, and (*h*) the possibly infective nature of the disease

The importance of each of these has been urged at different times by various observers, and the mere mention of such widely varying factors in itself seems to point to the conclusion that in none of them is to be found the sole specific cause of the disease. All of them—except the last—have therefore been put aside as not furnishing full explanation and investigators have turned their attention to other more promising fields In these circumstances it is most natural, considering the enormous results that have been obtained in other diseases, that many are looking for the solution in the discovery of a specific parasite or micro-organism. It is no part of my present purpose to discuss the researches which have been already published in this direction. Whether the growths obtained by Plimmer and others are to be regarded in any sense as integral parts of the cancer from which they were obtained, or whether the appearances in cancer cells are due to degenerations or true parasites does not affect the present point. The fact remains that the line upon which most research is now being done is the bacteriological line, presumably upon the supposition that a specific vital cause may be found for cancer, as has been demonstrated for so many other conditions

The only other view now being urged is what we may term the germ cell theory" In this country this view was, as I have said, set forth in THE LANCET last year by Dr Beard It is by no means an easy theory to understand thoroughly, for the simple reason that it depends upon the author's views of embryology which, to say the least, are not familiar to everyone. But as I understand it Dr Beard holds that cancers—and I think he now extends the view to

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[1] THE LANCET June 21st 1902, p 1758.

other tumours—are due to certain products of the segmentation of the fertilised ovum. Certain cells, as the result of segmentation, are set aside to form the sexual cells of the next generation—that is, of the developing embryo Some of these cells in early development wander into abnormal situations—become, in fact, aberrant germ cells. This part of his view is not a theory, it is a fact which has been observed in embryos of lower vertebrates, these particular cells being easily recognised by their special characters and by special staining methods. The theoretical part of the view is that these cells occur in mammals and lie dormant in those situations into which they have wandered, retain their capacity for developing into certain tissues, and at some later period of life, which in the case of cancer is, as a rule, between 40 and 60 years of age, take on growth and form cancers. I am not aware that these cells have been observed in mammals, there are special difficulties in the way which need not be stated here, but it is argued from analogy that the same process most likely takes place in mammals as in some other vertebrates.

Here, then, are the two views which at present may be said to hold the field, the one theory assuming that cancer may be due to a parasite and the other that it is due to aberrant germ cells in the embryo The fact that the latter view has received but little attention is no argument against its validity Nothing could very well be more divergent from each other than these two explanations of the cause of cancer and the most striking point to the mind of the present writer is that the advocates of neither view seem to have given a thought to the theory of their opponents As far as I am aware the bacteriologists have not given any indication that in their opinion Dr Beard's germ cell theory can have any relation to a parasitic cause of cancer, nor did Dr Beard in his latest paper on the subject (read before the Royal Society of Edinburgh on Feb 16th, 1903) refer in any way to the possible action of a parasite upon his pre-existent germ cells It is this striking omission on both sides which is my apology for the present letter

We are accustomed to divide the causes of disease into two great groups, the predisposing and the exciting causes We recognise that some morbid conditions are more liable to affect some individuals than others, because we say they have a predisposition or a predisposing cause acting on them, rendering them more susceptible. In other diseases we recognise that an exciting cause alone is sufficient to produce disease provided that the species of animal in question is not immune to that particular condition. But susceptibility in itself must be regarded as a predisposing cause, though the term is generally used with regard to more restricted factors, such as age sex, family, &c Is it not possible, then that the secret of the cause of cancer is wrapped up in the discovering of an *exciting cause* which is able to act upon a *predisposing one?* In other words, is it not possible that both the embryologist and the bacteriologist are right, although they themselves do not see the necessity for each other's view? How can a parasite conceivably give rise to growths of such special types as we find in cancers unless there be a pre-existing cell or tissue upon which its peculiar influence may be exerted? But if Dr Beard is correct in supposing that in mammals there are dormant germ cells which retain the capacity of development in special circumstances it is equally possible that the bacteriologists may discover the special irritant necessary to start the growth Or, as seems quite as likely, there may be many exciting causes, of which a parasite may be one, which have the power to initiate growth in a pre-existent germ cell.

It therefore seems to be possible that the cause of cancer will be found to depend upon two sets of factors—one a predisposing cause and the other an irritant acting upon the former Whether these two factors are to be identified with the germ cells and a specific parasite remains to be proved. More probably there will be found to be *a germ cell which can be impelled to growth by more than one exciting cause* In any case, to the mind of the writer a conception of the etiology of cancer which does not recognise the necessity of both a pre-existing cell of a definite type and an exciting cause which makes that cell take on deferred growth is an inadequate view In the interdependence of these two aspects of morbid etiology the true cause of cancer will in all probability be found.

I am, Sirs, yours faithfully,

GERALD R LEIGHTON, M.D Edin,

Professor of Pathology in the Royal (Dick) Veterinary College.

Feb 17th 1903.

THE EFFECTS OF BORIC ACID AS AN INTERNAL MEDICINE

To the Editors of THE LANCET

SIRS,—Mr Reginald Harrison's letter in THE LANCET of March 21st, p. 836, will be welcomed by all who, like myself, advocate the use of moderate quantities of boron preservatives in articles of food, such as butter and potted shrimps, which are liable to decompose rapidly While deprecating the use of boric acid he advocates the use of boracite, which, he tells us, is a borate of magnesium containing 62 5 per cent. of boric acid (anhydride), both as a medicine and also as an article of commerce for preserving such foods as he has mentioned Mr Harrison is perhaps not aware that in making an analysis of a food containing boric acid it is not possible to tell whether the acid was added free or in combination, or, if the latter, with what bases it was combined, and that whether boric acid or boracite was added the analyst would only be able to recognise the presence of so much boric acid. It is exceedingly difficult to understand how the effect of a few grains of boric acid on digestion can be so different from that of a few grains of boracite as Mr Harrison believes it to be, because the hydrochloric acid in the gastric juice must quickly liberate boric acid from the borate of magnesium. I should like also to point out that the preservative generally used for potted shrimps is a mixture of boric acid and borax known in the trade as glacialine, and that it is probable that the alkalies present in most organic substances preserved by it are sufficient to neutralise the free acid, which is at most exceedingly feeble That Mr Harrison has suffered from indigestion after partaking of potted shrimps and other articles containing boric acid is no proof that the preservative was the cause of his trouble. Has Mr Harrison found that it caused indigestion when mixed with his ordinary food? If he has we may have to admit that it does not suit his digestion, but we shall have also to admit that his digestion is unlike the digestion of the vast majority of persons, in whom there is overwhelming evidence to show that no appreciable harm results from the ingestion of considerable amounts of boric acid, even when continued daily for several months at a time

I may sum up these remarks by saying that Mr Harrison, by advocating the use of boracite, admits the principle of the use of a boron preservative, that analysts do not distinguish between boric acid and borates in a food, that it is doubtful whether boric acid in the free state is ever met with in the majority of the foods he has mentioned, and finally that to the best of my knowledge Mr Harrison is the first who would forbid the use of boric acid as a preservative while allowing the use of a borate.

I am, Sirs, yours faithfully,

THOMAS R. BRADSHAW, M.D Dub, &c.,

Physician to the Liverpool Royal Infirmary

Liverpool March 21st, 1903.

THE RISE OF BLOOD PRESSURE IN LATER LIFE

To the Editors of THE LANCET

SIRS,—In THE LANCET of Feb 14th, p 472 there appeared together letters from Dr Harry Campbell and myself, in one of which, my own, the mean pressure in the capillaries was spoken of as a considerable amount—say, 50 mm. Hg, in the other Dr Campbell's, as virtually *nil*. I did not trouble you with any explanation of this apparent paradox, as I thought the reconciliation of the two points of view would be perceived by physical readers. But as in hi very interesting letter in THE LANCET of March 21st, p 835, this accomplished physician returns to the subjec may I point out, after the fashion of the landlord o the Rainbow, that we are both right and both wrong Dr Campbell was, and is, considering the pressure i a (any *one*) capillary, I was considering—as I think said?—pressure on the *capillaries*—i.e, in the capillar system. The capillary system, and it is with the arborescence as a whole, not with individual twigs, that the hea is concerned,—the capillary system may be imagined in su as a vascular area of a certain collective diameter an capacity, and a rough calculation of this area, diameter, an capacity can be made and the probable mean pressure in calculated on this basis. The pressure in any one capillary is, of course, *infinitely* small

Dr Campbell says he cannot think the organism would "self inflict a wearing-out of the heart and arteries without any countervailing good" (when it has the means of self adjustment of pressures) Well, we have come to think many things which at first are difficult, and this difficulty applies still more forcibly to Sir Richard Douglas Powell's vaso-motor hypothesis which may turn out, of course, to be the true one, though I "find it difficult to think so" All I will say at present is that, as a matter of clinical and anatomical experience the heart and arteries do "wear themselves out" after a period of compensatory dilatation hypertrophy, and this is the chief matter I have urged so long against the French and German assertions that arterio-sclerosis (of the kind I now contemplate) is "a cardio-arterio-sclerosis"—"a cardio-arteriopathy," and the like—names positively misleading if the machine, as engineers say, is "*self strained*" After such persistence in this clinical doctrine I am amply rewarded by the adhesion of Dr. Campbell, Sir William Broadbent, and, I think I may add, of Sir Richard Douglas Powell also Where we may differ is now only as to the mechanism itself and I repeat once more that my suggestion herein as to viscidity is a mere suggestion which does not amount to hypothesis, still less to "theory," as someone put it. In favour of my surmise I learnt from Dr Bodington in his thesis for the M.D degree of this University (Feb. 26th, 1903) that the injection of nucleo-proteid into the circulation causes a manifest thickening of the blood, in some of his experiments with these products the blood became so "viscid" that it was difficult to draw it from the vessels of the still living animal.

Dr Campbell is evidently of opinion, as I was, that Dr H. Oliphant Nicholson's letter contained many statements which, if true, are very important, but that they were stated without indications of proof I wrote to Dr Nicholson to put this criticism before him. He was so kind as to send me in answer a long and very interesting letter which if it did not contain, as it scarcely could, the proofs of his several propositions, yet proved most indisputably his competence to express an opinion and set forth a large amount of careful experiment upon which they were made

I am, Sirs, yours faithfully,
T CLIFFORD ALLBUTT

St. Radegund's Cambridge, March 24th, 1903

PS.—I cannot close without reference to the importance of the criticism by my friend Dr E. H. Colbeck (in THE LANCET of March 21st, p. 793) of my interpretation of angina pectoris. His paper will have my careful consideration in my Cavendish Lecture next June

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THE VIRCHOW MEMORIAL

To the Editors of THE LANCET

SIRS,—Allow me to inform through the medium of your columns all those who have kindly contributed to the Virchow Memorial that the list of subscriptions was closed, as intended, on Feb 28th, and that the total after deduction of the small expenses for stationery amounts to £265 11s., contributed by 122 subscribers. A cheque for that amount has been sent together with the list of the contributors, by the honorary treasurer, the Right Hon. the Lord Avebury F R.S., to the treasurer of the Berlin committee, Herrn Geheimen Kommerzienrath A. von Mendelssohn Bartholdy The chairman of the Berlin committee, Professor Dr W Waldeyer, has addressed to me a letter in which he expresses in the name of the Berlin committee his very sincere thanks to all those who in Great Britain and Ireland have contributed to the memorial. He winds up by saying that England had again shown that she knew how to honour genuine science and its representatives.

I am, Sirs, yours faithfully
FELIX SEMON
Honorary Secretary

Wimpole-street W March 23rd 1903.

GLASGOW AND WEST OF SCOTLAND COÖPERATION FOR TRAINED NURSES

To the Editors of THE LANCET

SIRS,—I inclose a copy of the eleventh annual report of the above institution, containing the new constitution and rules which were unanimously passed at a special general meeting of members held in the Religious Institution Rooms, Glasgow, on Feb. 23rd. The coöperation was started in 1892, the necessary funds being contributed by members of the public who were anxious to provide an association of fully trained nurses with Glasgow as a centre The expectations of the founders have been more than fully realised and now the nurses on the staff number close upon 200 In view of the rapid development it became necessary to recast the original constitution and rules This matter has occupied the careful attention of the executive committee during the past year With the aid of their honorary solicitor, Mr William Brodie, the committee drew up the revised constitution and rules which were submitted to the annual meeting of the coöperation in November of last year The confirmation of the constitution was, however, delayed in order that all the nurses on the staff might have an opportunity of more fully considering its terms Since the annual meeting a copy of the new constitution and rules has been sent to all the nurses on the staff, as well as brought before a meeting of representative nurses, at which all the details were explained by the honorary solicitor The nurses have without exception accepted the new constitution and many have expressed themselves as greatly indebted to the executive committee for the trouble it has taken in connexion with the matter

Having regard to some general criticism which has been *passed on the constitution and rules as now adopted*, I think it right to note the following 1. The rights of nurses who are members of the coöperation have in no way been altered by the new constitution and it is not the case, as has been asserted, that the position of the nurses has been reduced to that of servants of the coöperation. They, as formerly, obtain employment through the coöperation and are paid by those to whom they render service—namely, the public. 2. Among various usual powers has been inserted one enabling the coöperation if need be to solicit and to collect subscriptions, but the inclusion of this power does not thereby, as has been asserted, reduce the coöperation to the position of a charitable institution. As above noted the coöperation was founded by contributions which have largely enabled the executive committee not only to finance the working of the association, but also to purchase the "home" in Sardinia terrace, which has been considerably added to since its acquisition The premises have been refurnished and refitted for the nurses' comfort and convenience and a "holiday home" at the seaside has also been established where the nurses can recruit. It is thus obvious that through the original capital subscribed by the public the coöperation has been relieved of house-rent and the working expenses which are contributed by way of commission by the nurses have accordingly been considerably reduced. The benefits derived are enjoyed solely by the nurses, who have expressed themselves as being very grateful to the ladies and gentlemen who by service on the executive committee have contributed so largely to their welfare and comfort In conducting the affairs of a coöperation of which the nurse members are necessarily for the greater part of the year scattered all over the country, it is essential that the members of the executive committee (which is elected annually) should be armed with wide and extensive powers. All those who have been interesting themselves in the coöperation are gratified by its steady progress and increasing efficiency and it has now become an institution conferring not only substantial benefits on the trained nurses who form its staff but also on the sick who require their services.

The standard required for admission is exceptionally high, no nurse being admitted who has not three years' continuous and systematic training in a recognised general hospital where the education of nurses is attended to and a qualifying diploma granted after examination. No monthly nurses can now join who have not also general medical and surgical training the same as the other nurses In this respect probably the coöperation is not excelled by any similar organisation of the kind

I am, Sirs, yours faithfully,
DAVID NEWMAN, M D Glasg.,
Chairman of the Executive Committee

Glasgow March 24th 1903.

SUGGESTION, AUTO-SUGGESTION, AND CHRISTIAN SCIENCE

To the Editors of THE LANCET

SIRS,—The few scattered prosecutions of so-called Christian Scientists in this country for attempting and failing to treat disease and thus allowing the patients under-their charge to die without any attempt at medical treatment have not as yet aroused public attention owing to their scarcity But that the movement is spreading in this country cannot be doubted.

To the public at large this so called "science" would be of comparatively little interest were it a mere religion pure and simple. Its interest—and, I may add, its danger—lies in that it professes to be much more than a religion it claims to hold the keys of health, to check disease, and to place the patient under treatment on the high road to health, not by drugs or any physical method of treatment, but simply by a sustained effort of the will To us with all the elaborate mechanism of modern science at our disposal, and the painfully accumulated clinical experience of centuries at our back, this may seem the veriest charlatanism to be dismissed on *a priori* grounds as a palpable absurdity But we find—not in this country but in the "States"—that there are over one million people bold enough to claim from their own experience benefit from this method Their statements are a factor whose influence on public opinion cannot be ignored, and a brief account of the methods of "Christian Science" may therefore serve some useful purpose To do this I must first describe the phenomena of "suggestion" and "auto-suggestion" Every hospital resident knows that when a patient for any reason has been treated with sleeping draughts or hypodermics of morphia for some little time he can readily be made to go to sleep by feigning to give him his usual draught, substituting any harmless placebo or giving a hypodermic of sterilised water instead of morphia. The idea of sleep is induced in his mind by the performance and he rapidly quiets down into natural slumber This and many cognate phenomena come under the head of "natural suggestion."

An analogous but more powerful form is what is known as "hypnotic suggestion" It is not much practised in this country and need not further be referred to "Auto-suggestion," as its name would imply, is where the idea emanates from the patient himself He has made up his mind that certain things will happen and within limits they do Any practitioner who has seen cholera abroad will tell you that when an epidemic starts those who are most afraid of taking it almost invariably do The explanation, of course, is that the vibrios are already present in the intestines (just as one often finds the diphtheritic bacillus in swabs from the throats of healthy people during an epidemic of diphtheria), but the resistance of the tissues has been lowered by fear and the individual who might otherwise have escaped becomes a victim under the influence of auto-suggestion

Bearing these two phenomena in mind the methods of the "Christian Scientist" are easily explained To take a concrete example A Christian Scientist gets a headache. Instead of looking for sympathy he sits down calmly and repeats a formula something like this "I have no pain. There is no pain I feel no pain. There is no such thing as pain. Nothing is real but mind. There is no pain" By keeping his mind fixed on this one idea he states that presently the pain is gone Now if one comes to analyse his method it is at once seen to be one of pure "auto suggestion." In a similar manner by "natural suggestion" one can work on the feelings and beliefs of others. Hysterical aphonia, imitative chorea, &c, can readily be treated and, in fact, are treated regularly in everyday practice by the exercise of a strong will over a weaker The success of many a practitioner is largely due to his hopeful manner with his patients He sets them thinking not of how ill they are, but of how soon they will get better And this is exactly the method of the Christian Scientist. He works by "diverting his mind from unhealthy channels and compelling it to travel in healthy ones" In the jargon of his religion he calls it "right thinking" in contra distinction to "wrong thinking," which is the origin of all unhappiness and disease according to his view

Backed by the glamour and mystery of a new religion it is obvious what a powerful weapon he wields against imaginary ailments and all the protean forms of hysteroidal and hypochondriacal fancies. But it is here the danger begins. He is not content to stop here. He claims to be able to cure all diseases by this method. But, unfortunately, the most powerful forms of suggestion will not reduce a strangulated hernia or all the thinking in the world stop the insidious course of the tubercle bacillus. As long as the Christian Scientist contents himself with treating the thousand and one small ailments which affect the mind rather than the body he serves a useful purpose, for faith based on any foundation, no matter how dubious, is always powerful. But when he professes to cure diseases of which he can have no practical knowledge—diseases in which there is some distinct pathological lesion—he immediately becomes a danger to the State and a person to be avoided as one would the plague

I am, Sirs, yours faithfully,

March 21st 1903 J JOHNSTON ABRAHAM.

SHORTENING THE SACRO-UTERINE LIGAMENT IN THE TREATMENT OF PROLAPSUS UTERI

To the Editors of THE LANCET

SIRS,—Mr E Stanmore Bishop in his admirable paper on shortening the sacro uterine ligaments in the treatment of prolapsus uteri in THE LANCET of March 14th, p 725, has most courteously alluded to my paper read before the British Gynæcological Society upon the same subject In theory his operation and mine are identically the same, but in practice, as he points out, they differ in one or two important points Mr Stanmore Bishop does not suspend the uterus at all to the abdominal wall, his objection to this is the fact that if the uterus is so attached by "ventrofixation" serious difficulties may arise in the future. Now in my opinion "ventro-fixation" is a misnomer, it should be termed "ventro-suspension," as in my experience I do not think it possible to fix the uterus absolutely to the abdominal parietes without the fundus is fastened directly to the recti muscles, but so long as it is only attached to the peritoneum no fixation will take place, as it will be found, as I have proved, that the attachments are always half an inch or more long and composed solely of peritoneal tissues which readily stretch. The importance of this attachment is, I think, that if the sacro-iliac ligaments are shortened without some parietal attachment to the fundus there is considerable risk of the uterus becoming strongly anteverted and to the patient in consequence being subject to all the inconvenience appertaining to this condition.

The *rationale* of the operation is readily understood if one considers that the uterus is a motile body suspended by the lateral ligaments and maintained in its normal antero-posterior position mainly by the sacro-uterine ligaments Should these ligaments become weakened the uterus has a tendency to revolve backwards on its axis, the broad ligaments, thus throwing more and more strain upon their posterior attachments which, continuing to elongate, eventually drag the fundus completely round, causing retroversion. The uterus, now lying in the axis of the vagina and the supports from above being weakened and elongated, gradually becomes more and more prolapsed and if the perineal supports are weakened or perhaps non-existing it is readily seen that there is nothing to prevent the whole organ prolapsing The only natural way of restoring the organ to its normal position is unquestionably to repair those attachments which in its normal state keep it in position and the chief of these unquestionably are the posterior attachments or those which suspend the os and cervix posteriorly and which tend to keep the uterus in the antero posterior position, this can only be done by passing a couple or three sutures deeply into the tissues on each side of the rectum in the position of the sacro uterine ligaments, bringing these forward so as to pass through the peritoneum and subperitoneal tissues in two or three places, and catching the cervix of the uterus, the two ends are then tied firmly The elongated and sacculated pouch of Douglas is by a darning stitch puckered up and a firm suspensory ligament formed. In many cases colpo perineoplasty will have to be performed, but even without this, if sacro-uterine suspension be properly performed, I am convinced that the uterus may be retained in its proper position

I am, Sirs, yours faithfully,

FREDERIC BOWREMAN JESSETT

Brook street W March 23rd 1903

A NEW ILLUMINANT FOR THE FUNDUS OCULI

To the Editors of THE LANCET

SIRS,—The large number of red rays reflected from the fundus of the eye when examining it by the ordinary light tends to mask some of the detail, this is especially the case disease of the retina and with the fine terminations of the teries. In microscopy it is well known that the insertion a Gifford's screen between the light and the section adds atly to the detail by absorbing the red rays where ructures have been stained red. By the kind courtesy the Westinghouse Electrical Company I have been able examine a number of fundi, both normal and diseased, means of the mercury vapour lamp, the light of hich is produced by allowing a direct current to w through a vacuum containing mercury, from a atinum to an iron electrode, the resistance in the tube ving been first broken down by a spark of high tension. his light, when examined spectroscopically is seen to be eficient in red rays being very rich in blue and violet The ght, although brilliant, is diffuse and produces an 'after age of very short duration. On looking at the fundus this light the background" appears pale green instead the usual red, the vessels appear purple, standing out th unusual distinctness, the arteries being the same olour as the veins can be traced to their finest ramifica- ns The choroidal vessels are of a deeper purple nd over the whole the retina can be seen glistening eing especially well marked along the arteries and veins he optic disc appears with a white centre and green edges his illuminant ought to be of considerable utility in he differential diagnosis of retinal and choroidal disease, nce the perspective of the retina, choroid, and sclera is ery clear Although the lamp in its present form is hardly itable for ophthalmoscopic work, alterations could be asily made for this purpose. A somewhat similar effect can e produced by using an arc lamp and screening off the red ays, but the same definition and detail cannot be obtained s with the mercury vapour lamp

I am, Sirs, yours faithfully

M. S. Mayou, F R C S Eng,

Chief Clinical Assistant to the Royal Eye Hospital.

March 20th 1903.

PROFESSOR GRASSI'S RECENT PAMPHLET

To the Editors of The Lancet

Sirs,—Professor Grassi has recently published a pamphlet entitled "Documenti riguardanti la storia della scoperta del modo di trasmissione della malaria umana" which I find he has dedicated to me The work is of a polemical character Lest from the fact of the pamphlet being dedicated to me it might be supposed that I indorse the views therein expressed, I beg to say that in many instances I do not, and, moreover, that I was not consulted about the dedication.

Yours truly

Queen Anne-street W., March 20th, 1903. Patrick Manson

Erratum —In the letter headed On the Problem of Glycosuria and Diabetes" and bearing the signature 'Rusticus,' published in The Lancet of March 21st, the word ' maintains" in the first line of col. 1, p 839, ought to be *mentions.*

The London Licentiates' and Members' Society —A meeting of the members of this society was held at the rooms of the Royal Medical and Chirurgical Society, Hanover square, W, on March 10th The chair was taken by Dr W Bezly Thorne who in addressing the meeting pointed out that there were two courses before them—viz., to approach the University of London with a petition that men holding the diplomas of the Conjoint Board should be permitted to present themelves for the final examinations without matriculation, and, secondly to approach one of the provincial universities to allow such men to enter for the pass examination for their M.B. degrees Mr Elliott Blake spoke upon the various injustices suffered by London 'Conjoint men and was of opinion that the society should be continued as a permanent one. Dr A. Douglas Cowburn did not think that any good would result from a petition to the University of London Mr F W Collingwood gave reasons for thinking that affiliation with certain provincial universities would be impossible and proposed that a petition should be prepared for presentation to the University of London. An executive committee was appointed for this purpose and it was also decided that the society should become a permanent one with an annual subscription of 5s. to be forwarded to the secretary Mr F O Langford, 142, Peckham Rye, London, S.E.

THE FOURTEENTH INTERNATIONAL CONGRESS OF MEDICINE, MADRID

(From a Special Correspondent)

The Journey

There are two routes by which Madrid may be reached—the longer but more comfortable and healthy journey by sea to Lisbon or Oporto, and the overland route through Paris. The latter course is most likely to be adopted by busy men and in general the Sud Express will be the train chosen. Now, the Sud Express is as ill contrived a train as any so-called *train de luxe* can well be. In the first place it has no direct communication with any train from London, the traveller must either leave London in the morning and spend from 15 to 18 hours in Paris, or he must travel all night by train and boat in order to reach Paris at an uncomfortably early hour in the morning and will then have to wait several hours for the Sud Express to start. It must also be noted that places in this train should on ordinary occasions be booked at least 24 hours before starting as the trains are constantly full, and those who visit some other Spanish towns after leaving Madrid on their return should bear in mind that a Spanish telegram may need 24 hours to travel 500 miles Travellers by the Sud Express have to change into a Spanish train at the frontier and the change is for the worse, for the French train, though dusty and ill-ventilated, is not overcrowded, as the seats are all numbered. Luggage should be in a handy form, as it is safer in the carriage with the traveller, and no charge is made for excess of weight if it is taken in the carriage—only 66 pounds are allowed free and portmanteaus have been cut open before now in the luggage vans. The sleeping cars in the Sud Express are divided into compartments, each containing four narrow bunks one above and one below on each side, with just enough space in the middle for one man to undress There is no place in which to secure money or jewellery and the only means of ventilation in this small space occupied by four persons is the window, for the door opens into the corridor There are dining-cars in this *train de luxe*, but the food is not first-class and the attendance is insufficient.

There is but little in the scenery along the route to interest the traveller, except glimpses of towns the names of which are familiar to him since his school days, as the most beautiful country—i.e., the Pyrenees—is passed during the night on the way south, but on the return journey there is very much to admire. The Sud Express is the best means of returning to England for the sake of the scenery through which the line passes and of the quaint sights from the windows of the train such as a woman and a girl ploughing with a yoke of oxen, carts drawn by oxen, or the same patient beast tramping a monotonous round to draw water from a well or it may be a woman working a water wheel with her feet, as the convict works the treadmill, or threshing floors with oxen treading out the corn. The trees will interest every stranger—forests of cork oaks, mostly small, stunted trees with curiously gnarled and twisted boughs, then the dull, weird, grey green olives, Spanish chestnuts and acacias, and lastly mountain-pines and larches with stone-pines intermixed, and here and there in warm valleys agaves and aloes growing wild in the open air though these latter are rare in Spain The line, too, passes near (seldom through) little old world, walled towns, occasionally these little towns still have the fortifications made during the Peninsular War but it is very remarkable that there are practically no modern fortifications on the Pyrennean border The landscape as the train approaches the Pyrenees affords views of rocky gorges and of beautiful wooded valleys with streams coursing through them, bordered by bold cliffs and sometimes by boulder strewn mountains, but there are so many tunnels on the railway that the passenger can only catch glimpses of what must often be striking scenery Often there are small square watch towers standing alone on the tops of the hills like the Peels in Northumberland and these recall the days of the borderland wars be ween France, Navarre and Spain. Sometimes in place of these border fortresses there are monasteries with their out-buildings all walled in so that they also might be fortresses on occasions even as the churches might be which in these border town are very large and massive, with tiny windows made high up in the walls, so that even these sacred places could be made defensible in case of invasion The houses in some of these little towns are themselves curious and picturesque, being three- and four-storeyed buildings stained to pleasing shades of colour by age and lichens and pierced with small windows very inadequate for the admission of air and light to the rooms within. Another sight which is characteristic of the Peninsula is that of four or five boxes, each about five feet high by three wide, marked "Bulls," on an open cattle-truck of a goods train which are intended for the bull-fights performed in every town and even village throughout Spain. It is certain that the representatives at the Congress will be invited to be present at a bull fight—to English minds the most unsportsmanlike amusement ever devised. The bull ring itself with its crowds of people in gay coloured dresses and the initiatory procession are worth seeing, but the show itself is not only cruel but stupid

Railway tickets to Madrid and back by the ordinary express trains may be obtained for the price of a single fare by any member of the Congress

The alternative way of reaching Madrid—viz , by sea to Lisbon—is far preferable for those who are good sailors and can afford the time, for the voyage lasts from three to six days, though it might be made shorter and more convenient if a sufficient number of passengers would club together and charter a vessel for themselves, as the regular boats only run once or twice a week By this plan visitors to the Congress would not only have a healthy and pleasant holiday and save themselves much of the unpleasing tedium of the railway journey, but they would also be able to see Lisbon, one of the quaintest and most picturesque towns in Europe. Lisbon is built on the side of a steep hill sloping down to the river which here opens out into a lake, or rather series of lakes, a most beautiful site, and from the top of the hill there is a most charming view over the town to the river

Everyone who travels to Madrid through Lisbon should visit the Botanical Garden at the latter town to see the tropical plants growing luxuriantly in the open air which at Kew can only be cultivated under glass The garden is in the outskirts of the town and therefore easily accessible , it is situated on the slope of a hill, a convenient site, in that the more hardy plants occupy the higher ground and the more delicate ones are below and sheltered from cold winds The grounds are said to cover ten acres and are well laid out with winding paths and here and there a small pool of water for aquatic plants. The soil seems poor and thin and stony, but the plants flourish there. From the lower entrance the visitor passes through an avenue of Washingtonias which are amazingly large seeing that they were planted only 20 years ago Within the garden there are clumps of lofty cocoa nut trees and many varieties of Phœnix, Bourbon, and very large fan palms and great tree-ferns Here are also many sorts of cacti and agaves and aloes in flower (with names scratched on their leaves in true cockney style) and great bushes and even hedges of plants which in England are only seen as small bedding out plants, such as lantana, veronica, and datura arborea. The cannas and begonias make but a poor show and the geraniums (which in Devonshire will cover a cottage) are thin and weedy and the roses are only of the most ordinary varieties Moreover, much space is wasted on common plants and trees—possibly because they are rare in Portugal. That part of the garden also which is intended for the botanical students needs supervision, for here are plants without labels and labels without plants and labels on the wrong plants, and occasionally a whole family of plants is characterised by a simple initial with no explanation of that initial. There is but one greenhouse and that poorly furnished with comparatively common plants The banana trees, too, are shabby and poor and there are but few plants in bloom to be seen in the garden and no care seems to be taken to insure a succession of flowering plants, but the wealth of tropical vegetation more than atones for these minor faults and it must be remembered that in this Lisbon Botanical Garden there are no potted plants put out for the summer months only, but there are to be seen great trees and bushes indigenous to Brazil, Syria, New Holland, &c , planted out and left in the garden throughout the winter—e.g (among many others), cocos Australis, cocos Romanzowiana, and cocos flexuosa as lofty trees, and nicotiana colossea 10 feet high In a word, the Lisbon Botanical Garden, which is open free all day, is a delightful place in which to spend an hour or two even for the visitor who has forgotten his botany

Oporto is well worth a visit by those who wish to kn how port is made and are interested in the most medi sanitation hidden behind a modern mask. Visitors to Opo *via* Lisbon should not take their tickets to Madrid thro a London agency, as in that case they will have spend an uncomfortable night in Pampilhosa, whereas t direct and proper route is through Barca d'Alva. Tho who travel from Lisbon or Oporto to Madrid may spe a profitable day in Salamanca, the oldest university to in Spain From Lisbon to Madrid is only 11 hours' journ by the Sud Express, but this train only runs on Monda and Thursdays and places must be booked the day befo There is, however, a daily express at 9 30 P M whi is almost as fast and cheaper The scenery on this li is most interesting and the train gives glimpses of t aqueduct which supplies Lisbon, of fields tilled by m dressed in white shirts and breeches as if they meant play cricket where there is no grass to play on, although the sides of the hills there are quite large flocks of she and goats with shepherds watching them Women, too, wo in the fields, for wages are very small, less than from 6*d* to 9 per day, and the children must be fed somehow, if only chick pease and oat-bread The vegetation along the li must attract the attention of the least observant travelle for orange and lemon trees, bamboos, carob trees, Indi corn, cacti, yuccas and agaves and great aloes which flow in the open air during the summer, eucalyptus trees, a palms and tree ferns growing along the sides of the railw are not common sights with us.

THE
ORGANISATION OF THE PROFESSION

(FROM OUR SPECIAL CORRESPONDENT)

The Battle of the Clubs at Cheltenham —The Professio organises wins in a First Encounter, and is subsequentl signally defeated

IN January, 1901, 14 of the junior practitioners of Chelte ham met together and discussed the evils of club practic In a somewhat loose and informal manner they consti tuted an organisation The Oddfellows and members o other benefit societies paid only 3*s* a year for medic aid and if they chose the members might also enter th whole of their families for another 5*s* a year The prac tioners who gathered together passed a resolution to effect that henceforth it would be considered derogat to the dignity of the profession to accept less than a year per member or 10*s* per family It was likew decided that if any practitioner resigned his post medical officer of a friendly society because he co not obtain this rate of payment no other member of t profession was to take his place These proposals hav met with general approval it was determined to try a t case and Dr R. Davies threatened to resign his post medical officer of a benefit society unless the subscrip was raised from 3*s* to 4*s* per member The members Dr Davies's lodge, in reply, acknowledged that the p ment they made was not sufficient, but they explain that if they increased the amount they would pl themselves at a disadvantage in respect to other lodg Therefore, the three months' notice was duly served a accepted The friendly society advertised for a new medic officer in the local papers, but no one replied. Then again advertised, this time offering the very terms whic Dr Davies had insisted upon, but received no other rep than that sent by Dr Davies himself The friendly societ was consequently obliged to reappoint its medical officer an this at the new and higher rate of payment. This, then, wa an emphatic victory for the medical practitioners, and now Mr A A. Dighton who had a large lodge of Oddfellows, made a similar application but he was at once met with a flat refusal and therefore he resigned Knowing that the medical men of Cheltenham were well disposed to each other and that they would not compete against Mr Dighton, no attempt was made by the lodge to secure the services of a local practitioner Advertisements were consequently sent to some Yorkshire newspapers and replies were received

By this time and with but one exception all the medical practitioners of Cheltenham had signed a declaration that would not apply for the vacant post. It was worth than £150 a year, but there was much abuse Many ers belonged to the trading classes and could well to pay the usual fees. Indeed, their guineas were forthcoming when it was thought necessary to call onsultant, but they thought 3*s* a year sufficient for own medical officer. Some of these cases were men to me. Thus there was one member of the Odd s who had several bad attacks of illness and always a guinea for a second opinion. Another patient who ontent to pay only 3*s* a year was concerned with an tant business. Then there was a well to-do trader refused to be attended by an assistant when Mr on was ill and therefore sent for another well-known tioner Another large trader was a member of the llows and only paid 5*s* a year for medical attendance family Another prominent Oddfellow occupying a table position considers that he is entitled to every ion at the hands of the medical officer If these o-do people live within the radius of four miles they to be attended for 3*s* a year just as if they were truggling labourers or badly paid workmen. What with als, the central and the branch provident dispensary, any clubs and friendly societies and the low death and ates, there does not remain much remunerative work for eral practitioner Thus, as another instance, a patient he other day The bill for medical attendance during st illness amounted to £35 and this was paid. Never-s, the two sons of this patient belong to a friendly y and only pay 3*s* a year for medical attendance. g the influenza epidemic there were so many patients r. Dighton had to engage a qualified assistant, and he that the cost of attending his patients amounted to a guinea per day more than he was receiving from He was glad when the epidemic began to abate. real value of club work is not the amount earned he regularity of the payments. Private patients, on ther hand, rarely pay regularly Indeed, it is when atient dies that there is the best chance of obtaining a ment of the bill. On the other hand, there are certain ses—rent, taxes, servants wages &c.—that must be rly met and the cheque so punctually received at the f the quarter from the benefit society or club often just to pay these most urgent claims. Therefore a practi may value his club or contract work more for its nty and regularity than for the amount actually ed.

question of age and sex is also a very important con tion However small the subscription paid by an adult it always pays better than a much larger sum if for women and children. The former give but little, he latter very much, trouble. Now, at Cheltenham both iberal club and the Conservative club have thought to se their influence and popularity by providing medical lance for their members This is paid for at the rate a year, but the value of the appointment so far as edical officer is concerned, is not so much the extra g as the fact that there are no women and children ers. As these latter do not vote at Parliamentary ons the organisers of the political clubs have not ed themselves to procure medical aid for them. But f this arise some delicate side issues which show much the delicate tact of diplomacy is needed in natter of the organisation of the profession. It een seen that Dr Davies obtained the increase which emanded and there appeared, judging the matter cially, no reason why Mr Dighton should not be ly successful But then Dr Davies was also medical of the Liberal club while Mr. Dighton was medical of the Conservative club Now Mr Dighton acknow-s that he had occasionally said it was better to to the Conservative club than to the Oddfellows us he meant that the position of medical officer to the rvative club was preferable to that of medical officer odge of Oddfellows. Also as the arrangement between embers of the political club and their medical officer more fair than that of the Oddfellows and their cal officer, the members of political clubs might expect prompt or more careful treatment. But it will be seen all this is susceptible of complete misinterpretation. Dighton was of course, accused of canvassing for the ervative party and this at the expense and financial ge of the Oddfellows lodge which had engaged him s medical officer. If, as was probably the case, the leading spirits of the Oddfellows were Liberals, then Mr Dighton's conduct would appear to them to be infinitely more reprehensible. In such circumstances it is not surprising to find that that section at least of the Oddfellows lodge was bitterly opposed to Mr Dighton and instead of attempting to come to terms urged that the friendly societies should form a medical institute of their own and employ a medical man who should be entirely at their service instead of a medical officer who was canvassing for a rival institution and for the political party to which in all probability the majority of the lodge were opposed.

As a consequence of all these complications and misunderstandings a very active campaign was successfully carried forward and sufficient friendly societies were persuaded to amalgamate. They took a large house and there installed what is now known as the Cheltenham Friendly Societies Medical Association Thus, not only did Mr Dighton lose his lodge of Oddfellows, but other practitioners, including Dr Davies, also lost their lodges, for these now joined the federation of societies which had formed the above mentioned medical association. This association was successful in securing the services of a practitioner Thus, the struggle was fairly commenced What could the Cheltenham practitioners do? They have refused to meet or to associate with the new-comer So that there should be no error in this matter and to treat the whole question in an impartial manner I called at the surgery of the Cheltenham Friendly Societies Medical Association and was courteously received by its medical officer He assured me that he was not undercutting the profession. On the contrary, he suspected that some of the old established practitioners of Cheltenham were undercutting him. Every member of the association paid 4*s* 1*d* per annum for medical aid. The penny went for administrative purposes and the 4*s*. were devoted to the medical service But the old rate of payment used to be 3*s*, and some lodges had refused to join the new federation of the various societies and retained their old medical officers Was this because these medical officers were content to continue to receive the old rate of payment, the 3*s* instead of the 4*s*?

In regard to families, I was assured that the wives of members had to pay 1*s* 1*d* per quarter for medical aid and that young persons above 15 years of age paid at the same rate. A wife with two children had to subscribe 1*s* 7*d*. per quarter and 2*s* 1*d* if she had more than two children. Thus the payments made are as high as, and in regard to the families they are higher than, what the local practitioners had demanded. Their proposal was 4*s* for single members and 10*s* for families, but in this institution it is only the small families that pay 10*s* 5*d* per annum and the larger families must give 12*s*. 5*d* per annum. However whatever the sum paid it is certain that it would be a large amount if there were a great many members Thus a profit might be made out of the medical officer's work and it had been reported in the town that the medical officer had signed a three years' engagement at £200 a year He assured me, however, that this was not the case A three months' notice on either side suffices to put an end to the agreement and though the salary is £200 a year this is only a guaranteed minimum. If after all the expenses are paid a balance remains I was assured that it was to be handed over to the medical officer. It is the medical officer therefore, who is to pocket the net profits if ever there should be any and not the friendly societies Consequently the medical officer of this association urges that he is not undercutting the other practitioners of the town, but on the contrary he suspects that he is getting better paid than some of them. Nor is he exploited by a lay committee, for the profits go to the medical officer and not to the lay committee.

The medical officer of the association also informed me that the declaration against consulting with him was signed before he came and that he had no knowledge of any difficulty having arisen till he had been in Cheltenham some four weeks. If this be true it shows how extremely ignorant some medical men are concerning the politics of their profession. Even a very slight knowledge of the economical struggle that is going on all over the country would suffice to indicate that wherever attempts are made by friendly societies to establish a new medical institute it is because they have some dispute or difficulty with their old medical officers. In such circumstances, therefore, no medical man should apply for such a post without first making very careful inquiries. But here is a medical officer up in the walls, so that even these sacred places could be made defensible in case of invasion The houses in some of these little towns are themselves curious and picturesque, being three- and four-storeyed buildings stained to pleasing shades of colour by age and lichens and pierced with small windows very inadequate for the admission of air and light to the rooms within. Another sight which is characteristic of the Peninsula is that of four or five boxes, each about five feet high by three wide, marked "Bulls," on an open cattle truck of a goods train which are intended for the bull fights performed in every town and even village throughout Spain. It is certain that the representatives at the Congress will be invited to be present at a bull fight—to English minds the most unsportsmanlike amusement ever devised. The bull ring itself with its crowds of people in gay coloured dresses and the initiatory procession are worth seeing, but the show itself is not only cruel but stupid

Railway tickets to Madrid and back by the ordinary express trains may be obtained for the price of a single fare by any member of the Congress

The alternative way of reaching Madrid—viz , by sea to Lisbon—is far preferable for those who are good sailors and can afford the time, for the voyage lasts from three to six days, though it might be made shorter and more convenient if a sufficient number of passengers would club together and charter a vessel for themselves, as the regular boats only run once or twice a week By this plan visitors to the Congress would not only have a healthy and pleasant holiday and save themselves much of the unpleasing tedium of the railway journey, but they would also be able to see Lisbon, one of the quaintest and most picturesque towns in Europe. Lisbon is built on the side of a steep hill sloping down to the river which here opens out into a lake, or rather series of lakes, a most beautiful site, and from the top of the hill there is a most charming view over the town to the river

Everyone who travels to Madrid through Lisbon should visit the Botanical Garden at the latter town to see the tropical plants growing luxuriantly in the open air which at Kew can only be cultivated under glass The garden is in the outskirts of the town and therefore easily accessible , it is situated on the slope of a hill, a convenient site, in that the more hardy plants occupy the higher ground and the more delicate ones are below and sheltered from cold winds The grounds are said to cover ten acres and are well laid out with winding paths and here and there a small pool of water for aquatic plants. The soil seems poor and thin and stony, but the plants flourish there. From the lower entrance the visitor passes through an avenue of Washingtonias which are amazingly large seeing that they were planted only 20 years ago Within the garden there are clumps of lofty cocoa nut trees and many varieties of Phœnix, Bourbon, and very large fan palms and great tree ferns. Here are also many sorts of cacti and agaves and aloes in flower (with names scratched on their leaves in true cockney style) and great bushes and even hedges of plants which in England are only seen as small bedding out plants, such as lantana, veronica, and datura arborea. The cannas and begonias make but a poor show and the geraniums (which in Devonshire will cover a cottage) are thin and weedy and the roses are only of the most ordinary varieties Moreover, much space is wasted on common plants and trees—possibly because they are rare in Portugal That part of the garden also which is intended for the botanical students needs supervision, for here are plants without labels and labels without plants and labels on the wrong plants, and occasionally a whole family of plants is characterised by a simple initial with no explanation of that initial. There is but one greenhouse and that poorly furnished with comparatively common plants The banana trees, too, are shabby and poor and there are but few plants in bloom to be seen in the garden and no care seems to be taken to insure a succession of flowering plants, but the wealth of tropical vegetation more than atones for these minor faults and it must be remembered that in this Lisbon Botanical Garden there are no potted plants put out for the summer months only, but there are to be seen great trees and bushes indigenous to Brazil, Syria New Holland, &c , planted out and left in the garden throughout the winter—e.g (among many others), cocos Australis, cocos Romanzowiana, and cocos flexuosa as lofty trees, and nicotiana colossea 10 feet high In a word, the Lisbon Botanical Garden which is open free all day, is a delightful place in which to spend an hour or two even for the visitor who has forgotten his botany

Oporto is well worth a visit by those who wish to kno how port is made and are interested in the most medi sanitation hidden behind a modern mask. Visitors to Oport *vid* Lisbon should not take their tickets to Madrid throug a London agency, as in that case they will have t spend an uncomfortable night in Pampilhosa, whereas th direct and proper route is through Barca d Alva. Thos who travel from Lisbon or Oporto to Madrid may spen a profitable day in Salamanca, the oldest university tow in Spain From Lisbon to Madrid is only 11 hours' journe by the Sud Express, but this train only runs on Monday and Thursdays and places must be booked the day befor There is, however, a daily express at 9 30 P M whic is almost as fast and cheaper The scenery on this lin is most interesting and the train gives glimpses of th aqueduct which supplies Lisbon, of fields tilled by me dressed in white shirts and breeches as if they meant t play cricket where there is no grass to play on, although o the sides of the hills there are quite large flocks of shee and goats with shepherds watching them. Women, too, wor in the fields, for wages are very small, less than from 6*d* to 9*d* per day, and the children must be fed somehow, if only o chick pease and oat-bread The vegetation along the lin must attract the attention of the least observant traveller, for orange and lemon trees, bamboos, carob trees, India corn, cacti, yuccas and agaves and great aloes which flowe in the open air during the summer, eucalyptus trees, and palms and tree ferns growing along the sides of the railway are not common sights with us.

THE ORGANISATION OF THE PROFESSION

(FROM OUR SPECIAL CORRESPONDENT.)

The Battle of the Clubs at Cheltenham —The Profession organises wins in a First Encounter, and is subsequentl signally defeated

IN January, 1901, 14 of the junior practitioners of Cheltenham met together and discussed the evils of club practic In a somewhat loose and informal manner they constituted an organisation The Oddfellows and members o other benefit societies paid only 3*s* a year for medic aid and if they chose the members might also enter t whole of their families for another 5*s* a year The prac tioners who gathered together passed a resolution to effect that henceforth it would be considered derogat to the dignity of the profession to accept less than a year per member or 10*s* per family It was likew decided that if any practitioner resigned his post medical officer of a friendly society because he co not obtain this rate of payment no other member of profession was to take his place These proposals havi met with general approval it was determined to try a t case and Dr R. Davies threatened to resign his post medical officer of a benefit society unless the subscrip was raised from 3*s* to 4*s* per member The members Dr Davies's lodge, in reply, acknowledged that the p ment they made was not sufficient, but they explain that if they increased the amount they would pl themselves at a disadvantage in respect to other lodg Therefore, the three months notice was duly served a accepted. The friendly society advertised for a new medi officer in the local papers, but no one replied. Then, again advertised, this time offering the very terms whic Dr Davies had insisted upon, but received no other rep than that sent by Dr Davies himself The friendly societ was consequently obliged to reappoint its medical officer an this at the new and higher rate of payment. This, then, wa an emphatic victory for the medical practitioners, and no Mr A A. Dighton who had a large lodge of Oddfellow made a similar application, but he was at once met with a flat refusal and therefore he resigned Knowing that the medical men of Cheltenham were well disposed to each other and that they would not compete against Mr Dighton, no attempt was made by the lodge to secure the services of a local practitioner Advertisements were consequently sent to some Yorkshire newspapers and replies were received

By this time and with but one exception, all the medical practitioners of Cheltenham had signed a declaration that district shows no sign of subsiding and since last an important deputation has waited on the sani mmittee, the outcome of a movement to help forward vision by the municipality of houses for the people houses have been condemned and destroyed. Alder cCabe said that the sanitary committee had closed a umber of houses in the district, the improvement tee had pulled down many more, and the extensions Lancashire and Yorkshire Railway had also closed The result had been increased overcrowding as the had to live near their work. Mr Schwann, M.P, out that whereas formerly one family would occupy roomed house it was now common for four families in it. Councillor Wells said that the majority of the splaced within the last ten years were still living in Michael's Ward and the sub-letting had enormously ed. He knew of one person who rented eight houses nt of 5s. 9d per house and let the rooms off at 5s 6d for each room. 'These furnished lodgings were occupied by the lowest class of the population—the ers,' 'hooligans,' and the women who lived with ' Several clergymen of various denominations bore testimony In reply the chairman assured the tion of the sincere desire of the committee to on housing reform and said that one great diffi was the high price required for the land by ndlords who "resisted to the utmost the sell their property" Another was the opposition in uncil to comparatively unremunerative undertakings wners sometimes refuse to sell property which has been for years, preferring to wait until the value of the ad risen. The deputy chairman said that the question e ratepayers to decide was—"Will you submit to the t condition of things or will you submit to another ny on the rates?" The corporation will have to learn build sufficiently well without extravagance—a lesson seems difficult to learn.

h 24th

LES AND WESTERN COUNTIES NOTES

(FROM OUR OWN CORRESPONDENTS.)

dministrative Difficulties connected with Small-pox Outbreaks

a meeting of the West of England and South Wales h of the Incorporated Society of Medical Officers of h, held at Pontypridd on March 19th, a discussion took upon some administrative difficulties connected with eaks of small pox. Mr D J Thomas medical officer alth of Merthyr Tydvil, pointed out the danger of nating "contacts," especially of the vagrant class, then releasing them from observation They might, hought, be attacked with modified small pox, take recautions, and thus be the means of spreading disease, whereas if left unvaccinated they would fficiently ill to require treatment, and would then be ed and no longer a danger to others. Mr Thomas several instances from the recent outbreak at Merthyr vour of the contention that small pox is far more ious in the earlier than it is in the later stages. In ase a woman infected seven persons in Merthyr which she left on the third day of the disease, and although in common lodging houses in Aberdare and going about the district during the following week yet no occurred in the latter town. Dr Edward Walford that in Cardiff during the past 15 years whenever had removed a case of small pox in the early they had never had any spread of the disease among the cases now in the Cardiff Hospital was evidence that some had been infected from atient in the first day of the disease Several of present at the meeting disapproved of the present od of obtaining the vaccination of "contacts," the in securing the services of the public vaccinator ently resulting in a refusal of vaccination by those in nfected house, although if vaccination could have been ed before the removal of the patient there would have little or no difficulty in obtaining the consent of those erned. The Cardiff port sanitary authority has passed solution authorising the medical officer of health to n the vaccination of "contacts," and Dr Walford asks nearest medical practitioner to vaccinate, the fees being by the authority In Newport Dr J Howard-Jones lly asks the public vaccinator to accompany him to a house where there is suspected small pox and thus procures the vaccination of "contacts" very promptly

Death of Mr John Paddon, M B Lond, M R C S Eng

Dr John Paddon, who died at the Mumbles on March 14th at the age of 86 years, retired from practice in Swansea about 15 years ago He qualified as M.R.C S Eng in 1839 and as L.S A in the following year, when he also graduated as a bachelor of medicine of the University of London. After practising for a few years in his native town of Truro he went to Swansea in 1846, where he established a large practice and was eventually elected on the staff of the Swansea Hospital. Outside his profession Dr Paddon had many interests and took his part in the public life of the town He was one of the first officers to be appointed to the Glamorgan artillery militia and was a great lover of all kinds of sport in his younger days, being a wrestler and a boxer of no mean capacity

Farewell Dinner to Dr W G Savage

The past and present students attending the public health department of the Cardiff College entertained Dr W G Savage to a farewell dinner on March 21st. Dr Savage has been for nearly four years the principal bacteriologist in the Cardiff and County Public Health Laboratory and he has also during the same period given lectures in the Cardiff College to those who were preparing for the public health examinations He is leaving Cardiff to become medical officer of health of the borough of Colchester The dinner, which was presided over by Dr T H. Morris, was attended by most of the members of the Cardiff Infirmary staff and by many of the medical practitioners of the town In the course of the evening Principal Griffiths, F R.S, on behalf of the subscribers, presented Dr Savage with an oak framed barometer

Administration of the Vaccination Acts

The Worcestershire county council has passed a resolution urging upon the Government the necessity for more stringent regulations for dealing with tramps infected, or suspected of being infected, with small pox, and also urging that revaccination at about the age of 12 years be made compulsory, and that the administration of the Vaccination Acts should be transferred to county councils. Worcestershire is very well provided with hospitals for the isolation of cases of small pox.

Abuse of Medical Charities

At the Exeter Police court on March 19th a woman was summoned for obtaining medical relief from the Exeter Dispensary by false pretences and another woman and man were also summoned for aiding and abetting her The prosecution was conducted by the trustees of the dispensary From the evidence it appeared that the first defendant was the aunt of a child of whom the male and female defendants were the parents, she obtained a recommendation for the Exeter Dispensary from a subscriber by representing that she had a child who required medical attention, she then used the recommendation for her nephew representing to the authorities at the dispensary that the father did not earn £1 weekly, and the boy was treated there for about six weeks. One of the rules of the institution stipulates that if a person earns £1 per week he is not entitled to treatment for himself or family As the parents of the boy earned more than this amount and were able to pay for medical attendance the action was brought. Eventually the magistrates dismissed the case against the male defendant but the two women were each fined 10s and ordered to pay the solicitor s fees.

The Dentists Act

Before the stipendiary magistrate (Mr T W Lewis) at the Cardiff police court on March 17th Mr W Bernstein was summoned at the instance of the local branch of the Dental Association for implying that he was a person specially qualified to practise dentistry whereas he was not registered under the Dentists Act of 1878 The defendant was fined 20s and costs.

March 24th.

SCOTLAND

(FROM OUR OWN CORRESPONDENTS.)

Changes in the Edinburgh Royal Infirmary

DR. P MCBRIDE, who has been the senior surgeon to the ear and throat department of the Edinburgh Royal Infirmary since the department came into existence twenty years ago, has passed out of office in virtue of twenty years of service. The managers of the infirmary have given expression to their thanks to him for his ungrudging devotion to the interests of the infirmary during his tenure of office They also have recorded their recognition of the position which he holds as one of the highest living authorities on his specialty and they have not forgotten that he started the department to which he was attached. Dr McBride is succeeded by Dr R McKenzie Johnston, who has been assistant surgeon in the department for many years, and Dr A Logan Turner has been appointed assistant surgeon Dr McBride was also university lecturer on his specialty and this position he has also had to resign He is succeeded in it by Dr McKenzie Johnston.

The Removal of Edinburgh Slaughter-houses

It will surprise many outside Edinburgh to know that the capital of Scotland retains its slaughter houses in a densely populated part of the city The town council has, however taken the matter in hand and it is taking steps with a view to their removal. The butchers are up in arms and have even gone the length apparently of packing meetings to carry motions against the proposed removal It would appear, however, that the trade interest is not to determine the matter, for it looks as if the town council means to carry it through, and in this it will not fail to have the moral support of the medical profession.

An Accidental Case of Poisoning in Edinburgh

An important case of this kind was tried recently in the High Court of Justiciary in Edinburgh A lady died at the end of last year with symptoms of strychnine poisoning after taking a powder supposed to contain five grains of sulphate of quinine, five grains of phenacetin, and one grain of exalgin The powder had been made up by an assistant in a druggist's shop in the neighbourhood. The defence accepted the view that the lady died from strychnine poisoning At the trial it was stated that exalgin and various other dangerous articles were kept in a separate cupboard in conformity with one of the regulations of the Pharmaceutical Society There were 14 or 16 bottles on the shelf where the exalgin and strychnine bottles were placed. The unqualified assistant who made up the powder was entitled to dispense exalgin but not strychnine. Lord Maclaren in summing up commented on the evidence that in working the Pharmacy Acts it was common in the trade to keep medicines like exalgin, which were not poisons in any proper sense of the word, in the same compartment along with more deadly poisons, to be handled with special and particular care He hoped that the attention of the Pharmaceutical Society would be directed to this point and that care would be taken that these specially dangerous poisons should be kept as the Act clearly implied, in a place by themselves The jury returned a verdict of "Not guilty" against the assistant and Lord Maclaren said that he was very pleased to give effect to the verdict which exonerated the accused from all criminal negligence

Public Health of Glasgow

The medical officer of health of the city of Glasgow reports that for the fortnight ending March 7th the death rate was 17 8 per 1000, as compared with 19 0 for the preceding fortnight and 24 8 for the corresponding period of last year It is satisfactory to note that at the present time the city has a clean bill of health as far as small pox is concerned. As regards typhus fever, six cases are reported as being in hospital In this connexion there is a sad interest attached to the death of the head schoolmaster of one of the large public schools situated in the east-end, the poorer part of the city Four children who were removed to the hospital suffering from typhus fever from the same district were attending this school. This has led to conjoint action on the part of the medical officer of health and the school board whereby the regulations as to reporting cases of "dirty" children attending schools should be more rigidly enforced This has already borne fruit and such cases are now being more regularly reported and subsequently dealt with by the sanitary officials Another matter of interest is the report by the medical officer of health of a death from glanders which occurred in the city at the end of last month. This is the first death from this disease which is known to have occurred in the city since 1892. The following are the chief facts connected with the case The deceased was a coal dealer who conjointly with another contractor rented a stable Cases of glanders were detected in this stable on the following dates, Dec. 31st, Jan 10th, 17th, 19th, and 31st, and Feb 2nd a 7th. The horses which were affected on Jan. 19th a Feb 2nd belonged to the deceased whose illness began days after the latter date. The premonitory sympto were of an indefinite febrile character, but on Feb 23 the patient presented grave symptoms, evidently t accompaniment of a severe broncho-pneumonia. Pai and œdema occurred most markedly in the right ha but to a less extent in the right knee and both ankl Before death, which occurred on Feb. 24th, a large dark re swelling had appeared on the right side of the face, involvi also the eyelids, while a pustule had begun to form over t left eye. A complete post-mortem examination was not pe mitted, but the city bacteriologist (Dr R. M Buchanan from material obtained from the eyes, nostrils, and the pustu on the face, was able to prove by inoculation experimen and cultures that the case had undoubtedly been one glanders Evidently there is some doubt as to the chann of infection. It is reported that the man while at wo among the infected horses had some superficial cuts, but evidence of these was obtained on examination of the bod The pulmonary affection from which the man suffer suggests that the entrance of the poison was by t respiratory tract.

Public Health of Govan

Dr James Barras, medical officer of health of the boroug of Govan, has just issued his annual report It is a admirable document and worthy of perusal by public heal authorities The following facts and abstracts culled fro the report may be of some interest. The population this important burgh adjoining, and really part c Glasgow, according to the returns of the Registra General from the last census, is 76,350, to these figure however, should be added 182 in shipping and 5642 t population of that portion of South Govan which is no known as the seventh ward and which was added to t burgh in August, 1901. This makes the total populatio of the extended burgh as at the 1901 census 82,17 while the population estimated at the middle of t present year shows it to have increased to 88,868 Th corresponds to 67 375 persons per acre. The birth rate stan at 35 512 per 1000 and the death rate 18 353 per 1000 Und age mortality the infantile death rate is 133 9 per 10 births, being 26 0 per cent. of the total mortality, the deat rate for under five years of age is 40 4 per cent, and that f over 60 years of age is equivalent to 17 3 per cent Th zymotic death rate equalled 2 070 per 1000, but of this on 0 9 per 1000 is accounted for by notifiable zymotic diseas the rest being due to whooping cough and diarrhœa the second part of the report dealing with the prevalen of, and mortality from, infectious disease is an accou of an epidemic of small pox which occured about the begi ning of the year 110 cases were notified, 15 of whi proved fatal, showing a case-mortality of 13 6 per cen With reference to the outbreak and its distribution throug out the burgh, Dr Barras states that the cause of the e demic was almost wholly due to the fact that one of the fi cases reported was that of an unvaccinated infant occurri in a densely populated locality, death taking place befo the true nature of the illness was notified to the sanita department. The source of infection in this instance w never discovered and as there had been no attempt minimise the visits of friends the result was, as anticipat a serious outbreak in and around the infected area. T protective influence of vaccination against an attack of sma pox was again evidenced during the epidemic, as of the to cases only nine were those of children under school age a of these five were unvaccinated, being aged respectively weeks, three months, three months, three and a half mont and 11½ months. As regards death the only cases wh proved fatal under 15 years of age were both unvaccinat infants, aged respectively 11 weeks and 11½ months t attacks in the remaining instances being of a mild type result of successful primary vaccination As regards the ra cases over 15 years of age, four occurred amongst those w had never been vaccinated, aged respectively 21, 21, and 45 years, whilst of the remainder seven had not b revaccinated. The above facts, as Dr Barras points o emphasise the necessity of having revaccination perform on the completion of school life. Not a single case occur where revaccination had been successfully accomplished a resorted to either before or shortly after exposure to infection Of the total cases—viz, 110—there were no l than 20 who contracted the disease after obstinately refus offer of revaccination. In three such instances the ks proved fatal. Most people will agree with the remark it is earnestly to be desired that the day is far distant in part of the United Kingdom when the "conscientious tor" will be able to jeopardise the health and lives of eighbours through neglecting to fulfil a duty which wes, if not to himself, then by all means to the unity at large. Under diphtheria and membranous it is to be noted that out of 64 cases 16 deaths red, showing a percentage mortality of 25 This is a er rate than that of the two previous years but it is r than that for any of the ten years from 1890 to 1899 sive. The figures which are given show that the ntage of deaths to cases notified averages for the last years 23 8, and for the five years previous to that d 34 9 The average for the three years previous to latter period again shows still a higher average—viz., . Therefore, in spite of a slight increase this year e death rate there has been since 1893 a very steady no doubt due to the aid given by the bacteriologist iagnosis and by the serum treatment now generally ted. In dealing with the mortality from other causes interesting to note from the figures given for percentage mortality for tuberculous diseases that here also is a gradual diminution taking place, thus for –72 it is 22 0, for 1873–82 it is 16 5, for 1883–92 it 4, and for 1893–1902 it is 12 8.

rch 24th

IRELAND

(FROM OUR OWN CORRESPONDENTS.)

Possible Epidemic of Small-pox in Dublin.

HERE were over 40 cases of small pox in Dublin on ch 23rd. On March 21st three children were removed their home in a densely populated district on north side of the city and transferred to the isolation pital at the Pigeon House Fort One of these has nded until quite recently a large public school and t have been in contact with many other children. No h case has been notified in the city since March 21st, Sir Charles Cameron reports that a case of a dent type was discovered on the 22nd close to the The patient was removed at once to the corpora hospital. It is satisfactory to note that the er institution, though small, is now available and is able of being quickly enlarged if necessary A letter the President of the Royal College of Surgeons in and appeared in the public papers of March 17th in ch he (Mr L. H Ormsby) stated that he had just made areful and complete examination of it and that he felt sfied that both as regards situation and equipment it an admirable hospital of its kind. As will be seen, ever, from the report of the Dublin Sanitary Association opinion is by no means universal.

The Dublin Sanitary Association

he annual general meeting of the Dublin Sanitary Asso- ion took place on March 19th. Dr C F Moore, the going President, occupied the chair and there was a e attendance. Dr T P Kirkpatrick, honorary secretary, d the draft report, which referred among other matters he difficult question of small pox isolation and expressed opinion that a very real danger would be caused to mers passing down the river by the present isolation hos- il, which should therefore be only a temporary substitute, le attention to the subject should not be relaxed until a per site in the country had been obtained.

Royal Commission on University Education in Ireland.

he final report of this commission was issued in London Dublin on March 11th, in a blue-book of 73 pages, the ater part of which is occupied by the majority report—onouncement divided into 12 sections with a series of 19 commendations The general recommendations, signed by the commissioners with the exception of one, are out in 19 paragraphs in which Nos 4 to 14 deal princi- ly with the medical schools, and in substance ommend that the Royal University shall be con- ted into a teaching university, having as its con ent colleges the Queen's Colleges in Belfast, Cork, Galway together with a new college for Roman tholics which shall be established in Dublin and shall absorb the Catholic University School of Medicine. It is also recommended (1) that the colleges should be accorded a large measure of autonomy so that each may be enabled to develop freely on its own lines, (2) that a liberal increase should be made in the endowment and equipment of Queen's College, Belfast, (3) that no addition should be made to the endowments of the Queen's Colleges at Cork and Galway until they give evidence of increased utility, (4) that the school of medicine in Queen's College, Galway, should be limited to the first two years of the medical curriculum, and (5) that the degrees of the reconstituted university should be open to women on the same terms as to men.

Clendinning v Byers.

At the Belfast Assizes on March 23rd the breach of promise action brought by Sarah Clendinning against Dr J W Byers resulted in judgment being entered for the defendant Dr Byers, who from the commencement of the proceedings denied that the relations existing between the woman and himself had been more than those of medical man and nurse, sought to expedite the trial but was prevented from doing so Proceedings were commenced on Sept. 4th, 1902, but when the case was heard at the Belfast Assizes on Monday last no appearance was put in on behalf of the plaintiff. The Solicitor General, who appeared for Dr Byers, referred to the mendacious report that had been circulated to the effect that the non appearance of the plaintiff was due to a compromise, the judge remarking that he assumed that when the plaintiff did not appear she had no cause of action.

March 25th.

PARIS

(FROM OUR OWN CORRESPONDENT.)

The Alcohol Question.

AT the meeting held on March 10th the Academy of Medicine finally made an end of the long discussion on liqueurs flavoured with essential oils M Laborde, the unwearied and valiant champion of prohibition, being ill and confined to bed, it fell to M. Joffroy to take charge of the report of the commission in M. Laborde's place. M. Joffroy carried by a very large majority a series of propositions much more stringent than those which had been so violently opposed when put forward by M. Laborde. The following are the conclusions of the academy ' The academy hereby declares that all essences, whether natural or synthetic or extractives, which may be incorporated with alcohol or with wine are without exception to be considered as dangerous or at least as harmful drinks. The academy also declares that the dangerous qualities of these drinks, which arise both from the alcohol and from the flavouring agents employed, make them substances to be prohibited. If absolute prohibition is impossible they should be so heavily taxed that the tax would in itself be a prohibition The academy wishes to lay particular stress upon *apéritifs*—namely, those alcoholic and flavoured drinks which are taken fasting for the very fact that they are taken on an empty stomach renders their absorption the more rapid and increases their toxicity ' The alcohol commission finally asked the academy to pass the following motion —

> The academy hereby resolves that the most strenuous measures should be taken to diminish the number of drink shops.

This motion was passed unanimously amidst loud cheers.

The Protection of the Supply of Drinking water

At the same meeting of the academy Dr Roux presented to the House a report of some work carried out by M A. J Martin, inspector-general of the sanitary department of the Seine, and M. H Thierry, deputy inspector general, concerning the protection of the sources of the supply of drinking water The gathering grounds and springs which supply water for the town of Paris are the object of unceasing attention on the part of the municipal engineers, bacteriologists and chemists. Since 1900, moreover, the Prefect of the Seine has by agreement with the municipal council, instituted a service for the medical supervision of the districts in which are situated the gathering grounds. M. Martin and M. Thierry are the chiefs of this department and they have as their assistants the various medical men practising in the districts in which are the gathering grounds. As soon as any one of these medical men becomes aware of the existence of a case of dysentery or of typhoid fever among his patients he reports the case to Paris and the municipal authorities put at his disposal all the necessary plant for the disinfection of the linen and the excreta of the patient More than this, the medical men take measures to prevent the pollution of water courses or springs by pathogenic germs This medical inspection makes it fairly certain that washing places or the drainings from dung heaps or latrines will not contaminate underground springs and water courses It is easy to see that this method of inspection is exceedingly useful not only to the town of Paris but also to the inhabitants of the districts inspected because it keeps the local hygienic conditions in a better state than they would otherwise be. The plan was in working order before the passing of the recent Act of Public Health, and it has been a success owing to the good understanding which exists between the municipal authorities of Paris and the *mayors* of the various communes concerned. Thanks are due more especially to the tact with which those responsible for the working of the measure have carried out their duties and to the devotion of the medical men in question Dr Roux gave as an example the case of the little town of Cerisiers on the Bacule which is close to a gathering ground in the valley of the Vanne Last year several cases of typhoid fever occurred and it was noticed that in all probability the effluent from a washhouse was contaminated. As a matter of fact, this washhouse drained into an open gully which ran through the streets and finally emptied itself into a fissure in the earth. The municipality of Cerisiers, acting together with that of Paris, at once took steps to prevent any further contamination of the town water supply by this effluent Dr Roux observed that owing to the new plan the town of Paris had become, from a hygienic point of view, the protector of vast tracts of country the sanitary condition of which was of no less importance to Paris than to the individual districts themselves

A New Anti tuberculous Serum

At the meeting of the Academy of Medicine held on March 17th M Kelsch laid before the society the results of some researches which had been carried out by Dr Viguier de Maillaine of Nimes He had been struck by the power of resistance to human tuberculosis which is manifested by poultry and he thought that this power was probably due to some force inherent in their serum Moreover, he had failed to cultivate the bacillus of Koch in the serum of the fowl. He therefore carried out a series of experiments and convinced himself that the serum of the fowl, prepared after a method of which he was enabled to give the exact technique, had a very real value both curative and immunising as regards tuberculosis in the guinea pig After having verified the harmlessness of the serum both by a trial on himself and upon a member of his own family who was in robust health, Dr Viguier de Maillaine tried the treatment on six patients affected with tuberculosis All the patients were in the first or second stage of the disease After 15 injections two were almost cured, three had markedly improved, and one was neither better nor worse. A sensation of warmth and pains behind the sternum followed the injections, the latter symptom being more acute in direct ratio to the stage at which the tuberculous lesions had arrived. No inflammatory reaction occurred at the seat of inoculation and the treatment gave the best results in quiet cases of tuberculosis In acute forms and in those with pyrexia no permanent results were obtained, but in all cases the results were good The cough and expectoration diminished and the nutrition improved, while even if the serum showed no bactericidal power it seemed to build up the patient in much the same way as meat juice does when administered by the stomach, although the serum was the more powerful.

March 24th

NEW YORK.

(FROM OUR OWN CORRESPONDENT)

Treatment of Tuberculosis in New York.

MANY suggestions have been made for the treatment of the tuberculous poor of New York city The tuberculosis committee of the Charity Organisation Society advocates the erection of a tuberculosis hospital to accommodate a very large number of patients and at a large cost. Others recommend hospitals in the city and sanatoriums outside The New York Board of Health thinks that such expen would prove too expensive and is of the opinion that establishment of a tuberculosis camp at a conve distance from the city would best meet the necessiti the situation. It is therefore proposed that a pie ground of sufficient size and of healthy location sh be chosen about 50 miles from New York, and a cam strong but inexpensive tents should there be formed, tent to hold two or three persons and to cost 100 dollars

Attack on Tenement House Reform in New York City

The difficulties in the way of properly housing poor are greater, perhaps, in New York than in city of the world The population is dense, w space is limited. Great reforms have been introduced the construction of tenement houses within the past years and especially by means of a Bill which pa the New York State Legislature about two years A determined effort is now being made to nullify the e of these reforms by the passage of Bills now pen before the cities' committees of the Legislature. New York Academy of Medicine has passed the follo resolution "Whereas strenuous efforts are being to induce the Legislature to utterly undo the g advances made in recent years in tenement house ref and sanitation and to prevent the permanent carrying effect of the great improvements in the construction management of tenement houses in New York and B which may have been made possible by the recent Tene House Law, and whereas pulmonary tuberculosis is p tically epidemic in the city of New York, there being deaths and 20,000 cases annually, and whereas the lac light and air in the rooms of the great masses of the pe is one of the most potent causes in increasing the preval of this and other communicable diseases and constit a serious menace to health and morality, be it resolved the New York Academy of Medicine deplores any weaken of the present tenement house laws, and urgently requ the Legislature to permit no changes to be made that in any way decrease the amount of light and air availa for the people living in such houses, or in any way to t a backward step in regard to their sanitary condition "

A Patent Medicine Bill

A Bill has been introduced into the Legislature of York State framed with the intention to prevent frau the advertisement and sale of patent medicines, med foods and beverages, and merchandise The first sec of this Bill reads as follows "No conversation, let report, opinion, publication, or memorandum or thereof of any description whatsoever, and no pictur illustration of any nature or description which state represents or purports to state or represent the qu and effect, merits or demerits of any patent cine, or of any medical preparation, liquid, or be distributed for public sale shall be posted, publishe circulated in any manner, in any city, town, or villag *this State* unless the same shall previously have examined, approved, and certified by the board of healt the city, town, or village in which the same is publishe circulated as a true and correct statement or representa of the medicinal qualities and probable physical effect o patent medicine, preparation liquid, or beverage of about and in reference to which the writing, pictur illustration is made, and unless the person alleged to made a representation shall verify the fact of having the same under oath and the verification when made is in the office of the clerk of the county in which the pe making the same resides " This Bill is certainly sufficie drastic and if enacted will have a deterrent effect upo business of proprietary medicine manufacturers Some legislation is undoubtedly badly needed in all parts o United States where the inhabitants consume patent cines in prodigious quantities, frequently to their injury

AUSTRALIA

(FROM OUR OWN CORRESPONDENT)

The Plague

ON Jan. 27th a case of bubonic plague was discovere Fremantle, West Australia The patient was isolated the "contacts" were quarantined Of these "conta two became affected, one fatally It is believed that ı was from fleas from infected rats. have also occurred at Rockhampton Queensland, one, that of a Chinaman, restrictions on shipping &c., have been other State ports and the destruction enewed In consequence of the drought imported into Australia, especially from I India, both of which places have been ıfected and the shippers object to the oard of health, which provide that vessels . on board fodder or grain of any kind from, any port infected or suspected of ı plague are required to discharge in the precautions to avoid the landing of rats as be deemed advisable by the board and umigated for the destruction of rats before The board, however, very wisely insists on ing strictly enforced

Tuberculosis in Victoria

ıeeting of the board of public health of man, Dr D A Gresswell, quoted statistics ıt there had been a remarkable decrease in ses of tuberculous disease in Victoria during s The decrease had been principally in in the metropolis In 1888 there were 27 8) of the population in Melbourne from various ılous disease , last year there were only 18 00 from the same cause. Throughout the deaths from tuberculosis had fallen from 18 38 to 15 per 10,000 last year

Infectious Disease in Victoria

sented to the board of health of Victoria ıng the fortnight ending Jan. 17th there was crease in the number of cases of infectious d to the board as compared with the number corresponding period of last year

ın Treatment of Diphtheria at Sydney

0 cases of diphtheria treated at the Children's ey before antitoxin was employed 158 died, mortality of 52 7 The percentage mortality during 1899, 1900, and 1901 was 12 65 , last ıtage was 12 57

Adulteration of Food

w South Wales and in Victoria the health e been giving a great deal of attention to the adulteration of food In Victoria an extensive yses have shown that adulteration is very ecially in non-alcoholic beverages, and the vatives of all kinds in perishable foods is sal. In New South Wales, as previously ıe board of health gazetted a regulation, Public Health Act, prescribing the degree of preservatives with food. The regulation ly prohibitive and it has now been rescinded to an agitation by the butter makers, butter d condensed milk manufacturers. The board s also asked those interested to state what would be fair restrictions and their recom- re now under consideration. The cordial makers accharin should be allowed as a substitute for at some preservative should be allowed as they d their products into the country with the quality hout a preservative. The manufacturers of con lk say that they cannot carry on business with me preservative Concentrated milk is a product Australia. It differs from condensed milk in being instead of sterilised It has no sugar added and ulk in vessels from which air is not excluded er dilutes it with water as required Boric acid ses, added to preserve it. The result of analyses ers of the board shows that it is difficult to get of food that is not adulterated or preserved with ical of a more or less deleterious character Lime erry vinegar fruit syrups, tomato sauce, and such e for the most part purely artificially prepared frauds in fact—and contain unknown, and often ıtities of salicylic acid.

Obituary

arles Rorke, who had practised for 23 years at dney died suddenly from heart disease on th. He was very popular and had a very large practice. He took a keen interest in the North Shore Hospital and was a member of its medical staff.—Dr Robert John Allan of Balmain died while on a holiday in Hobart The remains were brought home and buried in Waverley Cemetery Dr Allan was a graduate of Edinburgh University and after coming to New South Wales was for some time medical superintendent of St Vincent s Hospital, Sydney Then he practised at Raymond Terrace for eight years. Next he settled in Dulwich Hill for seven years. In 1899 he joined the medical staff of the Balmain United Friendly Societies Dispensary He was for three years a member of the honorary staff of the Balmain Hospital, but recently resigned.

Feb oth

Obituary.

WILLIAM SAUL, M.D St AND , M R C S ENG , L.S A.

THE somewhat sudden death of this well known practitioner took place at his residence, Dalblair, Boscombe, near Bournemouth, on March 11th, from cardiac failure supervening upon an attack of laryngitis Dr Saul had been in delicate health for several years and for the last 13 years had resided at Boscombe, having been advised on account of his health to leave London where for many years he had a practice in the neighbourhood of Bedford square

A native of Banbury, Oxfordshire, and a student at University College Hospital London where he took honours in several subjects, he qualified in 1862, obtaining the degree of Doctor of Medicine at St. Andrews University and the diplomas of M.R.C S Eng and L.S A. Early in his professional career he was appointed senior medical officer to St. Pancras Infirmary On resigning this appointment he entered into private practice and soon gained a wide reputation. During his residence at Boscombe Dr Saul took a deep interest in parochial affairs and he had been a churchwarden at St John's Church for the last five years. The funeral service, which took place on Saturday, March 14th, at St. John s Church, was very largely attended by his professional brethren in the locality and the residents of the neighbourhood His remains were afterwards laid to rest in the East Cemetery Boscombe. Dr Saul married in 1884 Mary, daughter of the late Sir William Brown, Bart , of Colstoun, Haddingtonshire, who, with four children, survives him.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON —At examinations held recently the following candidates passed in the subjects indicated —

Surgery —V E M Bennett (Section II) Royal Free Hospital L. Courtauld (Section II) Middlesex Hospital T G Longstaff (Sections I and II) Oxford and St. Thomas s Hospital S Northwood (Sections I and II) Birmingham and W A. G Stevens (Sections I and II) and F J Turner (Sections I and II), Guy's Hospital.

Medicine —J Ewing Leeds B C Ghosh (Sections I and II.) Cambridge W P Jones (Section I) Sheffield and G B S Soper (Section II) and W A G Stevens (Sections I and II) Guy's Hospital.

Forensic Medicine —S Bentley Sheffield L. Courtauld Middlesex Hospital G Dewick St Thomas s Hospital J Ewing Leeds R Gauld, London Hospital B C Ghosh Cambridge J D Keir St. Mary s Hospital and G B S Soper and W A. G Stevens Guy s Hospital.

Midwifery —C E Adams Guy s Hospital E H. Drinkwater Liverpool and St. Bartholomew s Hospital J H Harrison, Sheffield and W A. G Stevens Guy's Hospital.

The diploma of the Society was granted to the following candidates entitling them to practise medicine surgery and midwifery —V E M Bennett L. Courtauld R Gauld T G Longstaff G B S Soper and W A. G Stevens

FOREIGN UNIVERSITY INTELLIGENCE —*Bologna* Dr D Della Rovere has been recognised as *privat docent* of Pathological Anatomy —*Gratz* Dr von Hacker of Innsbruck has been appointed to the chair of Surgery and Dr Kreibich to that of Dermatology —*Greifswald* Dr Bleibtreu of Bonn has been appointed to the chair of Physiology in succession to the late Dr Landois.—*Innsbruck* Dr Merk has been appointed to the chair of Dermatology —*Jena* Dr Krönig of Leipsic has been appointed Director of the Gynæcological Clinic —*Kiel* Dr Alfred Gross has been recognised as *privat docent* of Internal Medicine and Dr Julius Raecke as *privat docent* of Psychiatry —*Königsberg* Dr Stenger has been recognised as *privat docent* of Surgery —*Marburg* Dr Römer has been recognised as *privat docent* of Hygiene —*Padua* Dr Carlo Maurizio Belli has been recognised as *privat docent* of Hygiene

PRESENTATIONS TO MEDICAL PRACTITIONERS — On Feb 27th Mr C H Powers M R C S Eng, L R C P Lond., was presented by the rector of Gosforth, on behalf of 250 subscribers, with a testimonial on his leaving the neighbourhood where he has practised for the past eight years In addition to an illuminated address Mr Powers received a silver tea service, an oak roll top desk and a purse containing 65 sovereigns.—Mr G Black, M B, B S Lond, M.R C S Eng, L.S A, on leaving Hurstpierpoint has been presented by his friends and patients with a cheque for £130 in recognition of his unselfish labour on behalf of the sick and suffering —Mr Thomas Lapraik, M.D, F F P S Glasg, has recently been presented with his portrait in oils on the occasion of his retiring from the chairmanship of the Glasgow Athenæum, a post which he has held for five years —At the sixth annual meeting of the South Wales and Monmouthshire Branch of the Sanitary Inspectors' Association, which was held at Bargoed on March 7th, Mr W Williams, M D, D P H Oxon., M.R C S Eng, the medical officer of health of the county of Glamorgan, who has been president of the branch since its formation six years ago, and his wife were presented with a massive silver tea service and tray, while two silver cups were presented to their children.

IRISH MEDICAL SCHOOLS AND GRADUATES' ASSOCIATION —Dr P S Abraham, the President, took the chair at the annual dinner of the Irish Medical Schools and Graduates' Association which was held on March 17th (St. Patrick's Day) in the International Hall of the Café Monico, London. The occasion attracted a numerous assembly and covers were laid for about 200 guests The company present included Mr H. A. Grainger (Agent-General in London for South Australia), Sir R. Ball, Sir J Colomb, M P, Mr J H Campbell, M P (Solicitor General for Ireland), Mr Henniker Heaton, M P, Inspector General W H Lloyd, R N, Deputy Director General A. H Keogh, C B, Deputy Inspector General A. G Delmege, M V O, Surgeon General C M Cuffe, C B, Mr A E J Barker and Mr P J Freyer Dr H Macnaughton-Jones proposed the toast of "Our Guests," which was acknowledged by Sir J Colomb, who commented on the advance of progress in regard to social welfare in Ireland and devoted some time to discussing the undesirable conditions which existed in the country districts in Ireland in connexion with the medical profession. He remarked that it was a very serious matter and thought that he would be excused for mentioning such a question on the ground that the health of the people was of such great importance. He considered that public opinion should be brought to bear to break down the prejudices of local rural authorities and pointed out that fair-play would be for the benefit of the people. He particularly emphasised the fact that there was in the election of medical men to the different posts in certain parts of Ireland evidence of undue family influence. The meeting concluded after many speeches had been delivered and much music and singing had been enjoyed.

THE ADAMS-WYLIE HOSPITAL, BOMBAY —The Adams Wylie Hospital for the Poor was opened on July 26th, 1902 by Lord Northcote, the Governor of Bombay The hospital, which is situated at the end of Guilder street, Bombay, has been erected by Mrs Adams Wylie in memory of her late husband, Lieutenant C H B Adams Wylie, I M S, who died from enteric fever at Bloemfontein, South Africa, on June 2nd, 1900 While serving in India Lieutenant Adams-Wylie was actively engaged in inoculation against plague. At that time the authorities in Bombay offered a reward of four annas (5*d*) to every person undergoing inoculation and as a further inducement Lieutenant Adams Wylie and his wife offered food the result being that within eight months he inoculated nearly 8000 persons. Mrs Adams Wylie accompanied him to South Africa and acted as a nurse during the time she was at the front. After his death she returned to India and devoted herself to nursing work among the pauper class, especially "roadside cases" suffering from the direct or indirect effects of famine. In November, 1901, she wrote to the President of the Bombay municipal corporation offering to lay out 22,000 rupees on the conversion of certain buildings into patients, but nothing was done, whereu the Improvement Trust a site in Guilder hospital at her own expense It consi which will accommodate 50 patients and operating theatre. Subscriptions are invi the work, more than 20,000 rupees collected, chiefly from native donors.

MEDICAL MAGISTRATE – Mr. C C C, M R C S Eng, L.S A., has been Lord Chancellor a justice of the peace Montgomery

THE END OF A DISPUTE —For an action has been pending between Baines and Dr W Longworth Wainwri Henley-on-Thames, the former having ins against the latter for slander We hav ing that this dispute is now at an end withdrawn all allegations against Dr proceedings have been stayed.

THE YARROW CONVALESCENT HOM OF THE BETTER CLASS, BROADSTAIRS — of children admitted to this institutio ending Dec. 31st, 1902, was 942, of wh and 491 girls. The average cost per chi was £1 1*s* 4*d* per week. According t accounts the income for 1902 was £4421 £4461

IDIOTS AND PARISH RELIEF — of the Wellington (Somerset) board of March 12th, Mr Preston Thomas, the Board inspector expressed the opinion th which provided that out-relief shall not of any idiot or imbecile was a most d idiots and imbeciles remained outside th would be generation after generation of in were placed in a workhouse this dange lessened.

THE LATE DR T LL PARRY Llewellyn Parry died at De Aar, Cape C from acute dysentery Dr Parry, who was whose connexion with South Africa date practice at East London Springs near Jo Fletcher, Swellendam, and Uniondale, Jan 1st he took up his duties at Naauw in conjunction with Dr Baird, as med railway and it was at this place that the itself

THE INEBRIATES ACT —At the court on March 20th the stipendiary ma Lewis) discharged a woman whom he ha viously committed to an inebriates' hom owing to the fact that the local authority an institution for her reception Mr Lew court of summary jurisdiction has power t to a home, but the legislature had not pro home and the local authority had omitted the Act, therefore, at Cardiff became letter

THE MOUNT VERNON HOSPITAL TION, HAMPSTEAD, N W, AND NORTHWO report of this institution for the year e 1903, states that although very many ad admitted the death rate was the lowest o 1 5 per cent., eight being the total numbe of these patients were admitted in a m and died within ten days—two, in fact, of admission Of the 547 patients admitt 503 were cases of pulmonary tuberculos did not remain so long as three weeks an ten days.

CHELTENHAM GENERAL HOSPITA general meeting of the subscribers to th held on March 18th, under the presidency King The medical report stated that in patients numbered 952 an increase of 1901 5119 out-patients were treated an dispensary 3879 patients were treated, compared with the previous year The f was satisfactory and showed an increase

Saturday collections had decreased. to £11,545 and £5000 had been received . J W Howe and Mrs. Disney Thorp

iamentary Intelligence.

OUSE OF COMMONS

EDNESDAY MARCH 18TH.

sed Vaccine Station for Scotland.

e Lord Advocate in view of the insufficient supply r vaccination purposes in Scotland, whether he dvisability of establishing in Scotland an animal laboratory for the preparation of glycerinated calf he establishment under the control of the Local London.—The Lord Advocate replied I cannot that the supply of animal lymph for vaccination has been found to be insufficient. But a proposal and a station for the preparation of glycerinated made to the Secretary for Scotland and will be

Bad Teeth among Army Recruits

the Secretary of State for War, in view of a state- the recently issued report of the inspector-general effect that in the reports from manufacturing aid upon the number of men rejected for bad teeth state the percentage of men who were rejected for he year under review —Mr Brodrick replied The cted for bad teeth in 1902 was 4508 and the ratio s 52 0. This number is nearly double the figures

THURSDAY MARCH 19TH.

duction of a Medical Member

ber of the House received a recruit to-day by the P Hutchinson the new representative of the

tutory Flash Point of Petroleum Oil.

this sitting his Bill for raising the statutory um oil. Having regard to the position of the Bill House there is little prospect of its being passed or d.

for the Nurses on the Maine.

the Secretary of State for War whether in view erican orderlies and male nurses on the hospital ed the war medal for their services to our sick th Africa and China, he would state why the rican female nurses in charge had been refused DRICK replied Instructions were despatched to e officer, Woolwich, on March 13th, to issue these

y Inspectors and Government Property

asked the Secretary to the Treasury if he would tary inspector at Waltham Abbey was not allowed dent houses and cottages as well as the houses of Hayes Fisher replied Under Clause 327 of the t 1875 War Department property is exempted from rence on the part of the local authority It does r that the local sanitary inspector has ever made Government houses at Waltham.

sical Training of School Children

was in Committee of Supply Dr Macnamara the new course of physical training for public He condemned the course as a purely military for school children He said that it consisted of leg exercises and 25 per cent. of arm exercises ercises for the muscles of the neck side abdo- bove all there were no breathing exercises —Sir emned the new course saying that it was dis Mr Shaw Stewart recommended the appoint- including medical experts to draw up a model aining on the most careful lines.—Sir William for the Board of Education, said that the ll aware of the difficulties of the new course that the local conditions and circumstances of a it impossible to carry it out and that it was no he Scottish Education Department had recently the subject and the results of its inquiry would tention, and if it were necessary a departmental appointed to consider the best form of physical ldren.

MONDAY MARCH 23RD

y Arrangements in the Royal Navy

asked the Secretary to the Admiralty whether etary scale to take effect next October would be ovements in the system of cooking and serving the royal navy —Mr Arnold Forster replied ry schools for the navy one at each of the prin hips cooks are specially trained at these schools of cooking whatever articles are supplied in navy rrangements have been made for preparing tea h mess to prepare its own Arrangements have ving the method of serving the food by adding ate and improved spoon to the present scale of ns.

The Navy Medical Service

the Secretary to the Admiralty whether it was the Naval Medical Department with respect to promotion and pay so as to place it on a like footing with the Army Medical Service.—Mr Arnold Forster replied: On March 24th 1902 an order in council was issued raising the pay of naval medical officers and placing it practically on an equality with that of officers of the Royal Army Medical Corps. Promotion both in the medical branch of the navy and in the Royal Army Medical Corps is by seniority until the administrative grades are reached when promotion by selection is practised. Special promotions for conspicuous professional merit or for war service are made in the Navy Medical Service Owing to the great differences between the navy and army it is impossible to conduct the medical services on exactly similar lines.

WEDNESDAY MARCH 25TH.

Rejections of Navy Recruits for Bad Teeth.

Mr Weir asked the Secretary to the Admiralty whether he would state the number of recruits for the navy who were rejected in 1902 on account of bad teeth.—Mr Arnold Forster replied The statistics in the possession of the Admiralty do not enable me to give exact figures on this particular point but it is estimated that at least one recruit in every ten is rejected on account of bad teeth.

Vaccination Questions

Mr Weir asked the President of the Local Government Board whether in considering any further legislation in regard to vaccination arrangements would be made such as would enable a parent when registering the birth of a child to obtain a certificate of exemption by making a declaration to the effect that he conscientiously believes vaccination to be prejudicial to the health of the child.—Mr Long replied The Prime Minister intimated in reply to a question a few weeks ago that except for the renewal of the existing Vaccination Act it was not intended to propose legislation on the subject of vaccination during the present session In these circumstances perhaps the hon. Member will excuse me if I do not go into matters such as that raised in the question at the present time

Mr Weir asked the Lord Advocate if he would state from whom the public vaccinators in Scotland obtained their supply of animal lymph —The Lord Advocate replied There are no public vaccinators in Scotland as the term is understood in England Parochial vaccinators whose duties are confined to vaccinating defaulters and the children of paupers receive free on application, supplies of glycerinated calf lymph from the Local Government Board for Scotland

BOOKS, ETC , RECEIVED

AMERICAN GYNECOLOGICAL SOCIETY (J Riddle Goffe, M.D Secretary, No. 29 West Forty sixth street, New York)

Transactions of the American Gynecological Society Volume xxvii For the year 1902. Price not stated.

AMERICAN ORTHOPEDIC ASSOCIATION (Dr Joel E. Goldthwait, Chairman, Publication Committee 372, Marlborough street Boston, U S.A.)

Transactions of the American Orthopedic Association. Sixteenth Session held at Philadelphia, June 5th 6th, and 7th 1902. Vol xv Price not stated.

AMERICAN SURGICAL ASSOCIATION (Recorder of the Association 503 Spruce-street Philadelphia U.S.A.) (For sale by WILLIAM J DORNAN Philadelphia.)

Transactions of the American Surgical Association. Volume the twentieth. Edited by Richard H. Harte M.D Recorder of the Association. Price not stated.

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The Refraction of the Eye and the Anomalies o the Ocular Muscles By Kenneth Campbell, M.B Edin F R C S Eng Surgeon to the Western Ophthalmic Hospital, Surgeon-Oculist to His Highness the Maharajah and Gaekwar of Baroda. Price 5s. net

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Liverpool School of Tropical Medicine Memoir ix. Report on Malaria at Ismailia and Suez. (Published for the University Press of Liverpool) By Ronald Ross F.R.C S D.P H. F R S C B Sir Alfred Jones Professor of Tropical Medicine at University College Liverpool. Price 1s

Macdougall, Alex 68 Mitchell street, Glasgow
Transactions of the Glasgow Obstetrical and Gynæcological Society Volume iii Sessions 1900-1901 1901-1902 Price not stated.

National Housing Reform Council 432, West Strand W C
The Housing Handbook By W Thompson Richmond (Surrey) Town Council author of Housing of the Working Classes and Richmond Official Housing Report " Price, art paper edition 6s net bound in limp cloth 2s 6d net.

Naud C, 3 Rue Racine, Paris
Manuel de la Prostatectomie Périnéale pour Hypertrophie. Par le Dr Robert Proust Prosecteur à la Faculté Price fr 4

Scottish Medical and Surgical Journal Limited 43 Castle-street Edinburgh
The Scottish Medical and Surgical Journal Edited by Norman Walker M D F R C P Edin, and Harold J Stiles M B F R.C S Edin Volume xi (July to December, 1902) Price not stated

Smith Elder and Co, 15, Waterloo-place S W
Diseases and Injuries of the Eye with their Medical and Surgical Treatment By George Lawson F R C S Eng Surgeon Oculist-in-Ordinary to Her Majesty the late Queen Victoria, Consulting Surgeon to the Royal London Ophthalmic Hospital and to the Middlesex Hospital Sixth edition revised and in great measure re-written by Arnold Lawson F R C S Eng Assistant Surgeon to the Royal London Ophthalmic Hospital Price not stated

Springer Julius Monbijouplatz 3 Berlin N
Der Herzmuskel und seine Bedeutung für Physiologie Pathologie und Klinik des Herzens Von Dr Ehrenfried Albrecht Arzt in Berlin Price M 14

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The Victualling of the Royal Navy Past Present and Future By Alexander Turnbull M D, Inspector General of Hospitals and Fleets (retired) Price 1s

Treat E B and Co New York
Clinical Treatise on the Pathology and Therapy of Disorders of Metabolism and Nutrition By Prof Dr Carl von Noorden Physician in Chief to the City Hospital Frankfurt a M Authorised American Edition translated under the direction of Boardman Reed M D Part III Membranous Catarrh of the Intestines (Colica Mucosa) By Prof Dr Carl von Noorden with the collaboration of Dr Carl Dapper Price 50 cents

Wilson Effingham Royal Exchange, E C
How and Where to Insure By Charles Cox (Thrift of the *Empire Review*) Price 1s net.

Wood William and Co New York.
The Proceedings of the Charaka Club Volume i Price not stated

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions and others possessing information suitable for this column are invited to forward it to The Lancet *Office directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week, for publication in the next number*

Barnes H J Lieut Col R A M C has been appointed Secretary to the St Andrew s Ambulance Association Glasgow

Briscoe, William Thomas M D M Ch Dub has been appointed Medical Officer for the Pewsham District by the Chippenham Board of Guardians.

Burgess Mildred M, M B Lond has been appointed Assistant House Surgeon to the Victoria Hospital for Sick Children, Hull

Burnet James M.A M.B Edin M R C P Edin has been appointed Clinical Tutor to the Extra mural Medical Wards, Royal Infirmary Edinburgh

Chadwick C M M D, F R C P has been appointed Honorary Consulting Physician to the Leeds Public Dispensary

Finch, Hugh Earnshaw M B B Ch Oxon D P H has been appointed a District Health Officer in New Zealand for the purposes of the Public Health Act 1900

Fitton Herbert L.R C.P Edin M R C S has been appointed Honorary Surgeon to the Dewsbury and District Infirmary

Hannah Nathan L R C P Edin L.F P S Glasg has been appointed Certifying Surgeon under the Factory Act for the Ashton in Makerfield District of the county of Lancaster

Jones Francis Frederick M R C S L S A has been appointed Medical Officer for the Second District by the Bath Board of Guardians

Lambelle F W M.B B.S Durh has been appointed Lecturer in Physiology to the Hong Kong College of Medicine for Chinese

Martin Antony Alexander, M D Lond B S, M R C S Eng L R C P Lond D.P H has been appointed Medical Officer to the Eastbourne and Seaside District of the Eastbourne Union

McGrath, M L.R C.P L.R.C S Irel. has been appointed Visiting Medical Officer to the Limerick Workhouse.

Robertson Monica L M. M B B S Durh has been appointed Resident Medical Officer to the Sherwood Forest Sanatorium for Consumptives Mansfield Notts.

Telling Walter H Maxwell, M D B S Lond M R C P has been appointed Honorary Physician to the Leeds Public Dispensary

Toms Philip Moysey M.R.C.S Eng., L S A Lond has been appointed District Medical Officer and Public Vaccinator to the Wood Church District of the Tenterden Union vice Mr Edward B Terry, resigned.

Traylen C L L R C P Lond M R.C S Eng, h
House Physician to the Royal Hospital for Dis
City road London E C

Woodford E Russell, M D M S, M.R C S, L.S.
re-appointed Medical Officer of Health to the Ven
Council.

Vacancies.

For further information regarding each vacancy r
made to the advertisement (see Ind

Birmingham and Midland Free Hospital for
Resident Medical Officer also Resident Surg
in each case £60 per annum with board washin

Chelsea Hospital for Women Fulham road
Assistants

Dundee Royal Lunatic Asylum —Junior Medical
£100 with board and lodgings

Ecclesall Bierlow Union —Resident Medical O
per annum with board, washing and apartment

Essex and Colchester Hospital.—Honorary Phy

Evelina Hospital for Sick Children Southwark
also House Surgeon Salary £80 respectively wi
and washing Also Assistant House Surgeon.
board residence, and washing Also Med
Honorarium £25 per annum.

Hospital for Consumption and Diseases of the
—Resident House Physicians for six months.

Liverpool Infirmary for Children —Assistant
six months Salary £25 with board and lodg

Metropolitan Hospital Kingsland road N
Honorarium 25 guineas per annum

Middlesex Hospital W —Assistant Obstetric Phy

Middlesex Hospital Medical School.—Demonst
Salary £80 per annum

Newcastle-on Tyne Royal Infirmary —Senior
Salary £100 per annum with board lodging an

North Eastern Hospital for Children Ha
Resident Medical Officer Salary £120 per a
residence and washing Also Casualty Officer
£100 per annum, with lunch

Oxford Warneford Asylum —Assistant Medi
£100 with board &c.

Radcliffe Infirmary Oxford —House Surgeon,
months Salary £40 with board lodging and

Samaritan Free Hospital for Women Mary
Clinical Assistants

St Thomas s Hospital —Superintendent of the C

Sunderland Infirmary —House Surgeon. Salar
with board and residence

Sussex County Hospital —House Physician, un
per annum with board and residence.

Wandsworth and Clapham Union Home for
Church lane Tooting Assistant Medical
Salary £130 per annum rising to £150 with
lodging and washing

West Ham Union New Infirmary Whipps-cross
N E —Assistant Medical Officer Salary £150
residential allowance.

West Norfolk and Lynn Hospital, King s Lyn
Salary £100 per annum, with board residence,

Wolverhampton Eye Infirmary —House Surge
annum with rooms board and washing

York Dispensary —Resident Medical Officer unm
a year with board lodging and attendance

The Chief Inspector of Factories Home Office, L
notice of vacancies as Certifying Surgeon und
Workshop Act at Cradley Heath in the Cou
Boherboy in the County of Cork at Warboy
Huntingdon and at Bungay in the County of S

Births, Marriages, and

BIRTHS

Braine-Hartnell —On the 21st inst. the wif
Braine-Hartnell M.R C S L.R C P of the Cot
near Stroud of a son, who only survived a few

Fuller —On March 17th at Tollington park the
M D Durh of a son

Lackie —On March 23rd at Randolph crescent, Ed
of J Lamond Lackie M D F R C P Edin. of a

Mitchell —On March 20th at St Vincent s Gu
Arthur M Mitchell M.D Cantab of a son,
born)

MARRIAGE.

Wood—Smith —On March 18th at St John s
Sheffield James Miller Swanson Wood M.B
Rotherham to Edith daughter of Frank
Hoyland, near Barnsley

DEATH.

Fielden —On Sunday 22nd March Lillie Louise, t
Fielden, of Burgess Hill Sussex Will friends
intimation?

N.B —A fee of 5s is charged for the insertion of
Marriages, and Deaths

Comments, and Answers r Correspondents.

IDIOCY OF SPIRITUALISM

a copy of an amazing publication called the proprietors are the Spiritualist Publishing publishing office seems to be at Church Judging by the contents the paper also and in Bradford. It is astonishing ded north-countrymen can believe the Keighley of course is an anti vaccina ts for much but we should have thought Burnley knew better The advertisement at the baits of quacks of every description. is T R. Allinson glorifying a new food There is also a Madame Burchell who to her patients" from an address in same as that of a firm of pill manufacturers Besides making pills this firm sells a work on spiritualists suffer much from piles for Messrs. splendid offer to societies and lyceums a neat Good Health How to get it and How to keep it. and cure to sell at Twopence." A person Alan Fisher holds himself up as The Great and further states that having second sight he human system hence cannot fail. It does not to see through Dr " Alan Fisher He lives at W., but his name does not appear in the Medical Register Dr " Fisher modestly conceals his he mentions his hours of consultation we at least to see his patient. A rival practi advertisement appears on the following page is Madame Bradley M.D U S.A. and lives All she wants is a lock of hair properly person seeking advice. Age and sex to be stated of parties such as these to the Chan as, for one year at least he might reap a imposing a prohibitive tax After that time we would be taxed out of existence.

CARS FOR MEDICAL MEN

Company Limited, 219 Shaftesbury avenue, made arrangements for the hire of motor or the week which will admit of medical men with the use of motor-cars. Communica to the Brownlow Mews Guilford street to the tariff for hire of the cars and also with for storing and cleaning cars and charging recommend all medical men who are thinking —and we have reason to believe that their make themselves acquainted with the construc- car which they select for purchase.

KING OF THE APPENDICITIS PILL."

long communication from Mr H. S Schultess to the printed testimonial sent to this office by Whitefoord's secretary Mr Schultess-Young testimonial. What I did say on hearing from demand for his pills If you go on selling will make your fortune " The rest of Mr letter is taken up with a consideration of the have, I think unfairly made upon that unfortu M. Whitefoord." Does Mr Schultess Young of criminal abortion as a peccadillo that can contrition?

A SUGGESTION FOR TREATMENT

the *Editors of* THE LANCET

your readers give me any hints as to treatment adult male suffering from symptoms resembling ng the feet chiefly the left foot? There are swelling and redness in the sole, simulating tion. The attacks have lasted off and on for commenced after a mild attack of influenza. No has been obtainable. The patient seems to for the pain and swelling of the feet He has and had every form of treatment seems to afford much relief except absolute

I am Sirs yours faithfully
M.D

USED BY TRAMCARS MOTOR CARS AND OTHER VEHICLES

circular which we commend to the notice of the on London Traffic. The author of the circular electrical and mechanical engineer and bell a brake and a life-guard which he is of opinion should be made compulsory upon all quick running vehicles because the accidents and frights caused especially by motor-cars and cycles which generally approach *like a thief in the night* or flash past like some unearthly sprite or goblin particularly on a country road, and startle people nearly out of their wits who are taking a lonely walk to commune with their thoughts or their beloved especially such as have highly-strung or weak nervous systems or are in a deep study" Mr Pearson's literary style is evidently formed upon a close study of that of Lord Grimthorpe. Mr Pearson's bell is automatic and rings continually it also has the same and a pleasant tone distinct from any other" a remark which somehow reminds us of Rawdon Crawley's entry in his inventory My duelling pistols, same which I shot Captain Marker" Mr Pearson's brake is an obstacle brake, a solid block of metal which .. is held three inches above and suspended by chains to the car and the frame of cycles" When an obstacle is in front the chains are released, the brakes drop in front of the wheels which mount them and the vehicle is brought to an abrupt stand We should have thought that a tramcar treated thus would go off the line, but we may be wrong Finally the guard is made of wire-netting covered with rubber and to give Mr Pearson's own description When a person comes in contact with it it is tripped up by the heel and its legs knocked from under it and falls down on to the cradle, and is carried along until the car stops without being injured to any serious extent" We think that possibly this guard might be of value, but we cannot say the same for the bell or the brake

A QUESTION OF ACCOUNTS.

To the Editors of THE LANCET

SIRS —I should like your opinion in the following matter A and B are in partnership A dies and in settling the accounts of the partnership A's executors do not wish to include the money paid by B for surgical and other instruments which were necessary for conducting the practice on modern scientific principles. A made no protest during his lifetime. Is B right in insisting that this money should be brought into the accounts? A and B both benefited of course, from the use of the instruments

I am Sirs yours faithfully
SCRUTATOR.

March 24th, 1903.

⁂ As the instruments were used by the firm it certainly seems fair that the partnership account should pay for them, but the executors will probably only take this view upon the advice of their solicitors. Executors must be very stern men of business and must take every precaution to do their best by the estate. Therefore their dealings with claims against an estate often appear mean or harsh.—ED L.

THE BEAUFORT ARTIFICIAL LIMBS

To the Editors of THE LANCET

SIRS —Can any of your readers give me information about the Beaufort artificial limbs manufactured by Worder of Paris?

I am Sirs, yours faithfully
E. H. SWEET

York House Uckfield, March 24th 1903.

AN OPPORTUNITY OF INFAMY "

To the Editors of THE LANCET

SIRS —I have again received the odd resolution of the General Medical Council passed in December 1893 It states that if a registered medical practitioner knowingly and wilfully assists *any* person who is *not registered as a dentist* in *any* operation in dental surgery he may be dealt with as having been guilty of infamous conduct. Surely in every part of Great Britain men in general practice are daily helping one another in what are certainly operations in dental surgery the operator *not* being a registered dentist of any kind If the Council means what it says there is nothing more to be said except that it is silly but if it means that a registered medical practitioner must not assist a man who is *neither* a registered practitioner *nor* a registered dentist it might be as well to say so.

I am, Sirs your faithfully
A REGISTERED MEDICAL PRACTITIONER.

March 21st, 1903

IMPORTANT TO PROVISION DEALERS

AN improved method for opening paper bags and separating shop papers has been devised by Mr Reay Thornton, of Warwick road, Cliftonville, Margate The invention consists of a rectangular piece of flat board into one side of which towards one end is fitted a glass well of a special design containing a sponge and into the same side of which towards the opposite end is fixed a slab of cork The well is placed at an equal distance from each edge of the board but the cork is not having a larger margin on one side. In the specimen which we have seen the board measured 13½ inches by eight inches and the cork five inches by four inches The inventor describes the method of use as follows The fingers are moistened on the damper so that the bag may be easily grasped and torn down. In the same movement it is brought into contact with the piece of cork and held firmly thereon by the thumb and by a natural movement of the fingers towards the thumb the bag immediately opens" He adds that the old practice even with improved bags is to moisten the finger with saliva and then to blow into the bag which at best is not cleanly and if the person so doing is not in good health it is worse There is no doubt that these offensive habits are indulged in by some shopmen either through thoughtlessness or wilful disregard of sanitary *measures but we hardly think that such practices* would be permitted in any shop with a reputation to maintain. It is as well however that customers who appreciate cleanliness should politely but firmly insist upon such practices being discontinued wherever *they are found and we think that Mr Thornton s invention is* an effort in the right direction. We also think that if all bags were made with one side of the mouth slightly shorter than the other or with a notch cut into one side at the top, it would permit of their being more easily opened but this is perhaps because we have not proved quite expert in the manœuvre described by the inventor Evidence has been produced to us that the bags can be opened by the inventor s method at the rate of eight per second, but such lightning speed can hardly be required and certainly could not be maintained.

A CORN EXTIRPATOR

MR. ADOLPHE ARBENZ has sent us a specimen of a new corn extirpator for which he claims a great many advantages He points out that razors and other sharp instruments are not convenient implements to cut corns with and he has therefore designed his instrument which is a sort of scraper The small steel blade, only some two inches long has saw teeth the serrations, which are very close being turned downwards towards the handle The corn having been softened by immersing the foot in hot water is scraped towards the operator by the teeth of the instrument when the teeth gradually lift up and finally erase the hardened patch of skin Mr Arbenz attempts to prove too much when he suggests that razors cause blood poisoning or that corn plasters weaken the flesh, but there is no doubt that for the removal of hard pieces of skin from the heels and soles of the feet, or from other places where friction occurs he has devised a very handy little tool.

A WARNING

To the Editors of THE LANCET

SIRS —Information has reached us of a fraud practised upon a member of the profession residing at Clapham

A man on crutches purporting to be an agent for the sale of our ublications induced the medical man in question to part with 6*s* 3*d* in ayment of a book selected from our list. As we are totally un cquainted with the man it is needless to add that the book was never received

By the insertion of this letter we hope to prevent a similar deception being perpetrated, or better *to give a clue which may lead to his* arrest We are, Sirs, yours faithfully,

J AND A CHURCHILL.

Great Marlborough-street, London, W March 23rd, 1903.

MILNE'S STERILISED ABSORBENT RIBBON GAUZE

THE Galen Manufacturing Company Limited of Wilson street, New Cross road, London, S.E , has sent us samples of two forms of Milne s sterilised absorbent ribbon gauze for the plugging of wounds and cavities in surgical operations The gauze is in long narrow strips having a woven edge so as to prevent fraying and is both soft and absorbent. The makers supply the gauze medicated with any anti septic Of the samples sent to us one contained iodoform and the other which was intended for wounds of a particularly foul nature, contained acetate of aluminium.

NON LEAKABLE FOUNTAIN PEN

To the Editors of THE LANCET

SIRS —I have been a constant user of fountain pens for about ten or 12 years and can therefore speak from some experience. The earlier makes which are still widely advertised have the fault that they become dry at the nib between each time of using and require the nib-end to be unscrewed before re-filling The one mentioned in THE LANCET of Feb. 21st (p 562) is frequently ruined when an attempt is made to replace the cap as there is no means then of protecting the nib and it may easily be screwed up too far with the same result. I have now adopted Moore s non leakable fountain pen the nib is always moist and ready for use it requires no removal of nib-end to fill and can be carried in any position. I am, Sirs, yours faithfully,

EXPERTUS

WHY APPENDICITIS ?

To the Editors of THE LANCET

SIRS,—In THE LANCET of March 21st p 797 Dr F E Wood of Windsor describes the case of a woman who had a local peritonitis which he attributed to perforation of the appendix. An operation was performed but the appendix was not seen so no attempt was made to remove it " May I ask Dr Wood to be good enough to say why he still called the case one of appendicitis ?

I am Sirs yours faithfully,

March 21st, 1903 S W

OFFICIAL NOMENCLATURE

To the Editors of THE LANCET

SIRS,—By Section 20 of the Births and Deaths Registration Act 1874 (37 and 38 Vict., c. 88) it is enacted that in the case of death the practitioner in attendance during the last illness of the deceased shall sign and give a certificate stating to the best of his knowledge and belief the cause of death " Had I been Mr W H Kesteven therefore I would have politely informed the registrar who refused the death certificate (1) that I had fulfilled the law
not being a Member or Fellow of the Royal Col
London I objected to be dictated to by any no
by its committee and (3) that as the death cert
gratis work on my part in so far as the State was
to follow any nomenclature adopted by registrars

On one occasion I attended a patient " during h
I strongly suspected to have been due to poisonin
death certificate but no post-mortem examinat
the deceased was buried seemingly without the de

In this district a policeman is usually sent to
tioner the suspected cause of death in any given
tioner expresses an opinion it is conveyed to the c
tioner finds himself minus his fee. If he gives
medical coroner with the aid of his "12 men g
themselves as to the cause of death The coroner
a stated one

In another district where I happened to be so
last year there were no less than seven inquests
of these, including my own one, need not have be
undoubtedly due to natural causes and we th
quite willing to give certificates The patient
least two days ere the inquest was held. The
seems depends upon the number of inquests held

So long as we are treated in the above fashion by
and the law of the land I fail to see that any good
ing our knees before those who show hostility tow
our profession I am Sirs yours

THE ATHLETES OF ANTIQUI

WITH reference to the physical or muscular str
race in ancient times it is well known that the
extraordinary statements as to athletic feats p
also the development of the muscles indicated t
human figure upon Assyrian monuments is
inscription recently found at Olbia in South
certain Anaxagoras son of Demagoras, a marvell
in the distance to which he shot an arrow, for i
yards (there is a little doubt as to the precise la
mentioned and it might be only 525 yards) F
of Scythian style in several pieces for our A
never achieve such a distance the average k
about 240 yards There is a record that in I
Ambassador s secretary shot 482 yards with th
Olbia says nothing as to wind but it is obviou
favourable

◆

Dr T A Buck —We agree with our correspond
is undesirable

ERRATUM —In THE LANCET of March 21st there a
book entitled Die Antikörper " The author s n
given as Dr Freiherr " it should have been
von Dungern."

COMMUNICATIONS not noticed in our present issue
in our next.

Medical Diary for the ensu

OPERATIONS

METROPOLITAN HOSPITAL

MONDAY (30th)—London (2 P.M), St. Bartholom
Thomas's (3.30 P.M.), St. George s (2 P.M.) St
Middlesex (1.30 P.M), Westminster (2 P.M)
Samaritan (Gynæcological by Physicians, 2
(2 P M), Royal Orthopædic (2 P M) City C
Gt. Northern Central (2.30 P.M) West London
Throat (9.30 A.M.) Royal Free (2 P.M) Guy's (1

TUESDAY (31st)—London (2 P.M) St. Bartholom
Thomas s (3.30 P.M) Guy's (1.30 P.M), Middles
minster (2 P M) West London (2.30 P M.)
(2 P.M), St. George s (1 P.M.) St. Mary's (
(2.30 P.M.) Cancer (2 P.M) Metropolitan (2.30
(9.30 A.M.), Royal Ear (3 P M.) Samaritan (9.30
Throat Golden-square (9.30 A.M) Soho-square

WEDNESDAY (1st)—St. Bartholomew's (1.30 P.M.
(2 P.M), Royal Free (2 P.M.) Middlesex (1.30
(3 P.M), St. Thomas's (2 P M), London (2 P
(2 P M), St. George's (Ophthalmic, 1 P.M)
National Orthopædic (10 A.M.), St. Peter s
(9.30 A M and 2.30 P M) Gt. Ormond-street (9.3
Central (2.30 P.M), Westminster (2 P M) Met
London Throat (9.30 A.M.), Cancer (2 P.M) Th
(9 30 A.M) Guy's (1.30 P.M)

THURSDAY (2nd)—St. Bartholomew's (1.30 P
(3.30 P M) University College (2 P M) Charin
George s (1 P M) London (2 P M) King's Colleg
(1.30 P M) St Mary's (2.30 P M), Soho-square
London (2 P M.) Chelsea (2 P.M.), Gt. Norther
logical 2.30 P.M) Metropolitan (2.30 P.M
(9.30 A.M) St. Mark's (2 P M) Samaritan (9 30
Throat, Golden-square (9 30 A.M.) Guy's (1.30 P.

don (2 P M) St Bartholomew's (1.30 P M), St. M.) Guy's (1.30 P.M), Middlesex (1.30 P.M.) Charing George's (1 P.M) King's College (2 P M) St Mary's mic (10 A M.) Cancer (2 P M) Chelsea (2 P.M.) Gt. l (2.30 P.M) West London (2.30 P.M.) London) Samaritan (9.30 A.M and 2.30 P.M.) Throat A.M) City Orthopædic (2.30 P.M) Soho-square

—Royal Free (9 A.M.) London (2 P.M.) Middlesex Thomas's (2 P.M.) University College (9 15 A.M) P.M.) St George's (1 P.M.) St Mary's (10 P.M.) quare (9.30 A.M) Guy's (1.30 P.M.)

Hospital (2 P.M.) the Royal London Ophthalmic l Westminster Ophthalmic (1.30 P.M.) and the halmic Hospitals operations are performed daily

SOCIETIES

—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (20 W.)—7 P.M. Council. 8 P.M Casual Communi H. Baldwin: The Design of Small Plates.—Mr F nt of Unerupted Teeth in a Case of Cyst of the :—Prof. Miller (Berlin) Studies relating to the unity in the Human Mouth Adjourned Discus 's paper on Some Points in the Mechanics of by Mr T E Constant)

—THERAPEUTICAL SOCIETY (Apothecaries Hall, riars) —3.30 P.M Council Meeting 4 P M. Papers —Dr N Tirard: Some Dangers of Beale: A New Film for Antiseptic Treatment

—OBSTETRICAL SOCIETY OF LONDON (20 Hanover- P.M. Specimens will be shown by Dr H. Lea, Dr Fairbairn Dr Groves and Dr W O Communication:—Dr V Bonney A Case of of the Puerperal Uterus and Vagina by Papers:—Lieut. Col. A. J Sturmer: Four Extra uterine Gestation occurring in Two by Abdominal Section, Recovery —Mr W A Case of Hydrosalpinx of an Accessory o Twisting of the Pedicle

—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Edgware-road, W) —8.30 P.M Paper —Dr L. Ancient Remedies.—Mr R. Jonnson: Some nosis of Malignant Disease

Hanover-square W) —8.30 P.M. Paper —Mr Effects produced by Radiations.

CLINICAL SOCIETY (Tottenham Hospital, N) —

OF THE UNITED KINGDOM (11 Chandos- re, W) —8.30 P.M. Paper:—Dr E. F Buzzard: acteriology of Landry's Paralysis (illustrated

KENT MEDICO-CHIRURGICAL SOCIETY (Royal Greenwich-road, S.E) —8.45 P.M. Discussion on Dietetics (opened by Dr R. Hutchison) The ckrell, Dr F S Toogood Dr R E Schole- Dr L. Williams Mr C Williams and C to take part in the discussion

SOCIETY OF LONDON (20 Hanover-squar be shown by Mr L. A. Laurence, and others.

DRESSES, DEMONSTRATIONS &c

DICAL GRADUATES' COLLEGE AND POLYCLINIC W C.) —4 P M Dr J M. H. MacLeod: Clinique. Dr A. Morison: Some Important Considerations of Heart Disease

—ROYAL COLLEGE OF PHYSICIANS OF LONDON —5 P.M. Dr T R. Glynn: On Infective Endo- its Clinical Aspects. (Lumleian Lecture.)

COLLEGE AND POLYCLINIC (22, Chenies street W Ewart Clinique. (Medical.)

—MEDICAL GRADUATES COLLEGE AND POLY street, W C) —4 P.M. Mr J Cantlie Clinique M. Mr H. Pinch: Diphtheria and its Antitoxin

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OF GREAT BRITAIN (Albemarle-street W) — Lord Rayleigh: Drops and Surface Tension.

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THE INDEX TO THE LANCET

THE Index to Vol. II. of 1902, which was completed with the issue of Dec 27th, and the Title page to the Volume, were given in THE LANCET of Jan 3rd.

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(Taken daily at 8.30 a.m. by Steward's Instruments)

THE LANCET Office March 26th, 1903

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Mar 20	30·18	S W	0·03	91	53	50	48	52	Cloudy
21	30 19	S.W		95	53	48	45	49	Cloudy
22	30·03	S.W	...	102	63	49	49	52	Cloudy
23	29·81	S W	0·23	102	62	49	49	54	Cloudy
24	29 81	S W	0·02	85	54	41	44	45	Cloudy
25	29·49	S W	0·11	102	67	45	50	53	Cloudy
26	29·35	S W		89	55	43	43	51	Cloudy

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